Project ReImagine Districts

Within the 14 proposals selected there are sixty-five school districts that have accepted the superintendent's challenge to reimagine the P–12 education system. They are partnering with MDE to find ways to innovate, provide proficiency-based achievement, and provide comprehensive early childhood education and other innovations. The reimagine districts are integral to Michigan's Race to the Top efforts. A few examples of the work include:

Battle Creek Lakeview:

Multiple opportunities are being implemented to ensure student success.

- Early transition options for all students based on proficiency and readiness to access post-secondary opportunities. Lakeview is offering its students three Michigan Merit Curriculum diploma pathways including a traditional diploma, a diploma with college credits (including CTE coursework), and a diploma with an associate's degree from Kellogg Community College 100% funded through a partnership with the Legacy Partners Program.
- Includes a shift from the agrarian school calendar to one that is flexible, allowing opportunities such as an extended day at the elementary level, mandatory K–12 summer school for students who need further supports, summer online courses, and dual-enrollment courses during the summer.
- Uses instructional coaching in the K–12 environment.
- Provides intensive, job-embedded professional development for one year to teachers who are chosen to be coaches—while they continue teaching.
- Provides a "graduation coach" for at-risk students ("big brother" concept).
- Offers fifth block classes and summer school as options for keeping students on track to graduate on time.
- Offers AP classes to all students maintaining an "average" overall GPA.
- Implements a block schedule to provide 90 minutes of math and English language arts daily.

Armada Area Schools:

New instructional format with flexible stages: three stages replace Grades 1–5 based on proficiency.

- Strong academic/social competence built, beginning in preschool.
- Project-based instruction adapted to student learning style.
- Multidisciplinary curriculum with technology integration.
- Increased instructional time through before-school, after-school, evenings, and summer instructional components.
- Flexible base of two-year grouping and multiple-age grouping, based on stages of development with opportunity for individual acceleration based on proficiency and readiness.
- Stages viewed as a continuum of learning instead of separate levels.

University Prep Detroit:

Provide sufficient support time for students struggling with a rigorous college-prep curriculum.

- Requires after school tutoring for all students scoring less than a B in core content area.
- Creates additional language arts and math classes for students entering middle or high school below proficiency levels.
- Requires students ending the school year below proficiency to attend five-week "catch-up" camp over the summer.
- Requires students who do not turn in homework to attend "college prep" after school: one hour of supervised homework completion.

Grand Rapids Public Schools:

Redesigned Centers of Innovation high schools.

- Combine rigorous academic preparation with experiential career preparation and a high degree of flexibility in learning.
- Transform Central High School Campus into a diverse learning and research community that includes PK–12 academic programs in alignment with public-private partners (including KIPP, GREENDOT, etc. for schools of excellence).

Oxford Community Schools:

Creation of a 21st century global school system.

- Strong Mandarin and Spanish language immersion programs starting at the preschool level that will result in required fluency in one world language by 8th grade. Students will be taking Algebra I and other core classes in their selected foreign language.
- Newly employed teaching staff must be bilingual in Mandarin or Spanish.
- Partnering with post-secondary institutions in China to offer high school/early college students a virtual student exchange program taught by an instructor in China. In turn China will also send students to Oxford to earn a Michigan Merit Diploma.
- Creates International Baccalaureate certification in every school building district wide.

Michigan's
Participating Local Education Agency/Intermediate School District
Memorandum of Understanding

This Memorandum of Understanding (MOU) is entered into by and between the Michigan Department of Education (MDE) and the ______________________________ (participating LEA/ISD). The purpose of this agreement is to establish a framework of collaboration, as well as articulate specific roles and responsibilities in support of the MDE in its implementation of an approved Race to the Top grant project.

I. SCOPE OF WORK

Exhibit I, the Preliminary Scope of Work, indicates the portions of MDE's proposed reform plans (MDE Plan) the participating LEA/ISD is agreeing to implement. (Note that in order to participate and be eligible for funding, the LEA/ISD must agree to implement all portions of the MDE Plan, as applicable.)

II. PROJECT ADMINISTRATION

A. PARTICIPATING LEA/ISD RESPONSIBILITIES

In assisting the MDE in implementing the tasks and activities described in MDE's Race to the Top application, the participating LEA/ISD subgrantee will:

1) Implement the LEA/ISD Plan as identified in Exhibits I and II of this agreement;
2) Actively participate in all relevant convenings, communities of practice, or other practice-sharing events that are organized or sponsored by MDE or by the U.S. Department of Education (ED);
3) Post to any website specified by MDE or ED, in a timely manner, all non-proprietary products and lessons learned developed using funds associated with the Race to the Top grant;
4) Participate, as requested, in any evaluations of this grant conducted by MDE or ED;
5) Be responsive to MDE or ED requests for information including the status of the project, project implementation, outcomes, and any problems anticipated or encountered;
6) Participate in meetings and telephone conferences with MDE 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. MDE RESPONSIBILITIES

In assisting participating LEAs/ISDs in implementing their tasks and activities described in MDE's Race to the Top application, the MDE grantee will:

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

C. JOINT RESPONSIBILITIES

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

D. MDE RECOURSE FOR LEA/ISD NON-PERFORMANCE

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

III. ASSURANCES

The participating LEA/ISD hereby certifies and represents that:

1) It has all requisite power and authority to execute this MOU;
2) It is familiar with the general scope of MDE's Race to the Top grant application and is supportive of and committed to working on all portions of the MDE Plan;
3) It agrees to be a participating LEA/ISD and will implement those portions of the MDE Plan indicated in Exhibit I, if the MDE application is funded;
4) It will provide a Final Scope of Work to be attached to this MOU as Exhibit II only if MDE's application is funded; will do so in a timely fashion but no later than 90 days after a grant is awarded; and will describe in Exhibit II the participating LEA's/ISD's specific goals, activities, timelines, budgets, key personnel, and annual targets for key performance measures (LEA/ISD Plan) in a

manner that is consistent with the Preliminary Scope of Work (Exhibit I) and with the MDE Plan;

5) It will comply with all of the terms of the Grant, MDE'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);
6) Nothing in the MOU shall be construed to alter or otherwise affect the rights, remedies, and procedures afforded school district employees under Federal, State, or local laws (including applicable regulations or court orders or under the terms of collective bargaining agreements, memoranda of understanding, or other agreements); and the participating LEA/ISD shall not be deemed to be in violation of this MOU, the MDE Plan, or the LEA/ISD Plan if any such rights, remedies, and procedures impair its ability to comply with the MOU, the MDE Plan, or the LEA/ISD Plan.
7) If any provision of the MOU impacts a mandatory subject of bargaining, the implementation of the provision shall be subject to collective bargaining as required by law if not covered by an existing collective bargaining agreement, memorandum of understanding, or other agreement.

IV. MODIFICATIONS

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

V. DURATION/TERMINATION

This MOU 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. THIRD PARTY BENEFICIARY

There are no intended third party beneficiaries to this MOU except for the ED to the extent indicated in the MOU.

VII. SIGNATURES

Local/Intermediate Superintendent (or equivalent authorized signatory) – ***required***:

Signature and Date

Print Name/Title/School District

Local/Intermediate President of Local School Board (or equivalent) – ***required***:

Signature/Date

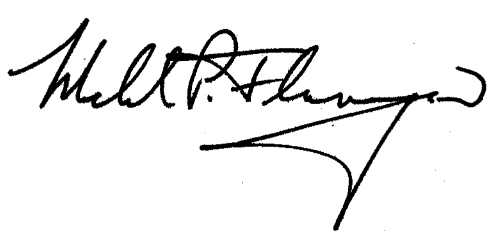
Print Name/Title/School District

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

Signature/Date

Print Name/Title/School District

Authorized State Official – ***required:***
By its signature below, the Michigan Department of Education hereby accepts the Local Education Agency as a participating Local Education Agency.



May 7, 2010

Michael P. Flanagan, State Superintendent of Public Instruction
Michigan Department of Education

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

ELEMENT OF STATE REFORM PLAN	STATE WILL	PARTCIPATING LEA/PSA/ISD (Local Education Agency/Public School Academy/Intermediate School Districts) WILL	LEA/PSA/ ISD PARTICI-PATION
B. Standards and Assessments			
(B)(1) Developing and adopting common standards			
(B)(1) (i) Participation in a consortium of states to develop common standards	• Participate in the Common Core Standards Initiative and plans to adopt the Common Core State Standards for mathematics and English Language Arts/Literacy.		Y
(B)(1) (ii) Adopting a common set of K-12 standards	• Analyze alignment of Common Core Standards with Michigan's Grade Level Content Expectations and High School Content Expectations. • Present Common Core Standards to State Board of Education for consideration of adoption.	• Review alignment analyses of Common Core Standards with Grade Level Content Expectations and High School Content Expectations.	Y
(B)(2) Developing and implementing common, high-quality assessments			
(B)(2) Developing and implementing common, high-quality assessments	• Participate in SMARTER Balanced Assessment Consortium as a governing state to submit a grant application to USED to develop assessments based on the new Common Core Standards. • Purchase commercially available, nationally recognized measures of college and career readiness to be administered by districts in grades 9 and 10. • Provide high-quality data on student achievement to better inform instruction and practice and support increasing student achievement. • Develop and Implement common high-quality assessments for the Common Core.	• Participate as requested in the development of learning progressions, curriculum supports, and the development, review and scoring of balanced assessments from the SMARTER Balanced Assessment Consortium. • Administer the commercially available, nationally recognized measures of college and career readiness to all students in grades 9 and 10 in accordance with vendor guidelines; participate in state pre-id process for both assessments. • Participate in professional development for using assessment data to inform instructional interventions and supports. • Participate as requested in determining technical parameters	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

	• Involve teachers in the design, development, and scoring of assessments. • Use technology to support assessment and learning systems. • Support Michigan's new annual educator evaluations. • Develop and implement, with partners, summative, formative, and interim benchmark assessments for non-common core areas. • Convene content area, grade, and/or specialty groups to identify appropriate evidence for use in the Framework for Educator Evaluations. • Fund consortia of districts and higher education to develop standards and assessments in areas traditionally not assessed by statewide assessment.	for assessment system development. • Participate as requested in development of alternate assessments. • Participate as requested in developing evidence to be used in Framework for Educator Evaluations. • Participate as requested in development of assessments in non-Common Core Standards areas. • Participate in professional development in design and use of formative assessments and in balanced assessment. • Participate in regional assessment consortia.	
(B) (3) Supporting transition to enhanced standards and high-quality assessments			
(B) (3) Supporting transition to enhanced standards and high-quality assessments	• Integrate data from Statewide Longitudinal Data System and Regional Data Initiatives to inform instruction, drive practice, and target professional development. • Align standards to CTE programs, teacher competency tests, and teacher preparation programs, and programs administered by the department, including early childhood education programs, special education programs, and Title I programs. • Develop and implement the Response System to continuously improve instructional practice. • Plan with ISDs for Regional rollouts.	• Align district curricula and instructional practices with Common Core State Standards, Grade Level Content Expectations, High School Content Expectations, Michigan Merit Curriculum high school requirements and American Diploma Project benchmarks. • Participate in professional development to support the transition of Common Core Standards. • Participate in work groups to develop the teach for learning framework, instructional units and surveys. • Participate as requested in work groups to develop, support the transition to formative, summative and interim assessments. • Participate in rollout sessions about Common Core Standards, curriculum alignment, assessment plans, and professional development opportunities. • Participate as requested on collaborative teams (district, regional, and state-wide) to support full implementation and	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

		integration of Common Core Standards throughout programs. • Participate as requested on teams to develop support materials and professional development modules. • Participate in data collection to evaluate success of Common Core State Standards adoption and implementation.	
C. Data Systems to Support Instruction			
(C)(1) Fully Implementing Statewide Longitudinal Data System	• Modify the Michigan Student Data System (MSDS) to collect links between students, teachers and courses. • Develop mechanisms and data structures for reporting of postsecondary transition data according to the America Competes Act. • Document and implement data transformations to reliably move data from data models optimized for collection to models designed for longitudinal reporting. • Develop and implement a longitudinal data model and reports based on the model. • Develop and Implement a data portal containing public and secure aspects to provide access to longitudinal data and reports.	• Provide all necessary data to support statewide efforts to come into compliance with the American Recovery and Investment Act of 2009 and the America Competes Act by: o Ensuring Unique Identification Code and Personal Identification Code information is added to individual student and staff records within the ISD, LEA, PSA information systems to optimize interface with the state data systems and with the Regional Data Initiatives. o Providing data to the state that links each teacher to each associated student via the Michigan Student Data System. o Providing student-level transcript information (Pk-12) including information on courses completed and grades earned. This will be accomplished via the e-transcript system and via student-level subject, class and grade reporting in Michigan Student Data System.	Y
(C) (3) (i) Using data to Improve Instruction	• Support the Michigan Association of Public School Academies in organizing public school academies into the Regional Data Initiatives consortium to support the adoption of a common classroom-level instructional improvement system • Provide Title IID grant funding for the Data for Student Success project to provide ongoing access to and support for schools and educators in the use of state longitudinal data for school and instructional	• Fully participate in the Regional Data Initiatives through the 2011-2012 and 2012-2013 school years in accordance with the eight program assurances currently in place. This also includes participation in program evaluation activities. • Utilize state sponsored data tools, like the Data for Student Success portal to begin providing access to state assessment results as the first step in building a local culture of quality data for decision making. • Use Regional Data Initiatives to help identify Early	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

	improvement through the 2012-2013 school years. • Support the Data for Student Success project's effort to expand to offer wider access to a broader set of state longitudinal data and provide interface with the Regional Data Initiatives, Comprehensive Needs Assessment, Annual Education Report, and other data driven decision making tools to improve the ease of access and use by administrators, educators, parents, and communities through the 2012-2013 school years.	Warning Sign information for dropout prevention efforts.	
(C) (3) (ii) Professional development on use of data	• Support the Regional Data Initiatives in providing professional development on using data for decision making.	• Provide professional development for teachers and administrators on the access and use of data for decision making that complements activities already in place for the Regional Data Initiative and Data for Student Success rollout activities.	Y
(C) (3) (iii) Availability and accessibility of data to researchers	• Work with Regional Data Initiatives and their post-secondary partners in using state and local data to examine problems of instructional practice.	• Make available to research partners in each region state summative and local formative data to explore and report on areas of academic interest to improve overall student, teacher and administrator performance.	Y
D. Great Teachers and Leaders			
(D)(2) Improving teacher and principal effectiveness based on performance			
(D)(2)(i) Measure student growth	• Use the existing growth model for reading and mathematics in grades 3-8. • Develop growth models for any other grade levels and subjects as statewide assessments with adjacent-grade measurement are put in place. • Convene content/specialty associations to describe appropriate student growth measures where state-developed growth measures are not available. • Let requests for proposals for Intermediate School Districts and Institutions of Higher Education to	• Comply with state law regarding providing measures of student growth to educators, including those produced by the State and those produced by other entities (including LEAs).	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

	collaborate on the development of assessments that can be used for creating measures of student growth.		
(D)(2)(ii) Design and implement evaluation systems	• Endorse the association and union-led framework for educator evaluations.	• Develop locally bargained evaluation systems that are compliant with state law.	Y
(D)(2) (iii) Conduct annual evaluations	• Annually convert state-produced individual growth data to preliminary educator effectiveness measures, and provide to schools and LEAs those measures for use in evaluations. • Annually review correlation among local evaluations and preliminary educator effectiveness measures as a quality control check.	• Conduct annual educator evaluations in a manner compliant with state law using the locally bargained systems. • Input annual educator evaluation outcomes into the Registry of Educational Personnel database at the end of each school year.	Y
(D)(2) (iv)(a) Use evaluations to inform professional development	• Build appropriate professional development into state staff performance evaluations as appropriate. • Assure staff follow-up via the state's Human Resource Management System (HRMN).	• Locally negotiate the methods in which the results of evaluations will be used to inform key decisions that are compliant with state law. • Locally consult and decide upon appropriate professional development opportunities. • Incorporate the outcomes of the evaluations in decisions consistent with collective bargaining agreements that are compliant with state law.	Y
(D)(2) (iv)(b) Use evaluations to inform compensation,	• Review state staff evaluations when promotions are considered. • Use staff evaluations to build necessary	• Locally negotiate the methods in which the results of evaluations will be used to inform key decisions in a manner compliant with state law.	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

promotion, and retention	documentation should retention become an issue.	• Incorporate the outcomes of the evaluations in decisions consistent with collective bargaining agreements that are compliant with state law.	
(D)(2) (iv)(c) Use evaluations to inform tenure and/or full certification	N/A	• Follow collective bargaining agreements and the Teachers' Tenure Act when using the results of evaluations to inform key decisions. • Incorporate the outcomes of the evaluations in decisions consistent with collective bargaining agreements that are compliant with state law.	Y
(D)(2) (iv)(d) Use evaluations to inform removal	• Review state staff evaluations when promotions are considered. • Use staff evaluations to build necessary documentation should retention become an issue.	• Locally negotiate the methods in which the results of evaluations will be used to inform key decisions in a manner compliant with state law. • Incorporate the outcomes of the evaluations in decisions consistent with collective bargaining agreements that are compliant with state law.	Y
(D)(3) (i) High-poverty and/or high-minority schools and (D)(3) (ii) Hard-to-staff subjects and specialty areas	• Use data systems to identify inequities in distribution when data on effectiveness is available. • Work with teacher preparation institutions to prepare teachers and principals in areas of shortage. • Revise Teacher Preparation Institution accountability system to include traditional and alternative preparation systems to provide an incentive for Teacher Preparation programs to focus on critical shortage areas and on preparing principals to create conditions to support teachers.	• Develop, locally negotiate as necessary, and implement practices concerning working conditions of teaching and learning that include: o Teaching assignments that align with teachers' expertise (HQT). o Focused induction and professional development programs for both teachers and leaders. o Supports for the development of school culture, including collegial interaction. o High quality curriculum, related instructional materials, and aligned assessments that leverage the work done on the Common Core of Standards and accompanying instructional materials. o Valid and reliable measures of teacher and principal performance.	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

D)(5) Providing Effective Support to Teachers and Principals			
(D) (5) (i) Quality professional development	• Partner with stakeholders to design and implement a responsive instructional support system. • Develop and train educators in the use of the Framework for Educator Evaluation, in collaboration with the unions and appropriate state associations. • Develop and pilot with stakeholders an Individual Professional Development Plan. • Develop criteria for inclusion of existing professional development programs in a state database.	• Participate in professional development for math instruction, using data to inform instruction, balanced assessment, assessment literacy, and the use of the Framework for Educator Evaluation. • Use the Individual Professional Development Plan. • Access and select professional development opportunities on the Teach for Learning website.	Y
(D) (5) (ii) Measure effectiveness of professional development	• Update, with stakeholders state Professional Development Standards. • Redesign, with stakeholders, the State Board Continuing Education System (SB-CEU). • Remove professional development programs from the Teach for Learning website that do not demonstrate effectiveness over time. • Link educator evaluation and student learning data to professional development programs to assess their impact. • Participate in the national evaluation of Title I School Improvement initiatives.	• Participate, as requested on work groups to update Professional Development Standards. • Use Professional Development Standards for developing and/or selecting professional development for teachers and leaders. • Implement revised State Board Continuing Education (SB-CEU) System. • Evaluate professional development programs to determine impact on improving instruction.	Y
E. Turning Around Low Performing Schools			
(E)(2) Turning Around Low Performing	• Identify the persistently lowest achieving schools using the approved business rules and publish the list of schools and the business rules. • Open the School Improvement Grant application	• Apply for School Improvement Grant funds and implement one of the four turnaround models. • Complete or revise the Comprehensive Needs Assessment.	Y

EXHIBIT 1
PRELIMINARY SCOPE OF WORK

Schools	process and provide technical assistance to LEAs with eligible schools, streamlining the process to the greatest extent possible. • Support and monitor the implementation of the turnaround models in identified schools. • Issue a request for information/qualifications for the purpose of providing lead and support partners (external providers) to identified schools to support the implementation of the selected turnaround model.	• Participate in all required activities to implement the selected turnaround model including: o Professional development for the use of balanced assessment and data-based decisions. o Extended learning time amending collective bargaining agreements if needed. o Submitting accurate data as required. o Using the School Improvement Framework to ensure that the school has one, unified improvement plan.	
General		• Commit to developing a strategy of transparent communication to include, at a minimum, a monthly update in public to the local Board of Education.	Y

Appendix A.3

Participating LEAs	LEA Demographics			Signatures on MOUs			MOU Terms	Prel. Scope of Work–Participation in each app. Plan Criterion															
	# of Schools	# of K-12 Students	# of K-12 Students in Poverty	LEA Supt. (or equivalent)	President of local school board (if applicable)	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)
Academic and Career Education Academy	1	128	93	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy for Business and Technology	2	653	601	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Detroit-West	1	321	295	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Flint	1	564	543	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Lathrup Village	1	365	312	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Southfield	1	329	272	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Warren	1	844	840	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Waterford	1	235	215	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Academy of Westland	1	421	392	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
ACE Academy (SDA)	2	186	161	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Achieve Charter Academy	1	563	64	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adams Township School District	2	431	218	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Addison Community Schools	3	978	418	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Adrian City School District	8	3,424	2,030	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Advanced Technology Academy	1	1,189	1,007	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Airport Community School District	7	2,794	1,178	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Aisha Shule/WEB Dubois Prep. Academy School	1	248	216	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Akron-Fairgrove Schools	2	322	219	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Alanson Public Schools	1	334	223	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Albion Public Schools	4	1,059	815	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Alcona Community Schools	3	899	468	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Algonac Community School District	5	2,030	862	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allegan Area Educational Service Agency	3	145	91	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allegan Public Schools	7	2,829	1,329	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allen Academy	1	1,060	1,014	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allen Park Public Schools	6	3,769	1,153	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allendale Public School District	6	2,205	665	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Alma Public Schools	6	2,280	1,177	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Almont Community Schools	4	1,741	502	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Alpena Public Schools	11	4,431	2,158	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Alpena-Montmorency-Alcona ESD	2	91	50	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
American Montessori Academy	2	446	131	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Anchor Bay School District	12	6,398	1,503	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ann Arbor Learning Community	1	264	35	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ann Arbor Public Schools	33	16,579	3,674	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Arbor Academy	1	220	140	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Armada Area Schools	5	2,061	377	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Arts Academy in the Woods	1	278	91	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Arts and Technology Academy of Pontiac	1	373	347	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ashley Community Schools	3	383	194	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Athens Area Schools	3	664	300	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Atherton Community Schools	3	978	664	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Au Gres-Sims School District	2	399	230	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
AuTrain-Onota Public Schools	1	44	27	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Avondale School District	8	3,827	1,112	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bad Axe Public Schools	4	1,247	529	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Baldwin Community Schools	3	546		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bangor Public Schools	4	1,280	827	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bangor Township Schools	5	2,480	1,177	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Baraga Area Schools	3	542	310	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bark River-Harris School District	2	655	310	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Barry ISD	1	55	36	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

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Bath Community Schools	3	968	302	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Battle Creek Public Schools	16	6,265	4,555	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bay City School District	16	8,973	4,304	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bay County PSA	1	234	196	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bay-Arenac Community High School	1	149	68	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Beal City Public Schools	3	700	219	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bear Lake School District	2	359	200	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Beaver Island Community School	1	71	26	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Beaverton Rural Schools	3	1,370	748	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bedford Public Schools	7	5,102	1,173	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Beecher Community School District	5	1,711	1,489	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Belding Area School District	5	2,241	1,320	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bellaire Public Schools	2	524	237	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bellevue Community Schools	2	668	337	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bendle Public Schools	5	1,693	1,225	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bentley Community Schools	2	900	505	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Benton Harbor Area Schools	14	3,590	3,306	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Benton Harbor Charter School	1	396	382	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Benzie County Central Schools	6	1,818	1,144	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Berlin Township S/D #3	1	35	8	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Berrien RESA	4	386	237	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bessemer Area School District	2	455	226	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Big Bay De Noc School District	1	248	120	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Big Rapids Public Schools	6	2,004	1,065	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bingham Academy	1	142	98	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Birch Run Area School District	4	1,847	771	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Black River Public School	1	830	133	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Blanche Kelso Bruce Academy	6	490	415	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Blissfield Community Schools	3	1,255	458	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bloomingdale Public School District	4	1,414	1,090	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Boyne City Public Schools	5	1,290	655	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bradford Academy	1	1,472	967	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Branch ISD	9	837	328	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Brandon School District	7	3,381	1,090	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Brandywine Community Schools	5	1,423	772	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Breckenridge Community Schools	4	856	402	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Breitung Township Schools	3	1,717	624	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bridge Academy	1	586	581	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bridgeport-Spaulding Community School District	4	1,550	1,088	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Brimley Area Schools	2	513	227	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Britton-Macon Area School District	1	546	161	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bronson Community School District	4	1,248	764	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Brown City Community Schools	3	1,000	546	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Buchanan Community Schools	5	1,639	784	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Buckley Community School District	1	396	245	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Buena Vista School District	5	1,014	913	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bullock Creek School District	5	1,995	775	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Burt Township School District	1	41	34	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Burton Glen Charter Academy	1	769	616	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Byron Area Schools	3	1,243	477	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Byron Center Charter School	1	234	77	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Byron Center Public Schools	6	3,331	866	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
C.O.O.R. ISD	1	81	57	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cadillac Area Public Schools	9	3,243	1,665	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Calhoun ISD	3	685	470	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Camden-Frontier Schools	3	570	302	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Canton Charter Academy	1	711	86	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Capac Community School District	4	1,593	727	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Capital Area Academy	1	198	166	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

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Carman-Ainsworth Community Schools	7	4,739	2,987	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Carney-Nadeau Public Schools	1	285	169	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Caro Community Schools	5	1,990	994	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Carrollton School District	5	1,912	1,374	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Carson City-Crystal Area Schools	4	1,077	538	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Carsonville-Port Sanilac School District	3	640	397	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Caseville Public Schools	3	267	153	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Casman Alternative Academy	1	104	77	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cass City Public Schools	4	1,221	642	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cedar Springs Public Schools	9	3,398	1,484	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Center Academy	1	491	477	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Center for Literacy and Creativity	1	116	83	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Center Line Public Schools	6	2,842	1,666	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Central Academy	1	514	426	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Central Lake Public Schools	1	378	206	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Central Montcalm Public Schools	6	1,914	1,138	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cesar Chavez Academy	4	1,844	1,801	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chandler Park Academy	3	1,716	1,516	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Charlevoix Public Schools	4	1,138	378	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Charlevoix-Emmet ISD	1	121	73	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Charlotte Public Schools	7	3,093	1,242	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Charyl Stockwell Academy	2	878	79	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chassell Township School District	1	270	142	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chatfield School	1	449	67	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cheb-Otsego-Presque Isle ESD	2	129	82	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cheboygan Area Schools	5	2,065	1,155	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chelsea School District	6	2,605	288	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chippewa Hills School District	7	2,281	1,402	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chippewa Valley Schools	19	15,939	3,457	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
City of Harper Woods Schools	4	1,345	890	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clara B. Ford Academy (SDA)	1	184	178	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clare Public Schools	4	1,546	747	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clare-Gladwin Regional Education Service District	1	123	89	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clarkston Community School District	13	8,209	1,491	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Climax-Scotts Community Schools	3	606	217	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clinton Community Schools	3	1,126	286	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clinton County RESA	2	122	34	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clintondale Community Schools	6	3,895	2,833	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Clio Area School District	6	3,468	1,488	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Coldwater Community Schools	7	3,156	1,628	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cole Academy	1	132	96	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Coleman Community School District	2	852	437	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Colin Powell Academy	2	591	548	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Coloma Community Schools	5	1,839	970	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Colon Community School District	3	693	399	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Columbia School District	5	1,694	649	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Commonwealth Community Devel. Academy	1	252	247	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Comstock Park Public Schools	6	2,440	1,135	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Comstock Public Schools	6	2,373	1,540	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Concord Academy - Petoskey	1	320	101	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Concord Academy Boyne	1	204	42	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Concord Community Schools	3	887	416	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Concord Montessori and Community School	1	169	118	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Conner Creek Academy	2	443	382	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Constantine Public School District	5	1,553	888	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Coopersville Area Public School District	6	2,549	910	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Copper Country ISD	2	89	46	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Corunna Public School District	5	2,442	1,087	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Countryside Academy	2	437	331	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

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Covenant House Life Skills Center Central	1	306	301	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Covenant House Life Skills Center East	1	313	251	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Covenant House Life Skills Center West	1	250	177	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Crawford AuSable Schools	5	1,793	1,057	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Creative Learning Academy of Science	1	64	50	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Creative Technologies Academy	1	310	57	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Crescent Academy	1	393	319	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Crestwood School District	6	3,441	1,936	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cross Creek Charter Academy	1	731	213	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Crossroads Charter Academy	2	624	338	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Croswell-Lexington Community Schools	5	2,235	1,177	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Da Vinci Institute	2	332	228	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dansville Schools	3	907	262	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
David Ellis Academy	1	320	234	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
David Ellis Academy West	1	834	559	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Davison Community Schools	9	5,607	2,011	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dearborn City School District	33	18,475	11,532	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dearborn Heights School District #7	6	2,837	1,714	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Decatur Public Schools	3	1,007	643	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deckerville Community School District	2	659	364	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Deerfield Public Schools	1	293	91	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Delta-Schoolcraft ISD	1	95	56	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Delton-Kellogg School District	4	1,658	785	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
DeTour Area Schools	3	206	115	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Academy of Arts and Sciences	3	1,855	1,507	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit City School District	173	88,484	70,029	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Community Schools	2	1,058	888	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Enterprise Academy	1	701	636	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Merit Charter Academy	1	717	596	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Midtown Academy	1	322	301	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Premier Academy	1	739	662	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Detroit Service Learning Academy	1	1,128	910	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dickinson-Iron ISD	2	60	44	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Discovery Arts and Technology PSA	1	220	201	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dollar Bay-Tamarack City Area Schools	2	298	171	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dove Academy of Detroit	1	469	423	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dr. Charles Drew Academy	1	397	384	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dr. Joseph F. Pollack Academic Center of Excellen	1	708	500	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dream Academy	1	228	193	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dryden Community Schools	2	700	199	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dundee Community Schools	4	1,703	501	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Durand Area Schools	6	1,756	859	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eagle Crest Charter Academy	1	714	290	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
East China School District	10	5,067	1,589	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
East Jackson Community Schools	4	1,319	774	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
East Jordan Public Schools	3	1,083	586	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
East Lansing School District	8	3,433	1,064	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eastern Upper Peninsula ISD	1	40	28	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eastern Washtenaw Multicultural Academy	1	254	161	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Easton Township S/D #6	1	31	7	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eaton Academy	1	467	373	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eaton ISD	2	144	50	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eaton Rapids Public Schools	6	2,855	1,226	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eau Claire Public Schools	3	829	610	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ecorse Public School District	3	958	544	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Edison Public School Academy	1	1,075	730	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Elk Rapids Schools	4	1,549	514	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Elkton-Pigeon-Bay Port Laker Schools	3	979	481	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ellsworth Community School	1	230	105	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

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Elm River Township School District	1	16	9	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Endeavor Charter Academy	1	657	378	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Engadine Consolidated Schools	2	268	128	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Escanaba Area Public Schools	6	2,693	1,261	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Essexville-Hampton Public Schools	5	1,884	593	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Evart Public Schools	4	1,081	705	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ewen-Trout Creek Consolidated School District	1	257	154	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Excel Charter Academy	2	954	459	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Excelsior Township S/D #1	1	53	38	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Farmington Public School District	25	11,919	2,307	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Farwell Area Schools	4	1,500	966	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fenton Area Public Schools	5	3,539	923	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ferndale Public Schools	7	4,035	2,272	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fitzgerald Public Schools	6	3,003	2,170	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Flagship Charter Academy	1	577	537	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Flat Rock Community Schools	4	1,934	794	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Flint City School District	30	12,668	9,730	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Flushing Community Schools	7	4,371	1,289	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Forest Area Community Schools	4	754	528	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Forest Park School District	2	550	249	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fortis Academy	1	737	346	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Four Corners Montessori Academy	1	177	71	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fowler Public Schools	2	527	68	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Francis Reh PSA	1	343	333	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Frankenmuth School District	3	1,227	167	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Frankfort-Elberta Area Schools	2	550	295	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fraser Public Schools	8	5,009	1,910	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Free Soil Community Schools	1	34	29	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Freeland Community School District	3	1,792	300	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fremont Public School District	6	2,408	1,133	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Frontier International Academy	1	326	321	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fruitport Community Schools	7	3,141	1,530	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fulton Schools	4	1,013	470	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Galesburg-Augusta Community Schools	4	1,218	587	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Garden City School District	9	5,179	2,214	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gaudior Academy	1	191	138	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gaylord Community Schools	6	3,222	1,511	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Genesee ISD	5	1,035	417	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Genesee School District	2	767	475	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
George Crockett Academy	2	431	394	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
George Washington Carver Academy	1	495	464	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gibraltar School District	8	3,720	1,132	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gladstone Area Schools	4	1,585	593	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gladwin Community Schools	5	1,875	1,074	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Glen Lake Community Schools	2	806	220	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Glenn Public School District	1	40	14	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gobles Public School District	2	967	456	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Godfrey-Lee Public Schools	5	1,676	1,402	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Godwin Heights Public Schools	6	2,220	1,690	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gogebic-Ontonagon ISD	1	41	35	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Goodrich Area Schools	4	2,192	337	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Blanc Academy	1	471	325	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Blanc Community Schools	13	8,693	2,239	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Haven Area Public Schools	11	5,854	1,976	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Ledge Public Schools	10	5,276	1,318	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Rapids Child Discovery Center	1	197	132	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Rapids Public Schools	71	18,428	15,883	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grand Traverse Academy	1	1,111	324	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grandville Public Schools	10	5,887	1,523	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

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Grant Public School District	5	2,277	1,092	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grant Township S/D #2	1	4	0	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grass Lake Community Schools	3	1,250	299	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gratiot-Isabella RESD	2	188	103	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grattan Academy	2	178	48	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Great Lakes Academy	1	299	288	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Great Oaks Academy	1	679	511	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grosse Ile Township Schools	4	1,852	144	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Grosse Pointe Public Schools	14	8,362	880	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gull Lake Community Schools	5	2,845	515	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gwinn Area Community Schools	4	1,269	751	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hale Area Schools	2	665	486	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hamilton Community Schools	6	2,585	659	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hamtramck Academy	1	480	442	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hamtramck Public Schools	7	3,133	2,652	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hancock Public Schools	3	858	403	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hanley International Academy	1	614	552	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hanover-Horton Schools	3	1,337	409	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Harbor Beach Community Schools	3	578	304	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Harbor Springs School District	4	1,024	306	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Harper Creek Community Schools	5	2,603	997	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Harrison Community Schools	5	1,649	1,191	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hart Public School District	4	1,281	888	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hartford Public School District	5	1,511	1,138	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Haslett Public Schools	5	2,726	488	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hastings Area School District	6	2,965	1,265	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hazel Park City School District	11	5,154	3,378	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
HEART Academy	1	220	182	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hemlock Public School District	5	1,359	332	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Henry Ford Academy	1	479	243	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hesperia Community Schools	4	1,120	697	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Highland Park City Schools	4	1,840	1,332	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hillman Community Schools	2	514	355	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hillsdale Community Schools	6	1,768	1,091	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hillsdale ISD	3	191	66	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Holland City School District	7	4,039	2,605	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Holly Academy	1	713	107	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Holly Area School District	8	3,792	1,496	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Holt Public Schools	12	5,908	1,958	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Holton Public Schools	3	1,065	699	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Homer Community Schools	4	1,028	582	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Honey Creek Community School	1	220	29	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hope Academy	1	496	453	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hope of Detroit Academy	2	488	449	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hopkins Public Schools	4	1,689	583	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Houghton Lake Community Schools	5	1,655	1,112	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Houghton-Portage Township Schools	3	1,306	364	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hudson Area Schools	3	940	499	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hudsonville Public School District	11	5,666	1,258	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Huron Academy	1	428	202	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Huron ISD	1	110	60	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Huron School District	6	2,494	758	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Huron Valley Schools	18	10,298	2,540	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ida Public School District	3	1,665	346	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Imlay City Community Schools	5	2,286	1,213	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ingham ISD	5	250	61	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Inland Lakes Schools	4	952	496	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
International Academy of Flint	1	1,180	965	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
International Academy of Saginaw	1	233	196	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix A.3

Ionia ISD	1	152	81	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ionia Public Schools	8	3,162	1,766	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ionia Township S/D #2	1	10	8	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Iosco RESA	1	58	48	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Iron Mountain Public Schools	5	1,286	483	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ironwood Area Schools	4	992	576	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ishpeming Public School District	3	847	395	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Island City Academy	1	204	76	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ithaca Public Schools	3	1,350	586	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jackson Arts and Technology PSA	1	162	159	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jackson ISD	9	244	135	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jackson Public Schools	13	6,140	4,208	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jefferson Schools (Monroe)	7	2,235	827	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jenison Public Schools	8	4,600	1,134	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Johannesburg-Lewiston Area Schools	3	797	421	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Jonesville Community Schools	4	1,428	758	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Joseph K. Lumsden Bahweting Anishnabe Academ	1	472	291	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Joy Preparatory Academy	2	464	438	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kalamazoo Public School District	27	12,380	8,501	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kalamazoo RESA	6	639	401	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kaleva Norman Dickson School District	4	677	473	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kalkaska Public Schools	6	1,559	923	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kearsley Community Schools	6	3,395	1,633	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kelloggsville Public Schools	7	2,302	1,646	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kent City Community Schools	3	1,346	486	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kent ISD	.	.	.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kentwood Public Schools	17	8,553	4,704	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Keystone Academy	1	746	182	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Kingston Community School District	2	621	365	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Knapp Charter Academy	1	713	398	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Laingsburg Community School District	3	1,243	271	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lake City Area School District	4	1,153	752	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lake Fenton Community Schools	4	1,816	493	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lake Linden-Hubbell School District	2	507	244	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lake Shore Public Schools (Macomb)	6	3,470	1,303	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lakeshore School District (Berrien)	5	2,930	692	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lakeview Community Schools (Montcalm)	4	1,507	785	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lakeview Public Schools (Macomb)	6	3,351	1,143	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lakeview Sch. District (Calhoun)	6	3,835	1,449	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LakeVille Community Schools	6	1,717	890	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
L'Anse Area Schools	3	748	354	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
L'Anse Creuse Public Schools	20	12,323	4,157	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lansing Charter Academy	1	285	186	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lansing Public School District	35	14,102	10,914	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lapeer Community Schools	12	6,281	2,634	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lapeer ISD	1	92	52	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Laurus Academy	1	692	432	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lawton Community School District	4	1,091	644	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lenawee ISD	3	315	197	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Les Cheneaux Community Schools	3	311	140	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Leslie Public Schools	3	1,387	545	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Life Skills Center of Pontiac	1	233	155	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lighthouse Academy	1	166	158	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lincoln Consolidated School District	8	4,797	2,072	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lincoln Park Public Schools	12	4,615	3,171	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lincoln-King Academy	1	284	168	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Linden Charter Academy	1	772	673	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Linden Community Schools	6	3,052	826	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Litchfield Community Schools	2	341	237	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Livonia Public Schools	27	16,575	3,584	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Lowell Area Schools	7	3,891	1,111	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ludington Area School District	6	2,179	956	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mackinac Island Public Schools	1	78	23	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mackinaw City Public Schools	1	189	53	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Macomb Academy	1	172	30	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Macomb ISD	7	1,277	507	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Madison Academy	1	517	308	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Madison Public Schools (Oakland)	5	1,418	1,026	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Madison School District (Lenawee)	3	1,470	887	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mancelona Public Schools	3	1,095	783	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manchester Community Schools	3	1,232	251	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manistee Area Schools	5	1,679	799	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manistee ISD	1	38	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manistique Area Schools	3	987	497	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Manton Consolidated Schools	3	1,015	653	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Maple Valley Schools	4	1,395	700	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mar Lee School District	1	315	145	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marion Public Schools	2	556	349	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marlette Community Schools	3	1,117	613	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marquette Area Public Schools	8	3,135	830	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marquette-Alger RESA	1	45	10	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marshall Academy	1	263	65	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marshall Public Schools	6	2,399	696	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Marysville Public Schools	5	2,672	655	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mason Consolidated Schools (Monroe)	3	1,257	535	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mason County Central Schools	4	1,597	942	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mason County Eastern Schools	2	483	314	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mason Public Schools (Ingham)	5	3,030	860	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mason-Lake ISD	8	51	31	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mattawan Consolidated School	4	3,833	619	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mayville Community School District	3	893	568	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
McBain Rural Agricultural Schools	3	1,052	506	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mecosta-Osceola ISD	4	329	162	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Melvindale-North Allen Park Schools	4	2,767	1,916	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Memphis Community Schools	3	1,056	386	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mendon Community School District	2	704	320	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Menominee Area Public Schools	5	1,758	807	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Menominee ISD	1	24	17	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Meridian Public Schools	3	1,385	594	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Merrill Community Schools	3	778	371	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Merritt Academy	1	393	179	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mesick Consolidated Schools	3	752	503	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Metro Charter Academy	1	721	410	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Michigan Center School District	3	1,411	691	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Michigan Health Academy	1	203	164	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Michigan Mathematics and Science Academy	1	128	90	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Michigan Technical Academy	4	1,242	1,071	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mid Peninsula School District	1	233	118	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Midland County Educational Service Agency	1	129	67	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Midland Public Schools	19	8,791	2,130	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mid-Michigan Leadership Academy	1	196	177	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Milan Area Schools	5	2,670	715	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mildred C. Wells Preparatory Academy	1	172	172	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Millington Community Schools	4	1,494	720	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mio-AuSable Schools	2	683	451	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mona Shores Public School District	6	3,848	1,428	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Monroe ISD	4	760	366	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Monroe Public Schools	9	6,449	3,253	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix A.3

Montabella Community Schools	2	840	543	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Montague Area Public Schools	3	1,469	736	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Montcalm Area ISD	3	173	123	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Montrose Community Schools	4	1,529	816	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Moran Township School District	1	78	32	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Morenci Area Schools	4	799	424	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Morey Charter School	1	252	152	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Morley Stanwood Community Schools	5	1,446	877	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Morrice Area Schools	2	561	229	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mt. Clemens Community School District	5	1,905	1,607	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mt. Clemens Montessori Academy	1	317	40	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mt. Morris Consolidated Schools	6	3,005	2,137	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Mt. Pleasant City School District	11	3,633	1,249	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Munising Public Schools	2	677	303	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Muskegon Area ISD	1	209	171	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Muskegon City School District	13	5,073	4,407	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Muskegon Heights School District	8	1,596	1,503	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
N.I.C.E. Community Schools	4	1,229	430	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nah Tah Wahsh Public School Academy	1	174	135	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Napoleon Community Schools	4	1,584	632	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Negaunee Public Schools	3	1,434	400	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Bedford Academy	1	139	40	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Beginnings Academy	1	184	136	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Branches School	1	245	164	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
New Haven Community Schools	4	1,245	650	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Newaygo County RESA	1	37	26	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Newaygo Public School District	5	1,865	1,155	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Niles Community School District	11	3,900	2,174	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Adams-Jerome Schools	2	467	235	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Branch Area Schools	5	2,518	1,169	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Central Area Schools	3	465	280	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Huron School District	2	435	259	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Muskegon Public Schools	3	938	264	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Saginaw Charter Academy	1	532	412	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
North Star Academy	1	202	122	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Northridge Academy	1	264	259	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Northview Public School District	7	3,452	1,400	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Northville Public Schools	12	7,314	380	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Northwest Academy	2	132	52	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Northwest Community Schools	5	2,997	1,215	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Norway-Vulcan Area Schools	3	797	297	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Nottawa Community School	1	148	80	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oak Park City School District	7	3,465	2,253	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oakland Academy	1	227	61	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oakland International Academy	3	607	592	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oakland Schools	.	21	16	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oakridge Public Schools	6	1,892	1,144	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oceana Intermediate School District	1	43	27	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ojibwe Charter School	1	106	77	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Okemos Public Schools	9	4,003	637	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Old Redford Academy	3	1,907	1,575	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Olivet Community Schools	3	1,512	567	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Onaway Area Community School District	3	703	419	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Onekama Consolidated Schools	2	406	153	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Onsted Community Schools	3	1,667	373	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Orchard View Schools	6	2,862	1,854	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oscoda Area Schools	4	1,354	943	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Otsego Public Schools	6	2,294	850	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ottawa Area ISD	3	306	180	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

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Outlook Academy	2	51	49	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ovid-Elsie Area Schools	5	1,807	752	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Owendale-Gagetown Area Schools	2	217	149	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Owosso Public Schools	7	3,491	1,921	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Oxford Community Schools	8	4,602	1,157	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Palo Community School District	1	78	50	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pansophia Academy	1	255	198	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Paragon Charter Academy	1	644	331	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Paramount Charter Academy	1	693	300	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Parchment School District	6	1,764	869	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Paw Paw Public School District	6	2,384	1,005	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Peck Community School District	2	551	316	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pellston Public Schools	2	684	383	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pennfield Schools	5	2,095	872	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pentwater Public School District	1	265	157	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pewamo-Westphalia Community Schools	3	657	103	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pierre Toussaint Academy	1	455	410	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pinckney Community Schools	7	4,635	838	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pinconning Area Schools	6	1,548	775	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pine River Area Schools	5	1,256	749	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pittsford Area Schools	2	660	318	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Plainwell Community Schools	6	2,764	855	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Plymouth Educational Center	2	1,143	911	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Plymouth-Canton Community Schools	26	19,118	2,916	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pontiac Academy for Excellence	3	1,455	1,333	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pontiac City School District	11	5,984	5,055	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Port Hope Community Schools	1	82	55	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Port Huron Area School District	18	10,434	5,520	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Portage Public Schools	15	8,766	2,098	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Portland Public School District	4	2,096	543	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Posen Consolidated School District	2	249	136	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Powell Township Schools	1	46	19	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Presque Isle Academy II	1	59	43	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Prevail Academy	1	731	401	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Public Schools of Calumet	4	1,554	950	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Public Schools of Petoskey	7	2,943	1,039	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quest Charter Academy	1	331	231	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Quincy Community School District	3	1,388	605	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rapid River Public Schools	1	392	142	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ravenna Public Schools	4	1,050	449	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reach Charter Academy	1	525	318	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reading Community Schools	2	895	514	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Redford Union School District	8	3,310	1,907	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reed City Area Public Schools	4	1,579	829	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reese Public Schools	3	988	411	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Reeths-Puffer Schools	7	3,981	1,838	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Renaissance Public School Academy	1	325	212	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Republic-Michigamme Schools	1	153	92	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Richfield Public School Academy	1	603	519	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ridge Park Charter Academy	1	626	469	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
River Rouge School District	3	1,293	1,161	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
River Valley School District	4	710	393	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Riverside Academy	2	1,027	1,007	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Riverview Community School District	5	2,689	820	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rochester Community School District	22	14,941	1,992	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rockford Public Schools	16	7,988	1,255	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rogers City Area Schools	2	555	264	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Romeo Community Schools	9	5,577	1,445	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Romulus Community Schools	10	3,872	2,662	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Roscommon Area Public Schools	4	1,526	946	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Roseville Community Schools	12	5,847	3,816	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Rudyard Area Schools	3	896	541	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saginaw City School District	23	8,821	6,805	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saginaw County Transition Academy	1	128	124	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saginaw ISD	4	436	305	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saginaw Learn to Earn Academy	1	125	100	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saginaw Preparatory Academy	1	320	309	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saginaw Township Community Schools	9	5,333	1,967	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saline Area Schools	8	5,442	455	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sand Creek Community Schools	2	925	400	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sandusky Community School District	4	1,157	619	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sanilac ISD	2	146	83	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saranac Community Schools	4	1,157	519	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Saugatuck Public Schools	3	857	304	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sault Ste. Marie Area Schools	6	2,429	1,045	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
School District of the City of Inkster	5	3,276	2,517	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
School District of the City of Royal Oak	9	5,400	1,410	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
School District of Ypsilanti	11	3,864	2,642	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Schoolcraft Community Schools	4	1,169	140	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Shelby Public Schools	9	1,649	1,066	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Shepherd Public School District	5	1,733	705	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Shiawassee Regional ESD	2	197	108	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sigel Township S/D #3F	1	18	8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sigel Township S/D #4F	1	16	9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sodus Township S/D #5	1	72	32	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
South Arbor Charter Academy	1	767	148	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
South Haven Public Schools	5	2,276	1,304	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
South Lake Schools	5	2,242	1,060	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
South Redford School District	7	3,426	1,710	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Southfield Public School District	18	8,525	4,547	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Southgate Community School District	12	5,703	2,452	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sparta Area Schools	6	2,944	1,279	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Spring Lake Public Schools	6	2,397	423	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Springport Public Schools	3	1,033	575	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Charles Community Schools	4	1,121	502	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Clair County Learning Academy	1	32	27	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Clair County RESA	1	168	102	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Ignace Area Schools	4	657	341	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Joseph County ISD	1	128	80	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Joseph Public Schools	5	2,828	501	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
St. Louis Public Schools	4	1,215	563	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stanton Township Public Schools	1	142	98	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Star International Academy	1	1,304	1,157	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stephenson Area Public Schools	5	744	423	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stockbridge Community Schools	5	1,664	640	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sturgis Public Schools	8	3,279	2,088	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Summerfield School District	3	815	197	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Summit Academy	1	405	233	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Summit Academy North	3	1,485	678	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sunrise Education Center	1	55	47	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Superior Central Schools	1	382	161	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Suttons Bay Public Schools	3	775	310	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Swan Valley School District	5	1,801	601	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Swartz Creek Community Schools	8	4,010	1,411	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tahquamenon Area Schools	3	861	411	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tawas Area Schools	3	1,383	707	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Taylor Exemplar Academy	1	677	375	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Taylor School District	16	8,322	5,463	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix A.3

Tecumseh Public Schools	7	3,046	651	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tekonsha Community Schools	3	306	185	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
The Dearborn Academy	1	481	460	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Thornapple Kellogg School District	6	2,968	896	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Three Lakes Academy	1	62	38	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Three Oaks Public School Academy	1	439	377	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Threshold Academy	1	175	164	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Timberland Academy	1	450	395	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Traverse Bay Area ISD	5	362	237	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Traverse City Area Public Schools	18	10,015	3,843	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Traverse City College Preparatory Academy	1	71	22	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Trenton Public Schools	5	2,872	662	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tri County Area Schools	5	2,421	1,106	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Trillium Academy	1	727	390	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Triumph Academy	1	636	308	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Tuscola ISD	3	354	283	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ubly Community Schools	2	805	401	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Union City Community Schools	3	1,140	626	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Unionville-Sebewaing Area S.D.	3	947	356	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Universal Academy	1	500	477	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Universal Learning Academy	2	469	433	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
University Preparatory Academy	4	1,657	1,313	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
University Preparatory Science and Math (PSAD)	1	382	230	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Utica Community Schools	42	29,205	6,734	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Van Buren ISD	3	257	169	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Van Buren Public Schools	11	5,742	2,715	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Van Dyke Public Schools	7	3,245	2,529	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vanderbilt Area Schools	1	162	109	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vanderbilt Charter Academy	1	443	338	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vandercook Lake Public Schools	2	1,289	702	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vanguard Charter Academy	1	722	359	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vassar Public Schools	5	1,716	1,088	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Verona Township S/D #1F	1	23	8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vestaburg Community Schools	3	716	433	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vicksburg Community Schools	6	2,646	817	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Victory Academy Charter School	1	149	146	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vista Charter Academy	1	722	608	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Vista Meadows Academy	1	61	51	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wakefield-Marenisco School District	1	281	151	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walden Green Montessori	1	241	51	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Waldron Area Schools	3	337	222	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walker Charter Academy	1	692	256	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walkerville Public Schools	3	338	284	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walled Lake Consolidated Schools	22	15,479	3,046	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Walton Charter Academy	1	769	603	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Warren Consolidated Schools	26	15,879	7,387	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Warren Woods Public Schools	7	3,540	1,486	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Warrendale Charter Academy	1	729	641	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Washington-Parks Academy	1	323	173	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Washtenaw ISD	4	249	168	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Waterford School District	23	11,434	4,846	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Watersmeet Township School District	1	170	117	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Watervliet School District	4	1,319	745	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wavecrest Career Academy	1	163	90	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Waverly Community Schools	7	2,974	1,378	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wayne RESA	7	30	8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wayne-Westland Community School District	26	12,934	7,457	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WayPoint Academy	1	212	167	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Webberville Community Schools	3	665	291	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix A.3

Wells Township School District	1	13	7	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West Bloomfield School District	11	6,929	1,380	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West Branch-Rose City Area Schools	6	2,315	1,287	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West Iron County Public Schools	4	921	556	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West MI Academy of Arts and Academics	1	392	106	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West MI Academy of Environmental Science	1	472	343	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West Ottawa Public School District	12	7,601	3,709	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
West Village Academy	1	403	345	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Western School District	6	2,884	1,059	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Weston Preparatory Academy	1	406	323	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Westwood Community Schools	6	2,558	1,836	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Westwood Heights Schools	3	993	852	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wexford-Missaukee ISD	1	95	71	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
White Cloud Public Schools	4	1,132	786	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
White Pigeon Community Schools	2	824	522	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
White Pine Academy	1	159	45	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Whiteford Agricultural Schools	3	734	127	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Whitehall District Schools	6	2,388	967	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Whitmore Lake Public Schools	4	1,203	430	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Whittemore-Prescott Area Schools	4	1,062	878	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Will Carleton Charter School Academy	1	260	35	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
William C. Abney Academy	1	473	455	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Williamston Community Schools	4	1,887	325	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Willow Run Community Schools	6	1,860	1,542	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Windemere Park Charter Academy	1	680	351	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Windover High School	1	116	84	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wolverine Community Schools	2	335	246	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Woodhaven-Brownstown School District	8	5,064	1,710	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Woodland Park Academy	1	422	262	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Woodland School	1	207	33	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Woodmont Academy	1	374	254	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Woodward Academy	1	557	500	Y	Y	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wyandotte City School District	10	4,850	2,366	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wyoming Public Schools	10	5,153	3,402	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Yale Public Schools	6	2,221	845	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Zeeland Public Schools	13	5,617	1,554	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
TOTALS	**3,386**	**1,446,119**	**689,598**																				

MICHIGAN DEPARTMENT OF EDUCATION (MDE)/MICHIGAN ASSOCIATION OF INTERMEDIATE SCHOOL ADMINISTRATORS (MAISA)

PARTNERSHIP ACTION PLAN

Letter of Agreement and Work Plan

July 1, 2010-June 30, 2011

Background

In November of 2006, the first MDE/MAISA Partnership Action Plan for the Darkening the Dotted Lines initiative was signed by Superintendent of Public Instruction Mike Flanagan and MAISA Executive Director William Mayes. This agreement set forth the process to implement a system of regular and comprehensive planning and governance for joint partnership activities. A committee structure was put in place to carry out these mutually agreed upon activities that are intended to build capacity and create efficiencies. It was agreed by both parties that the Letter of Agreement and Work Plan would be reviewed on a regular basis and revised as necessary. The overarching goal is to institutionalize and sustain this partnership.

Work Plan

Based on evaluation of the work accomplished to date under the DTDL initiative, MDE and MAISA agree to the following committee structure and respective charges/plans of action. Each of these committees will be co-chaired by MDE staff and an MAISA member.

DTDL Governance Committee on Joint Initiatives

Charge: This committee directs initiatives identified and agreed upon to be partnership efforts between MDE and the ISDs. This committee will work with other MAISA and MDE standing or Ad Hoc Committees as appropriate.

High Priority Schools Committee

Charge: Develop a 5-year strategic plan to provide high priority schools assistance/support in a seamless and efficient way; oversee and disseminate school improvement grant funds and other appropriate resources.

Monitoring and Compliance

Charge: (1) Identify and target professional development/technical assistant in the following major areas: (a) procurement; (b) timekeeping; (c) unallowable activities and costs; (d) cash management (2) define Levels 1 and 2 roles and responsibilities and develop processes.

Support Services Committee

Charge: Identify and review joint processes and procedures and recommend efficiencies.

Other Committees

Additional standing and ad hoc committees may be established and charged as agreed to by both parties.

MDE and MAISA agree to implement this Action Plan. Modifications can be made based upon mutual agreement.

Mike Flanagan	**Date**
Superintendent of Public Instruction	

William H. Mayes	**Date**
MAISA Executive Director	

MDE/MAISA Partnership Action Plan

Letter of Agreement and Work Plan

July 1, 2009-July 1, 2010

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Support Services Committee

Charge: Provide guidance and follow up related to consolidation efforts including consolidation of services and consolidation of school districts; identify and review joint processes and procedures and recommend efficiencies.

Other Committees

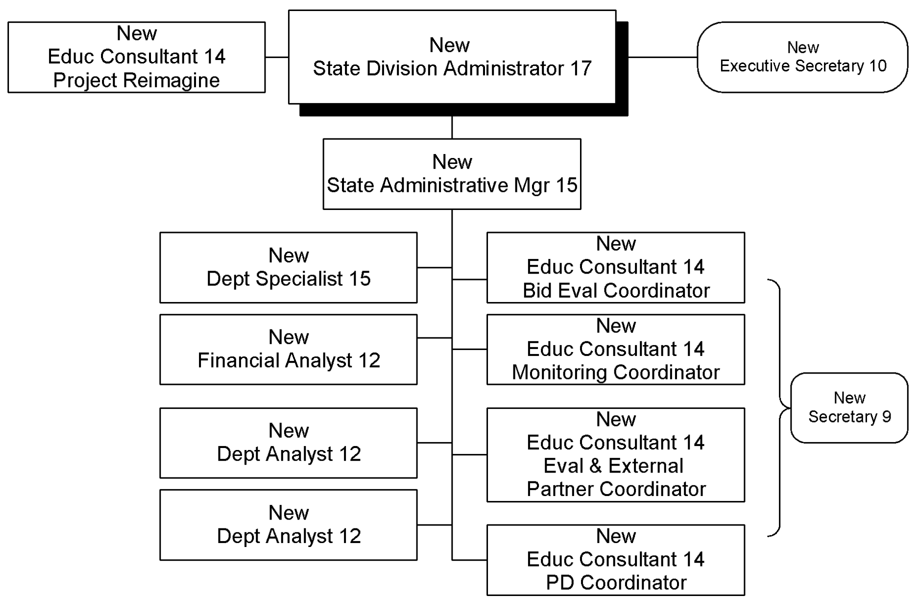
Additional standing and ad hoc committees may be established and charged as agreed to by both parties.

MDE and MAISA agree to implement this Action Plan. Modifications can be made based upon mutual agreement.

Mike Flanagan	7/8/09 Date
Superintendent of Public Instruction	
William H. Mayes	6-26-09 Date
MAISA Executive Director	

Appendix A.5

Accelerate Michigan
FY 2010-2011



Rev. 05/2010

Accelerate Michigan- Letters of Support

Name	Type of Organization
Michigan Association of Student Councils	STUDENTS
Michigan Parent Teacher Student Association	PARENT
American Federation of Teachers - Michigan	TEACHERS
Michigan Education Association	TEACHERS
Michigan Mathematics and Science Centers Network	TEACHERS
Network of Michigan Educators	TEACHERS
Michigan Association of Intermediate School Administrators	ADMINISTRATORS
Michigan Association of School Administrators	ADMINISTRATORS
Michigan Association of Secondary School Principals	ADMINISTRATORS
Michigan Elementary/Middle School Principals Association	ADMINISTRATORS
Michigan School Business Officials	ADMINISTRATORS
Michigan Association of Community and Adult Education,	ADULT EDUCATION
Michigan Commission for Spanish Speaking Affairs	CULTURAL
Michigan Association of School Boards	SCHOOL BOARDS
Aztec Manufacturing, Inc.	BUSINESS
Beaumont Hospitals	BUSINESS
Corporation for a Skilled Workforce	BUSINESS
Detroit Energy (DTE), Inc.	BUSINESS
Detroit Regional Chamber of Commerce	BUSINESS
Dow Chemical, Inc.	BUSINESS
Dowding Industries, Inc.	BUSINESS
Ford Motor Company, Inc.	BUSINESS
Genesee Regional Chamber of Commerce	BUSINESS
Henry Ford Health Systems	BUSINESS
Kellogg, Inc.	BUSINESS
Michigan Institute of Aviation and Technology	BUSINESS
Steelcase, Inc.	BUSINESS
Michigan Association of Public School Academies	CHARTERS
Michigan Council of Charter School Authorizers	CHARTERS
Middle Cities Education Association	DISTRICTS
Childrens Trust Fund	EARLY CHILDHOOD
Early Childhood Investment Corporation	EARLY CHILDHOOD
Highscope	EARLY CHILDHOOD
Michigan Head Start Collaborative	EARLY CHILDHOOD
Michigan Staff Development Council	EDUCATORS
Black Family Development, Inc.	FOUNDATION
C.S. Mott Foundation	FOUNDATION
Hispanic Bar Association of Michigan	FOUNDATION
Michigan After-School Partnership	FOUNDATION
New Detroit	FOUNDATION
Skillman Foundation	FOUNDATION
United Way for Southeastern Michigan	FOUNDATION

Urban League of Detroit & Southeastern Michigan	FOUNDATION
W.K. Kellogg Foundation	FOUNDATION
Congress of the United States - Michigan Delegation	GOVERNMENT
Kalamazoo/St. Joseph County Michigan Works	GOVERNMENT
Macomb/St. Clair County Michigan Works	GOVERNMENT
Michigan Council for Labor and Economic Growth	GOVERNMENT
S.E. Region/Metro Detroit Michigan Works	GOVERNMENT
South Central Michigan Works	BUSINESS
West Central Michigan Works	GOVERNMENT
Midland County ESA	ISD
Michigan House of Representatives	LEGISLATIVE
Michigan Senate	LEGISLATIVE
City of Detroit - Mayor Dave Bing	MAYOR
Alpena Community College	POST-SECONDARY
Bay Mills Community College	POST-SECONDARY
Central Michigan University	POST-SECONDARY
Eastern Michigan University	POST-SECONDARY
Ferris State University	POST-SECONDARY
Grand Rapids Community College	POST-SECONDARY
Grand Valley State University	POST-SECONDARY
Kalamazoo Community College	POST-SECONDARY
Lake Superior State University	POST-SECONDARY
Lansing Community College	POST-SECONDARY
Michigan Association of Career Colleges and Schools	POST-SECONDARY
Michigan Assoc. of Collegiate Registrars/Admission Officers	POST-SECONDARY
Michigan State University	POST-SECONDARY
Michigan Technological University	POST-SECONDARY
Mid Michigan Community College	POST-SECONDARY
Monroe County Community College	POST-SECONDARY
Muskegon Community College	POST-SECONDARY
North Central Michigan College	POST-SECONDARY
Oakland University	POST-SECONDARY
Presidents Council, State Universities of Michigan	POST-SECONDARY
Saginaw Valley State University	POST-SECONDARY
St. Clair Community College	POST-SECONDARY
University of Michigan	POST-SECONDARY
University of Michigan - Dearborn	POST-SECONDARY
Wayne State University	POST-SECONDARY
Western Michigan University	POST-SECONDARY

Michigan Association of Honor Societies
Michigan Association of Student Councils

Jim Ballard
Executive Director

Todd Burlingham
Coordinator

ADVOCACY
EDUCATION
GUIDANCE
LEADERSHIP

May 7, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

We would like to express Michigan Associations of Student Councils and Honor Societies' (MASC/MAHS) support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education for students by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association representing Michigan's student leaders, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6) [redacted]

Jim Ballard
Executive Director,
Michigan Associations of Student Councils and Honor Societies

STUDENT LEADERSHIP SERVICES
todd@mascmahs.org
www.mascmahs.org

1001 Centennial Way, Suite 100
Lansing, MI 48917

Phone **517.327.5315**
Fax **517.327.5360**

MASC & MAHS are affiliated with the Michigan Association of Secondary School Principals (MASSP).

Michigan PTSA

everychild.onevoice.

Michigan PTSA mobilizes the forces of school, home, and community in order to ensure a quality education and nurturing environment for every child.

May 12, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express support from the Michigan Parent Teacher Student Association (Michigan PTSA) for Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Sandra York
Executive Director

3300 Washtenaw Ave.
Suite 220
Ann Arbor, MI 48104
734-975-9500
734-677-2407 (Fax)
www.michiganptsa.org

A Union of Professionals
AFT Michigan
AFL-CIO

An affiliate of the American Federation of Teachers, AFL-CIO

Teachers
PSRP
Higher Education
Public Employees

MAIN OFFICE
2661 E. Jefferson
Detroit, MI 48207
T: 313/393-2200
800/638-8968
F: 313/393-2236

LEGISLATIVE OFFICE
419 S. Washington, Suite 301
Lansing, MI 48933
T: 517/371-4300
F: 517/371-1922

Northern Michigan Office
2342-B Industrial Street
P.O. Box 172
Grayling, MI 49738
T: 989/348-4191
F: 989/348-4178

www.aftmichigan.org

Letter of Support – Race To The Top Round II

May 10, 2010

As a participant in the collaborative process for developing Michigan's Race To The Top second round application, AFT Michigan submits this letter in support of the application.

We are comfortable supporting the application because it includes principles that we have previously supported like strengthening academic standards; aligning assessment with standards; using research-based best practices; concentrating on addressing the achievement gap; modeling meaningful professional development that address teacher needs; using data to drive instruction; and evaluating teachers and administrators. Moreover, we appreciate that the Framework for Educator Evaluations was incorporated into the application, as well as the frequent acknowledgements of the collective bargaining rights of educational unions.

This application was strengthened by an inclusive process, which benefited from the professional expertise of our union and other educational organizations. While we feel comfortable with the application and encourage our teacher locals to sign off, we also are advising them to examine the application, the Memorandum of Understanding, and Scope of Work closely, and make their choice at the district level.

Sincerely,

(b)(6) [redacted]

David Hecker
President
AFT Michigan

opeiu42aflcio/cj
s:david10/rtttroundII

MEA

Office of the President

Michigan Education Association

1216 Kendale Blvd.
East Lansing, MI 48823
517-332-6551
800-292-1934

May 10, 2010

RE: Letter of Support for *Race to the Top* Round 2 Application

After participation in a collaborative process with the Michigan Department of Education and many other public education stakeholders, the Michigan Education Association has chosen to submit this letter of support for Michigan's second round application for the federal *Race to the Top* program.

After careful consideration of the many adjustments and revisions made since the initial application in January, MEA believes this second application benefits greatly from the inclusion of the expertise and dedication of Michigan's professional educators in our state's efforts to ensure every student gets a world-class education.

Although as a statewide organization we support this application and encourage others to do so as well, Michigan is a local control state – our individual members and their local collective bargaining representatives have the right and authority to decide for themselves whether the application meets their local needs and therefore, whether to support it. We are encouraging them to carefully consider their choice after they thoroughly review the application, the Memorandum of Understanding, and Scope of Work.

MEA and our 155,000 members across the state are pleased to have been able to assist our state Department of Education in developing an application for Race to the Top that has the potential to have a lasting positive impact for Michigan's public school students.

Sincerely,

Iris K. Salters

Iris K. Salters
MEA President

RECEIVED

MAY 12 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Michigan
Mathematics and
Science Centers Network

Building a 21st century workforce by inspiring and nurturing excellence in mathematics and science for all Michigan schools, students, teachers and communities.

January 11, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Michigan Mathematics and Science Center Network's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Connie Duncan, President

the Network Of Michigan Educators

Improving Teaching and Learning by Connecting Recognized Educators as a Resource to Inform Practice, Research, and Policy.

Chair: David Borth, Director, Hawthorn Learning Center, 20609 Madison, Big Rapids, Michigan 49307 231-796-0924

The Network represents over 500 educators from these recognition programs:

- Michigan Teacher of the Year
- Milken National Educator Award
- Presidential Award for Excellence in Mathematics and Science Teaching
- National Board Certification
- Christa McAuliffe Fellowship Program
- Einstein Distinguished Educator Fellowships
- Michigan Elementary-Middle Principal of the Year
- National Distinguished Principal
- Michigan Secondary H.S. Principal of the Year
- Michigan Secondary M.S. Principal of the Year
- Michigan Superintendent of the Year

www.nme-educators.org

Network Collaborative Partners:

- Michigan State Board of Education
- Michigan Department of Education
- Michigan Institute for Educational Management
- Michigan Virtual University
- National Academies of Science, Engineering, and Medicine Teacher Advisory Council

Research
NME
Network Of Michigan Educators
Policy —— Practice

January 11, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
608 W. Allegan Street
Lansing, MI 48933

Dear Superintendent Flanagan:

The Network of Michigan Educators overwhelmingly supports the Michigan application for the federal Race to the Top funds, as well as being fully committed, as engaged stakeholders, in the implementation of the plans in the Michigan application. In a recent "Ask the Network" Survey network members indicated the following:

83 % of the Network strongly agree or agree (7% Neutral, 17% disagree) that the Michigan Race to the Top application represents a critical opportunity for our state to engage in the innovations and fundamental reforms that that will lead to increased student achievement and career readiness. Many of those who disagree believe we are already on the path of high expectations and increased achievement.

85 % of the Network strongly agree or agree (14% Neutral, 1% disagree) that our identity as "...the most important grass roots organization providing input for the Michigan Department of Education" (Superintendent, Mike Flanagan, 12/1/09) gives the NME a unique opportunity to provide primary stakeholder engagement in RTTT implementation at both the state and local level.

71 % of the Network strongly agree or agree (8% Neutral, 21% disagree) with the statement: "I support the RTTT application." Most disagreements were based on feeling rushed into the Race or discomfort with a perceived lack of details and information or frustration with school funding in general.

91 % of the Network strongly agree or agree (8% Neutral, 1% disagree) with the statement: "I will be engaged in the opportunity to shape the future of education in Michigan at the local and/or the state level."

Our members understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

In summary, the Network, both collectively and individually as educational leaders, is in very significant support of the Michigan Race to the Top application and 99% will be actively engaged in its implementation. The full results of the NME "Ask the Network" survey along with member comments can be found on our website at www.nme-educators.org by clicking on "Ask the Network" and then on "RTTT Survey"

Sincerely,

Dave Borth, Chair, The Network of Michigan Educators maisa

Michigan Association of Intermediate School Administrators

1001 Centennial Way
Suite 300
Lansing, MI 48917-9279
Telephone 517-327-9260
Fax 517-327-0779
www.gomaisa.org

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express support by the Michigan Association of Intermediate School Administrators (MAISA) for Michigan's application for the federal Race to the Top funds. As Michigan's regional service agency leaders, our members are committed to supporting and equipping local superintendents as they envision and work toward a public education for Michigan's future. We've worked with the Michigan Association of School Administrators (MASA) on the groundbreaking *Lead Forward* report, which captures this vision and adopts—among others—the goals promoted in the U.S. Department of Education grant to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a proven commitment to improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

William H. Mayes
Executive Director

Leaders for Educational Excellence

Michigan Association of School Administrators

MICHIGAN ASSOCIATION *of* SCHOOL ADMINISTRATORS

The mission of MASA is to develop leadership and unity within its membership to achieve the continuous improvement of public education in Michigan.

Your success — Our passion

Executive Director
William H. Mayes

1001 Centennial Way
Suite 300
Lansing, MI 48917-9279

Phone: 517-327-5910
Fax: 517-327-0779
www.gomasa.org

RECEIVED
JAN 12 2010
SUPERINTENDENT'S OFFICE

January 7, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express support by the Michigan Association for School Administrators (MASA) for Michigan's application for the federal Race to the Top funds. As Michigan's top-level district leaders, our members have been engaged in an 18-month-long process to define a vision for the future of public education in Michigan. Their resulting *Lead Forward* report captures this vision and adopts—among others—the goals promoted in the U.S. Department of Education grant to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a proven commitment to improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

William H. Mayes
Executive Director

RECEIVED
JAN 13 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Mark Palmer
St. Johns High School
President

Jim Ballard
MASSP
Executive Director

MICHIGAN Association of Secondary School PRINCIPALS

ADVOCACY

EDUCATION

GUIDANCE

LEADERSHIP

December 30, 2009

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express The Michigan Association of Secondary School Principals' support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Respectfully,

Jim Ballard

Jim Ballard
Executive Director

1001 Centennial Way Ste. 100
Lansing, Michigan 48917-9279
Phone 517.327.5315
Fax 517.327.5360
www.mymassp.com

MEMSPA
The Principal is the Key

MICHIGAN ELEMENTARY AND MIDDLE SCHOOL PRINCIPALS ASSOCIATION

January 11, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express MEMSPA's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Robert E. Howe, Jr.

Robert E. Howe, Jr.
Executive Director

1980 N. College Road, Mason, MI 48854
517.694.8955 ** Fax 517.694.8945 ** www.memspa.org

RECEIVED
JAN 12 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Michigan School Business Officials

RECEIVED

MAY 11 2010

SUPERINTENDENT'S OFFICE

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the Michigan School Business Officials (MSBO) support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

David Martell

David Martell, CPA
Executive Director

DM/dh

RECEIVED

MAY 11 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

1001 Centennial Way, Suite 200 • Lansing, MI 48917
517.327.5920 • 517.327.0768 Fax • email: msbo@msbo.org • www.msbo.org

macae

Michigan Association
of Community and
Adult Education

4000 North Okemos Road
Okemos, MI 48864

ph: 517-706-5024
fx: 517-349-6643

January 14, 2010

Mike Flanagan
Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
P.O. Box 3008
Lansing, MI 48909

Dear Superintendent Flanagan:

I commend you and your colleagues for taking on what has been an amazing challenge by anyone's standards, particularly at a time when both financial and human resources are so limited in state government. Over the past few years, the Michigan Association of Community and Adult Education (MACAE) has worked closely with your team to identify and resolve barriers to helping our hardest-to-serve high school students, those enrolled in alternative education programs, successfully graduate. The professionalism, follow through, and resourcefulness of the Department of Education's staff and leadership have contributed to many positive steps forward, and perhaps most importantly, the development of a collaborative, trusting relationship built upon a shared mission: keeping the best interest of the individual student at the forefront.

Building upon this foundation, on behalf of MACAE, I am sending this letter of support for Michigan's application for the federal Race to the Top funds. As MDE begins to develop guidelines for implementing the recent school reform legislation that was signed into law by Governor Granholm as part of joint effort to aggressively compete for the Race to the Top funds, MACAE requests that we continue to work together to make sure the resulting guidelines and respective policies that could impact alternative education, before and after school, transition to post-secondary and career preparation, and early care and education programs, benefit from the insight and experience of community educators.

Our community education programs support what is often deemed the hardest-to-serve population, foster a whole family, whole child approach to lifelong learning, and are defined and driven by the needs of the local community. We believe that we could be a very positive contributor to educational reform in Michigan, particularly since sustaining our programs, many which are self-funded, requires constant out-of-the-box thinking, resourcefulness, and building unique partnerships to ensure our students stay in school, graduate from high school and continue on as lifelong learners.

As we have done in striving to attain the high standards set by the Michigan Merit Curriculum and graduation requirements, we want to join you and the many other stakeholders in helping Michigan schools be more globally competitive; turn around low performing schools and programs; attract, retain and reward the most effective teachers and administrators; and develop an integrated, K-20 data system that helps inform and improve decision making, delivery of instruction, and student achievement.

Congratulations on what has already been a very bold endeavor!

Sincerely,

(b)(6)

Katie Wolf
Executive Director

STATE OF MICHIGAN
DEPARTMENT OF ENERGY, LABOR & ECONOMIC GROWTH
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

STANLEY "SKIP" PRUSS
DIRECTOR

May 13, 2010

RECEIVED

MAY 18 2010

SUPERINTENDENT'S OFFICE

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Commission on Spanish Speaking Affairs (COSSA)'s support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We are squarely behind this initiative, and we agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

Lawrence T. Garcia

Lawrence T. Garcia
Chairman

LTG:vmg

Michigan Commission on Spanish Speaking Affairs • 611 W. Ottawa • 4th Floor • Lansing, Michigan 48933
www.michigan.gov/cossa • (517) 373-8339

MASB LeadStrong
Michigan Association of School Boards

Dec. 30. 2009

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Association of School Boards support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Kathleen S. Hayes

Kathy Hayes
Executive Director

1001 Centennial Way, Suite 400
Lansing, MI 48917-8249
P: 517.327.5900
F: 517.327.0775
www.masb.org

AZTEC

RECEIVED

MAY 20 2010

SUPERINTENDENT'S OFFICE

May 17, 2010

Michigan Department of Education
Post Office Box 30008
Lansing, MI 48909

Attn: Mike Flanagan, State Superintendent of Public Education

Dear Superintendent Flanagan,

I would like to express Aztec Manufacturing's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve the K-12 education by:

1. Adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace.

2. Turning around our lowest performing schools.

3. Recruiting, developing, retaining and rewarding effective teachers and principals

4. Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the State's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6)

Francis Lopez
Chairman

AZTEC MANUFACTURING CORPORATION
– QS9000 Registered –
15378 OAKWOOD DRIVE • ROMULUS, MI 48174 • 734-942-7433 • 734-942-9499 FAX • www.aztecmfgcorp.com

Beaumont Hospitals®

May 14, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Beaumont Hospitals' support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As the chief human resource officer for Beaumont Hospitals, I can't emphasize enough the importance of academically preparing Michigan's children in the disciplines of science, technology, engineering and mathematics (STEM). This education is vital if today's students are to fill the shoes of our current health care workforce. Students seeking to become tomorrow's health care professionals from doctors and nurses, to pharmacists, physical therapists and physician extenders must be prepared during K-12 years if they are to be successful in secondary and graduate education programs. That is one reason that Beaumont has partnered with Oakland Schools to host a Saturday Schools series to expose high school students to health care careers.

Corporate Human Resources
3711 W. Thirteen Mile Road
Royal Oak, MI 48073

Race to the Top
May 14, 2010
Page 2

As you are probably aware, Michigan's population age 65 and over is projected to grow from 1.2 million to 1.5 million by the year 2030. In light of this, demand for health care will continue to grow due to the aging population, chronic and acute diseases and end of life care further driving the demand for more heath care professionals in the State.

Preparing our children to succeed will also support continued economic development within the State of Michigan. Healthcare is Michigan's largest private sector employer, directly contributing more than 500,000 jobs and almost $37 billion a year in wages and benefits to the Michigan economy.

As an organization with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will impact all of Michigan's children.

Sincerely,
Beaumont Hospitals

(b)(6)

Ronald P. Lilek
Vice President, Human Resources

CSW
Corporation for a
Skilled Workforce
Good Jobs. Thriving Communities.

900 Victors Way, Suite 350
Ann Arbor, MI 48108
734.769-2900 / Fax 734.769.2950
www.skilledwork.org

Friday, May 14, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I am writing to express Corporation for a Skilled Workforce's strong support of Michigan's application for federal Race to the Top funds. We understand Michigan seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a national nonprofit based in Michigan with a mission to reimagine everything about work and learning for the prosperity of individuals, firms and communities, we recognize the importance of our state receiving this grant. We are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6) [redacted]

Jeannine M. La Prad
President & CEO

Paul Hillegonds
Senior Vice President

Corporate Affairs
One Energy Plaza, Detroit, MI 48226-1221
Tel: 313.235.7266 Fax: 313.235.0232
Email: hillegondsp@dteenergy.com

DTE Energy

RECEIVED

MAY 11 2010

SUPERINTENDENT'S OFFICE

May 5, 2010

Mr. Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

On behalf of DTE Energy Company, I am writing to support Michigan's application for federal Race to the Top funds. We understand that the state is resubmitting a request for grant assistance from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that will develop the state's workforce, fuel education innovation and accelerate student achievement.

As a Michigan-based company with a strong interest in improving the education of Michigan children, we at DTE Energy recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application.

Thank you for your steadfast commitment to school improvement and Michigan's children.

Sincerely,

(b)(6)

Paul Hillegonds

/smw

RECEIVED

MAY 11 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

DetroitRegionalChamber

January 11, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

On behalf of the Detroit Regional Chamber, I would like to express support of Michigan's application for the federal Race to the Top funds. This is an effort to challenge and dramatically improve K-12 education in Michigan, in part, by adopting internationally-benchmarked standards for students; turning around our lowest-performing schools; recruiting, developing, retaining, and rewarding effective teachers and principals; and, building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

The Chamber's mission is to bring business investment to southeast Michigan. Among the criteria that companies look at to make a site selection is the quality of education in a state and region. Michigan does not currently fair well in this regard. Any improvement in this image, as well as the reality, would greatly enhance our efforts to create jobs and increase the tax base of our communities.

There has been an enormous investment of federal taxes in rebuilding our auto companies. They will become profitable again only with a highly skilled workforce at all levels of the corporations. This will be possible if our Michigan schools graduate students who are qualified to compete with workers educated in any country in the world.

This Chamber has always taken a leadership role in improving the education of Michigan children. We recognize the importance of receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Richard E. Blouse, Jr. CCE
President and CEO

Headquarters
One Woodward Avenue
Suite 1900
P.O. Box 33840
Detroit, Michigan 48232-0840
313.964.4000

Lansing
101 S. Washington Sq.
Suite 820
Lansing, Michigan 48933
517.372.2278

www.detroitchamber.com

The Dow Chemical Company
Midland, MI 48674
USA

May 18, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express The Dow Chemical Company's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will impact all of Michigan's children.

Sincerely,

(b)(6)

Tommy Faucheux
Science & Education Leader, North America

DOWDING INDUSTRIES, INC.

503 MARILIN STREET · EATON RAPIDS, MICHIGAN 48827 · PHONE: (517) 663-5455 · FAX (517) 663-0538

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Dowding Industries support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a business with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will impact all of Michigan's children.

Sincerely,

(b)(6)

Jeff Metts
President, Dowding Industries, Inc.
503 Marilin St.
Eaton Rapids, MI 48827
Cell 517-331-4400
Office 517-663-5455
jmetts@dowdingindustries.com

January 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
608 W. Allegan Street
Lansing, MI 48933

Dear Superintendent Flanagan:

I would like to express Ford Motor Company Fund's support of Michigan's application for the Federal Race to the Top funds. As a part of this challenge-grant process, we understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

Race to the Top represents a unique opportunity for Michigan to engage in the fundamental reforms that are needed to fuel education innovation that will accelerate and drive growth in student achievement. Moreover, these changes are critical in developing a workforce in the state that can thrive in a global, knowledge-based economy.

As an organization with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Mike Schmidt
Director, Education and Community Development
Ford Motor Company Fund

GENESEE regional
CHAMBER OF COMMERCE
your partner for growth

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MAY 18 2010
SUPERINTENDENT'S OFFIC

May 17, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the Genesee Regional Chamber of Commerce's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an agency with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6)

Tim Herman
CEO

519 S. Saginaw St. • Suite 200 • Flint, MI 48502 • phone 810.600.1404 • fax 810.600.1461 • www.thegrcc.org

HENRY FORD HEALTH SYSTEM

RECEIVED

MAY 14 2010

SUPERINTENDENT'S OFFICE

May 10, 2010

Nancy M. Schlichting
President and CEO

Executive Offices
1 Ford Place, 5B
Detroit, MI 48202-3450
(313) 876-8708 Office
(313) 876-9243 Fax
ns@hfhs.org

Henry Ford Medical Group

Henry Ford Hospital & Health Network
Henry Ford Hospital
Henry Ford Behavioral Health Services
Maplegrove Center
Kingswood Hospital
Henry Ford Cottage Hospital
Henry Ford Medical Centers

Henry Ford Macomb Hospitals
Clinton Township Campus
Warren Campus
Henry Ford Macomb Health Centers

Henry Ford West Bloomfield Hospital

Henry Ford Wyandotte Hospital
Center for Health Services

Health Alliance Plan
Alliance Health and Life
HAP Preferred
CuraNet

Community Care Services
Henry Ford at Home
Henry Ford Health Products
Hospices of Henry Ford
Henry Ford Extended Care
Henry Ford Home Health Care
Center for Senior Independence
Greenfield Health Systems
Henry Ford Continuing Care
Henry Ford OptimEyes
Henry Ford Pharmacy
Occupational Health

Centers of Excellence
Heart & Vascular Institute
Josephine Ford Cancer Center
Neuroscience Institute
Transplant Institute
Vattikuti Urology Institute

henryford.com

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Henry Ford Health System's support of Michigan's application for the federal Race to the Top funds. We believe Michigan has developed a strong set of reforms to the K-12 education system and would greatly benefit from the support of the U.S. Department of Education through the Race to the Top funding. Amongst others, this funding would help Michigan increase student achievement by linking all assessments to internationally-benchmarked standards for college and career readiness and build data systems to measure student success, providing information for teachers and principals to use in improving their practices. These and other reforms will help with recruiting, developing, retaining, and rewarding effective teachers and principals.

Henry Ford Health System's School-Based and Community Health Program has been working in the Detroit and Warren schools since 1991 to bring primary and preventive care services to the children and adolescents in our school-based health centers. The school-based health center model is a credible venue through which the health care system can impact the educational and thus health opportunities of the area's young people. We have continued to support this Program because we recognize the link between the health of the young person and his/her academic performance.

We believe that our work in the schools in Detroit and Warren is a fundamental ingredient to the educational and life success for the young people we serve. We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

RECEIVED

MAY 14 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

E N V I S I O N *the next 100 years.*

Henry Ford
HEALTH SYSTEM

Henry Ford Health System has a vested interest in improving the education of Michigan youth and we recognize the importance of the Race to the Top funding in implementing these reforms. We are committed to supporting the State in the implementation of these proposals and look forward to witnessing the positive impact on all of Michigan's youth as a result.

Sincerely,

(b)(6)

Nancy Schlichting
President and CEO

Kellogg's®

David Mackay
President
Chief Executive Officer

May 13, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Kellogg Company's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a business with its headquarters based in Michigan, we have a vested interest in improving the education of Michigan children. It is critically important that our state receives this grant, and we are committed to supporting the implementation of proposals outlined in our state application which will impact all of Michigan's children.

Thank you for your consideration.

Sincerely,

(b)(6)

A.D. David Mackay
President and Chief Executive Officer

Kellogg Company / Corporate Headquarters
One Kellogg Square / PO Box 3599 / Battle Creek, MI 49016-3599 / (269) 961-2000

MIAT
MICHIGAN INSTITUTE OF AVIATION AND TECHNOLOGY

May 18, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express MIAT's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6)

Kevin Burchett
Campus President - Michigan

MAIN CAMPUS 2955 S Haggerty Road • Canton, Michigan 48188 • 800.447.1310 • Fax 734.858.5000
SATELLITE CAMPUS 17757 Woodland Drive • New Boston, Michigan 48164 • 734.753.9101 • Fax 734.753.9105
www.miat.edu

Steelcase

Brian Cloyd
Vice President, Global Corporate Relations

May 18, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Steelcase's support of Michigan's application for the federal Race to the Top funds. We appreciate and support the state seeking a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

As a global organization dealing with competitive business environments requiring highly educated employees, the Race to the Top represents a critical opportunity for the people of Michigan. The need for fundamental reforms are critical to the development the state's workforce which will fuel education innovation and systemic change that will accelerate and drive growth in student achievement.

As a corporation with significant hands-on involvement and investment in improving the education of Michigan children, we recognize the importance of our state receiving this grant. Steelcase Inc. is already a committed partner who will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6) [redacted]

Brian

Steelcase Inc. • Mail Code: GH.4E, P.O. Box 1967, Grand Rapids, MI 49501-1967 • USA www.steelcase.com
O: 616.475.2009 F: 616.475.2599 bcloyd@steelcase.com

MAPSA
Michigan Association of Public School Academies

215 S. Washington Square
Suite 135
Lansing, MI 48933
517.374.9167 p
517.374.9197 f
www.charterschools.org

January 8, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express MAPSA's support of Michigan's application for the federal Race to the Top funds. We understand the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1. Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;
2. Turning around our lowest-performing schools;
3. Recruiting, developing, retaining, and rewarding effective teachers and principals;
4. Building data systems that measure student success and inform teachers and principals how they can improve their practices; and
5. Promoting the expansion of high quality public charter schools.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant.

We are committed to working with you and other key stakeholders to make Michigan's students globally competitive.

Sincerely,

(b)(6)

Dan Quisenberry
President

RECEIVED
JAN 0 8 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

THE COUNCIL

.C

January 5, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

The Michigan Council of Charter School Authorizers supports Michigan's application for Race to the Top grant. Recent bipartisan efforts by the legislature instituted a framework of reforms which support the criteria for Race to the Top funding and allows:

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

In addition, the legislature established a mechanism to create more high performing charter schools, also a criteria in the Race to the Top guidelines.

Race to the Top funding will allow the state to leverage the new reforms enacted by the legislature which are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

The Michigan Council of Charter School Authorizers has been actively working in the state to improve education and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Billie Kops Wimmer
Executive Director

Michigan Council of Charter School Authorizers /
201 Townsend / Suite 900 / *Lansing*, MI 48893
P. 517.487.4848 / F. 517.487.4855 / www.mccsa.us

Middle Cities
EDUCATION ASSOCIATION

826 Municipal Way
Lansing, MI 48917
Ph. 517.492.1380
Fax 517.492.1368
www.middlecities.org

January 11, 2010

Michael Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
P.O. Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I am writing this letter on behalf of the Middle Cities Education Association (MCEA) in support of Michigan's current education reform efforts and its application for federal Race to the Top (RTTT) grant funds. MCEA understands that it is critical for the state to build capacity to implement, scale up, and sustain any proposed reform plans in order for those efforts to yield positive results and for the state to successfully apply for federal RTTT grant funds. Only with support from a broad group of stakeholders, including Middle Cities and our member districts, will our state reach both of these goals.

As we move forward, there are three aspects of Michigan's current reforms that are of particular importance to MCEA – closure of achievement gaps, equitable distribution of educators, and the turnaround of the lowest-performing schools. These three issues were repeatedly cited by state and federal officials as important reasons to adopt and implement major reforms in December. It is essential that the new policies to address these challenges are carefully vetted and integrated with one another so that these priorities are addressed effectively.

MCEA looks forward to working with the Michigan Department of Education (MDE) to implement these and other reforms approved by the legislature as well as the plan developed for the RTTT application. Given the scale of the changes that will take place as a result of recent legislation and the RTTT application, there will certainly be a great deal of work to be done in order to decipher the intent of lawmakers and to strategize how best to implement changes at the local school level. MCEA is eager to assist MDE as well as our member districts to reach the goal of increasing academic achievement of all of our students in Michigan.

Sincerely,

(b)(6)

Ray Telman
Executive Director
Middle Cities Education Association

RECEIVED

JAN 12 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Children's Trust Fund
Protecting Michigan's Children

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Children's Trust Fund's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Michael Foley
Executive Director
Children's Trust Fund of Michigan

P.O. Box 30037 • Lansing, MI 48909 • 1-800-CHILDREN • www.michigan.gov/ctf

Great Starts Here

ECIC

Early Childhood
Investment Corporation

May 5, 2010

Mr. Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Mike

Dear Superintendent Flanagan:

I would like to express ECIC's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

Although the mission of ECIC and Great Start focuses on preparing young children for success in school and in life, we recognize that the long-term outcomes we strive for are significantly impacted by the experiences of children as they progress through the K-12 system. Therefore, we agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an organization with a vested interest in improving the education of Michigan children, the ECIC has partnered with the Michigan Department of Education to support Project ReImagine sites through our ReImagine Early Years initiative, which focuses on developing innovative prenatal through age 8 systems of educational supports and services. As such, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Judy Y. Samelson
Chief Executive Officer

221 N. PINE
LANSING, MI 48933
517.371.9000 PH
517.371.9080 FX
www.ecic4kids.org

HIGHSCOPE®
INSPIRING EDUCATORS to INSPIRE CHILDREN

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express HighScope's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace

2) Turning around our lowest-performing schools

3) Recruiting, developing, retaining, and rewarding effective teachers and principals

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a strong interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6) [redacted]

Lawrence J. Schweinhart, Ph.D.
President

HighScope Educational Research Foundation
600 North River Street • Ypsilanti, Michigan 48198-2898 • Ph: 734.485.2000 • Fax: 734.485.0704 • highscope.org

May 12th, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Head Start Collaboration Office's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

This is a unique opportunity that collectively we share a vested interest in improving the education of Michigan children, and recognize the importance of our state receiving this grant. The Head Start Collaboration Office is committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Jeremy C Reuter, Director
Head Start Collaboration Office

Great Starts Here
ECIC
Early Childhood
Investment Corporation

MSDC
MICHIGAN STAFF DEVELOPMENT COUNCIL

RECEIVED
JAN 1 2 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

January 8, 2009

Mike Flanagan, State Superintendent of Public Instruction

Michigan Department of Education

Attention: Race to the Top

Post Office Box 30008

Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Staff Development Council's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan school districts to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a professional organization with a vested interest in improving the education of Michigan children and the professional learning of the adults serving them, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder

Michigan Staff Development Council www.nsdconline.org PO Box 80446, Lansing, MI 48908

group that will support the implementation of proposals outlined in our state application. The Michigan Staff Development Council is also fully committed to contributing to the implementation of the proposals in our state's application, including the building of a system for professional development that supports the learning of Michigan educators.

Sincerely,

(b)(6)

Amy B. colton

Executive Director

Michigan Staff Development Council www.nsdconline.org PO Box 80446, Lansing, MI 48908

Appendix A.6

bfd inc. BLACK FAMILY DEVELOPMENT INC.

BLACK FAMILY DEVELOPMENT INC.

2995 E. Grand Boulevard • Detroit, Michigan 48202 • (313) 758-0150 • Fax # (313) 758-0255

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MAY 11 2010

SUPERINTENDENT'S OFFICE

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MAY 11 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

May 10, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

Black Family Development, Inc. is pleased to provide this letter of support for Michigan's application for the federal Race to the Top funds. We support the desire of the State to secure grant dollars from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

It is unquestionable that the Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

Black Family Development, Inc. has been intimately involved for the last 20 years in several prominent educational reform initiatives, and continues to be intimately involved with other key stakeholders in the region who have a vested interest in improving the education of Michigan children. We strongly believe that receiving federal Race to the Top funds will help Michigan achieve innovative educational growth in student achievement. We are committed to supporting the implementation of proposals outlined in our state application which will impact all of Michigan's children.

Sincerely,

(b)(6)

Alice G. Thompson

CHARLES STEWART
MOTT FOUNDATION

May 17, 2010

Superintendent Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the C. S. Mott Foundation's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) turning around our lowest-performing schools;

3) recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an institution with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

An-Me Chung, Ph.D.
Program Officer

AMC:clb

MOTT FOUNDATION BUILDING 503 S. SAGINAW ST., STE 1200, FLINT, MI 48502-1851 (810) 238-5651 FAX (810) 766-1753
E-MAIL: info@mott.org WEB SITE: Mott.org

Hispanic Bar Association of Michigan

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MAY 20 2010

SUPERINTENDENT'S OFFICE

May 17, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Commission on Spanish Speaking Affairs (COSSA)'s support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We are squarely behind this initiative, and we agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6)

Lawrence T. García
Chairman

January 8, 2010

To Whom it May Concern,

This letter is in support of the State of Michigan's application for Race to the Top.

The Michigan After-School Partnership (MASP) is an established state-wide coalition and network for ensuring that high quality expanded learning opportunities exist for all Michigan students. Since 2004, MASP has worked with Michigan's Departments of Education, Human Services, Community Health and Energy, Labor and Economic Growth to improve access and quality of out-of-school time programs for all Michigan students. We have state-wide connections and have put into place standards, professional development and credentialing efforts to advance the quality of out of school time opportunities in Michigan.

The MASP network has established an initiative focusing on building the capacity of Michigan' out-of-school time programs to offer Science, Technology, Engineering and Math (STEM) activities. Our goal is to increase access and the quality of programs in the STEM areas and improve the capacity of programs throughout the state to address and offer them. Since 2008, efforts have included the development of a state-wide survey to build a data base of programs. Partnering with Michigan Math and Science Centers, efforts have also been linked to the National Coalition for Afterschool Science. The National Partnership for Afterschool Science (NPASSS) has been assisting our efforts in the development of an expanded learning professional development system for STEM programs in our state.

The evidence clearly shows that afterschool programs are effective in helping students learn by providing expanded learning opportunities that help them succeed academically, socially and professionally. We are pleased to offer our support and assistance to ensuring that all Michigan students have access to high quality after-school programs and STEM activities that will improve student success.

Sincerely,

(b)(6)

Mary B. Sutton
Executive Director
Michigan After-School Partnership

1627 Lake Lansing Road, Lansing, MI 48912 | Web: www.MIafterschool.org
Phone: 517-371-4360 x17 | Fax: 517-371-5860 | Email: msutton@uwmich.org

NEW DETROIT
The Coalition

SHIRLEY R. STANCATO, *President & CEO*

May 18, 2010

Mr. Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

New Detroit supports Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate growth in student achievement.

As an organization that has worked to improve educational outcomes for children in Southeast Michigan for more than 40 years, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will impact all of Michigan's children.

(b)(6)

Shirley R. Stancato
President & CEO

3011 W. Grand Boulevard, Suite 1200, Detroit, Michigan 48202 • sstancato@newdetroit.org • Phone 313.664.2000 • Fax 313.664.2005

The Skillman
FOUNDATION

100 TALON CENTRE DRIVE
SUITE 100
DETROIT, MI 48207
(313) 393-1185
FAX: (313) 393-1187

May 12, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

On behalf of the Skillman Foundation in Detroit, I would like to express our support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

Race to the Top represents not only a critical opportunity for Michigan but for Detroit, to engage in the fundamental reforms that are needed to fuel the education innovation that will accelerate and drive growth in student achievement.

The Skillman Foundation works in the City of Detroit to ensure every child is safe, healthy, well-educated and prepared for adulthood and is the largest private investor in Detroit Public Schools. We have a long history of engaging in educational reform initiatives and have learned many lessons from our work. Detroit faces a number of challenges in its educational system. Recent developments in the city have helped shape the landscape into a fertile ground for innovation and reform. A broad-based coalition representing agencies from the private and public sectors to create a strategic education plan to improve student achievement across Detroit. This coalition, Excellent Schools Detroit, pledged to take the steps necessary to ensure that by 2020, Detroit would be the first major U.S. city in which 90 percent of students graduate from high school, 90 percent enroll in a quality postsecondary education, and 90 percent of enrollees are prepared to succeed without remediation. The Foundation and our partners in education reform believe now is the time to improve the education of all children. We recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6)

Carol A. Goss
President & Chief Executive Officer

LIVE UNITED

United Way

United Way
for Southeastern Michigan

680 Woodward Ave., Suite 300
Detroit, MI 48226-1899
Phone: 313.226.9200
Fax: 313.226.9210
Web: www.LiveUnitedSEM.org

January 11, 2009

Mr. Mike Flanagan,
State Superintendent of Public Instruction
Michigan Department of Education
608 W. Allegan Street
Lansing, Michigan 48933

Dear Superintendent Flanagan:

Please accept this letter as the United Way of Southeastern Michigan's enthusiastic statement of support for Michigan's application for the federal Race to the Top funds.

Two of the four ten-year goals on our community scorecard are directly connected with this application. Those goals are 1) to increase graduation rates from less than 60% to higher then 80% at the 30 high schools in our region known as "dropout factories" and 2) to increase kindergarten readiness rates from 50% to 80% for the 40,000 children aged 0 to 5 in eight communities across Detroit and its suburbs that have the highest concentrations of children and families in poverty.

As you know, we are working closely with civic and community leaders, as well as with Robert Bobb, the Emergency Financial Manager for Detroit Public Schools, and Detroit Mayor Dave Bing, to develop and drive a plan that will make excellent schools a reality for all children in our region. A major portion of that plan involves the Four Assurances required in the Race to the Top application. We see this as a unique time to leapfrog the process of other states and cities, which couldn't be more critical in light of the recent NAEP scores.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement. We look forward to getting the real work done with you when the application is complete.

In partnership,

(b)(6)

Michael J. Brennan
President & CEO

Urban League of Detroit
& Southeastern Michigan

208 Mack Avenue
Detroit, MI 48201

P 313/832-4600
F 313/832-3222

www.deturbanleague.org

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MAY 13 2010

SUPERINTENDENT'S OFFICE

Empowering Communities.
Changing Lives.

May 11, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

On behalf of the Urban League of Detroit & Southeastern Michigan, I would like to express our support of our state's application for federal Race to the Top funds. We understand that the State of Michigan is seeking a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and advise teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms needed to develop Michigan's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an organization with a vested interest in improving the education of children in Michigan, we recognize the significance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in this application which will impact all of Michigan's children. We look forward to sharing in your successful efforts.

(b)(6)
[redacted]

N. Charles Anderson
President/CEO

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MAY 13 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

A United Way Agency
Affiliated with the National Urban League

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the W.K. Kellogg Foundation's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

(b)(6) [redacted]

Sterling K. Speirn
President & CEO
W.K. Kellogg Foundation

W.K. KELLOGG FOUNDATION

One Michigan
Avenue East
Battle Creek, MI
49017-4012
USA
269-968-1611
TDD on site
Facsimile: 269-968-0413
www.wkkf.org

The W.K. Kellogg Foundation supports children, families, and communities as they strengthen and create conditions that propel vulnerable children to achieve success as individuals and as contributors to the larger community and society.

Congress of the United States
Washington, DC 20515

May 18, 2010

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

Dear Secretary Duncan,

We are writing you in support of the state of Michigan's application to the Department of Education's Race to the Top Fund. The state of Michigan passed a series of significant educational reforms over the past year and stands ready to implement these changes with the funding available through Race to the Top.

Race to the Top represents a critical opportunity for Michigan to develop and fuel educational innovation, as well as accelerate growth in student achievement. Michigan is committed to preparing its students to become productive members of the 21st Century job force.

Though we were disappointed Michigan did not receive funding in the first round of applications, Michigan has made several changes and improvements to its second round application. This round has provided Michigan the ability to promote greater involvement from all of the stakeholders such as labor, management and higher education institutions. In fact, this application has received the endorsements of several key groups, including the Michigan Education Association and the Michigan Federation of Teachers, demonstrating a commitment from stakeholders across the board.

Michigan has felt the current economic crisis long before many other parts of the country and we will certainly feel it longer than most. We also continue to struggle with an unemployment rate of more 14 percent. Despite our struggles, we continue to focus on investing in innovative education so we can emerge from this challenging time stronger and with a workforce that is better prepared to meet the needs of a 21st century economy.

Michigan has often been highly regarded for its high standards in education. We have developed world class students and we will continue to do so. We believe that Michigan has been a national model for state standards, which embodies the core principal of Race to the Top – to set the bar high and help our students achieve.

Race to the Top would provide an infusion of resources to help our state carry out important reforms and changes to the Michigan education system. We believe that with these funds Michigan can become a model for public education programs for the rest of the country.

We appreciate your consideration of Michigan's application to the Race to the Top Fund and urge your full and complete consideration.

Sincerely,

MICHIGAN WORKS!

A Private-Public Partnership Serving Kalamazoo and St. Joseph Counties
222 S. Westnedge Avenue, Kalamazoo, Michigan 49007-4628

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MAY 17 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

May 13, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

On behalf of the Workforce Development Board representing Kalamazoo and St. Joseph Counties, I would like to express our support of Michigan's application for federal Race to the Top funds. We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement; close the achievement gap; increase high school graduation rates; and increase student readiness for post-secondary education.

The view that higher levels of educational attainment are linked to higher incomes, less unemployment, less poverty and less reliance on public assistance is supported by a recent study "Goals for the Common Good: Exploring the Impact of Education":

- "The median annual earnings of Americans 25 and over who did not complete high school are less than $18,500, while those who completed high school typically earn $26,000. College graduates earn $44,000 annually, and those with a graduate or professional degree typically earn $57,500."
- "The less education a person has, the more likely he or she is to be unemployed. A high school dropout is four times more likely to be unemployed than a college graduate."
- "Education is the single most important factor in the determination of a person's poverty status. Almost 24 percent of the adult population without a high school diploma is poor, compared to 11 percent of those who are high school graduates and only 3.6 percent of college graduates."

We understand the State of Michigan seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

As an organization with a vested interest in improving the education of Michigan children and the training of our State's future workforce, we recognize the importance of our State receiving this grant and are committed to supporting the implementation of proposals outlined in our State application which will positively impact all of Michigan's children.

Sincerely,

(b)(6) [redacted]

Robert A. Straits
Director, MWA

MICHIGAN WORKS!

A private-public partnership
administered locally by the Macomb/St. Clair Workforce Development Board

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MAY 1 8 2010

SUPERINTENDENT'S OFFICE

May 17, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the Macomb/St. Clair Workforce Development Board's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6)

John H. Bierbusse
Executive Director

ADMINISTRATIVE OFFICE

VerKuilen Building
21885 Dunham Road, Suite 11
Clinton Township, MI 48036-1030
(586) 469-5220
FAX (586) 469-7488

CUSTOMER CENTERS

75 North River Road
Mt. Clemens, MI 48043
(586) 469-7702
FAX (586) 469-5062

15560 12 Mile Road
Roseville, MI 48066
(586) 447-9200
FAX (586) 447-9238

43630 Hayes Road
Clinton Township, MI 48038
(586) 263-1601
FAX (586) 286-9517

100 McMorran Boulevard
6th Floor
Port Huron, MI 48060
(810) 966-3300
FAX (810) 965-3337

27850 Van Dyke
Warren, MI 48093
(586) 574-2178
FAX (586) 576-0576

STATE OF MICHIGAN

JENNIFER M. GRANHOLM
GOVERNOR

DEPARTMENT OF ENERGY, LABOR & ECONOMIC GROWTH
LANSING

STANLEY "SKIP" PRUSS
DIRECTOR

May 18, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Council for Labor & Economic Growth's (CLEG) support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

CLEG serves as the state's workforce investment board, charged with supporting Michigan's employers and citizens through strategies that ensure a well-trained, well prepared workforce. We see this application as a step in the path to achieving that goal. CLEG is committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

John E Mogk

John Mogk, Chair
MI Council for Labor & Economic Growth

COUNCIL FOR LABOR & ECONOMIC GROWTH
VICTOR OFFICE CENTER • 201 N. WASHINGTON SQUARE, 1ST FLOOR • LANSING, MICHIGAN 48913
www.michigan.gov/cleg • (517) 241-8408 • FAX (517) 335-7773

SER
METRO-DETROIT
JOBS FOR PROGRESS, INC.

Main Office

9301 Michigan Avenue
Detroit, MI 48210
(313) 846-2240
Fax (313) 846-2247

Additional Office

9215 Michigan Avenue
Detroit, MI 48210
(313) 945-5200
Fax (313) 945-1566

MICHIGAN WORKS!
A Michigan Works! Affiliate

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MAY 20 2010
SUPERINTENDENT'S OFFICE

May 13, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

SER Metro-Detroit wholeheartedly supports Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to turn around and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

SER believes that Race to the Top represents a critical opportunity for Michigan to fuel education innovation that will accelerate and drive growth in student achievement. We are especially certain that this project will lead to fundamental reforms that are needed to develop the state's workforce for emerging jobs of the future!

Our organization has a vested interest in improving the education of Michigan children, and the state receiving this grant is critical to the workforce development activities and services that SER provides. Thus, SER is totally committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Please do not hesitate to call me if SER can be of any assistance on this desperately needed project; (313) 846-2240 x290 or 228.

Sincerely,

(b)(6)

Eva Garza Dewaelsche
President and CEO

Funded in part by the Michigan Department of Labor and Economic Growth and the City of Detroit Workforce Development Department. An Equal Opportunity Employer/Program. Auxiliary aids and services available upon request to individuals with disabilities. All are welcome. TTY Number: 1-800-649-3777.

SOUTH CENTRAL MICHIGAN WORKS!™

For Business. For Opportunity. For *You!*

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MAY 14 2010

SUPERINTENDENT'S OFFICE

Administrative Office
310 West Bacon Street
Hillsdale, MI 49242
(517) 437-0990
Toll-Free (888) 649-6757
FAX (517) 439-4388
Michigan Relay Center:
(800) 649-3777

Hillsdale County
21 Care Drive
Hillsdale, MI 49242
(517) 437-3381
FAX (517) 437-4128

Jackson County
Commonwealth
Commerce Center
209 E. Washington Ave.
Suite 100
Jackson, MI 49201
(517) 841-5627
FAX (517) 782-0140

Lenawee County
Lenawee County
Human Services Bldg.
1040 S. Winter Street
Suite 1014
Adrian, MI 49221
(517) 266-5627
FAX (517) 266-2745

May 12, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

On behalf of the South Central Michigan Works! Workforce Development Board, I would like to express our support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an organization with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children and our future workforce.

Respectfully,

(b)(6)

Christine Quinn
President

RECEIVED

MAY 14 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Appendix A.6

MICHIGAN WORKS! ™
WEST CENTRAL

LARRY EMIG
Chairperson, Local Elected Officials
SHERI THOMPSON
Chairperson, Workforce Development Board
PAUL J. GRIFFITH
Executive Director

14330 Northland Drive • Big Rapids, Michigan 49307 • 231.796.4891 • Fax: 231.796.8316 • www.michworkswc.org

May 14, 2010

RECEIVED
MAY 20 2010
SUPERINTENDENT'S OFFICE

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

This is to indicate our support on behalf of the Workforce Development Board and Local Elected Officials for the West Central Michigan Works! area, to Michigan's application for federal Race to the Top funds.

As you know, the state's workforce development system helps workers with retraining and skill attainment to meet the current and future needs of employers, to be successful in the world class economy. These activities are part of a larger effort that begins in our public schools, and while Michigan has made great strides in adopting high standards and relevant training and measurements, there remains much to be accomplished in the ongoing effort to raise the skill level of our children.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

Michigan Works! represents both employers and job seekers who have a huge stake in improving the education of Michigan children. We recognize the importance of receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

(b)(6)

Sheri Thompson, Chair Workforce Development Board	Larry Emig, Chair Local Elected Officials

Our Mission: "To continually improve a Workforce Development System that produces a workforce with the required skills to attract, retain and expand business and enhance our regional economy."

MIDLAND COUNTY
ESA
EDUCATIONAL SERVICE AGENCY

RECEIVED
JAN 13 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

January 11, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Midland County Educational Service Agency's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Clark E. Volz

Clark Volz
Superintendent

RECEIVED
JAN 13 2010
SUPERINTENDENT'S OFFICE

3917 Jefferson Ave., Midland, MI 48640-3599
(989) 631-5890
Fax (989) 631-4361

HOUSE OF REPRESENTATIVES
STATE OF MICHIGAN

CAPITOL BUILDING
P.O. BOX 30014
LANSING, MI 48909-7514
OFFICE: (517) 373-0857
TOLL-FREE: (888) REPDILLON

ANDY DILLON
SPEAKER OF THE HOUSE

January 13, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
PO Box 30008
Lansing, MI 48909

Re: Support for Michigan's "Race to the Top" application

Dear Superintendent Flanagan:

We are writing this letter in support of Michigan's application for the federal Race to the Top funds.

The Michigan Legislature has taken significant steps towards ensuring we qualify for a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education. The Michigan House has worked towards implementing ways to: adopt new standards and assessments that prepare students for success in college and the workplace; turn around our lowest-performing schools; recruit, develop, retain, and reward effective teachers and principals; and, build data systems that measure student success and inform teachers and principals how they can improve their practices.

Through our legislative actions we are establishing education reforms that will dramatically improve Michigan schools and prepare students for 21st century jobs. With these improvements we are placing ourselves in direct contention to receive a share of more than $4 billion in education funding made available through the federal "Race to the Top" program.

It is essential that our state does all it can to qualify for this grant and we are fully committed to supporting the implementation of proposals outlined in our state application.

Thank you for your kind attention to this matter.

Regards,

Andy Dillon
Speaker of the House
Michigan House of Representatives

Tim Melton
House Education Chair
Michigan House of Representatives

Michigan Senate

Michael D. Bishop

State Senator

Senate Majority Leader

12TH DISTRICT
LANSING OFFICE: (517) 373-2417
TOLL-FREE: (877) 9-BISHOP (24-7467)
FAX: (517) 373-2694
E-MAIL: senmbishop@senate.michigan.gov

May 7, 2010

Mr. Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
P.O. Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

As the Senate Majority Leader and the Chair of the Senate Education Committee, we are writing to strongly support Michigan's Race to the Top application.

Michigan's recently enacted education reform package represents decisive bi-partisan legislative action to adopt significant reforms that will result in dramatic improvement of the ability of Michigan students to successfully compete in the 21st Century. These reforms also comply with the Race to the Top guidelines as defined by the U.S. Department of Education.

This legislation, along with cooperative activity on the part of the Michigan Department of Education, is meant to dramatically reform and improve K-12 education by:

1. Adopting internationally benchmarked standards and assessments that prepare students for success in college and the workplace;

2. Turning around our lowest-performing schools;

3. Recruiting, developing, retaining, and rewarding effective teachers and principals; and

4. Building data systems that measure student growth and success and inform teachers and principals as to how they can improve instruction.

The Race to the Top education reforms reflect critical transitional changes to education in Michigan. These fundamental reforms were needed to promote education innovation, accelerate growth in student achievement, and turn around failing schools.

Mr. Mike Flanagan
Page Two
May 7, 2010

We especially support Michigan's plan to empower local districts and, if necessary, a state reform officer to implement changes at the building level to ensure the most highly qualified teachers are matched with the students who need the most help. We look forward to those students receiving the extra intervention needed to assist in raising their academic achievement to a high level. All parties need to work together to achieve these goals.

We hope that the Common Core State Standards Initiative will consider Michigan's K-12 and high school graduation standards in their deliberations. Their rigor and effectiveness in preparing students for college and the global economy are among the highest in the nation.

As elected officials responsible for improving the education of Michigan children, we recognize the importance of these bipartisan-enacted reforms signed into law by Governor Granholm. We are committed to continue our legislative oversight to make sure that these reform provisions are implemented by the educational community as mandated by law and as further detailed in our state application.

Sincerely,

Michael D. Bishop
Majority Leader
State Senator, 12th District

Wayne Kuipers
State Senator, 30th District
Chair, Senate Education Committee

CITY OF DETROIT
MAYOR'S OFFICE

COLEMAN A. YOUNG MUNICIPAL CENTER
2 WOODWARD AVE., SUITE 1126
DETROIT, MICHIGAN 48226
PHONE: 313•224•3400
FAX: 313•224•4128
WWW.DETROITMI.GOV

May 07, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

The City of Detroit supports Michigan's application for the federal "Race to the Top" funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We are also in agreement that "Race to the Top" represents a critical opportunity for Michigan to engage in the fundamental reforms needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As you are aware the City of Detroit has a vested interest in improving the education of Michigan children, and recognizes the importance of our state receiving this grant and is committed to supporting the implementation of proposals outlined in the state application, which will impact ***all*** of Michigan's children.

Sincerely,

Dave Bing

Dave Bing,
Mayor

DB:KL/rdc:

Cc: file

ALPENA
COMMUNITY COLLEGE

Office of the President

665 Johnson Street
Alpena, MI 49707-1495
(989) 358-7246
FAX (989) 358-7553
Website: www.alpenacc.edu

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MAY 1 9 2010

SUPERINTENDENT'S OFFICE

May 17, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the support of Alpena Community College for Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1. Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace.

2. Turning around our lowest-performing schools.

3. Recruiting, developing, retaining, and rewarding effective teachers and principals.

4. Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a community college with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

Olin Joynton
President

CC: Trustee Florence Stibitz, Alpena Community College
President Mike Hansen, Michigan Community College Association

Bay Mills Community College

January 4, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

Bay Mills Community College would like to express our support of Michigan's application for the federal Race to the Top funds. We understand that the state is seeking a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that the Race to the Top Program represents a critical opportunity for Michigan to undertake the fundamental reforms that are needed to develop the state's education reform, which will accelerate and drive growth in student achievement.

As a Tribally controlled community college with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Michael C. Parish

Michael C. Parish, President

RECEIVED

JAN 07 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

12214 W. Lakeshore Drive • Brimley, MI 49715 • 1-800-844-BMCC (2622) • Fax (906) 248-3351 • www.bmcc.edu

CMU
CENTRAL MICHIGAN UNIVERSITY

COPY

January 5, 2010

RECEIVED
JAN 07 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

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

Dear Secretary Duncan:

Central Michigan University (CMU) is pleased to support the State of Michigan's application for the federal Race to the Top (RTTT) grant and will continue to provide leadership in furthering RTTT's goal of increasing the availability of high-quality charter schools for high-needs students.

Founded in 1892, CMU has a proud history of improving public education by preparing teachers and school leaders. In 1994, CMU became the first public body in Michigan, and the first university in the nation, to charter a public school. Today, CMU charters a portfolio of 58 schools that operate at 77 sites and serve more than 30,000 students – over two thirds of whom are high-needs. More importantly, student achievement data shows that the schools chartered by CMU are consistently outperforming their comparable host districts in key academic areas, and are making real progress in closing the achievement gap.

To lead our charter school efforts and fulfill our authorizing obligations, CMU established The Center for Charter Schools, which has earned a gold standard reputation for its work in chartering schools, overseeing their performance, and holding them accountable for their performance. CMU is also home of the National Charter Schools Institute, a non-profit organization that specializes in board governance and helping charter school operators deliver exceptional results for students and taxpayers.

The work that we have done is having a transformational impact on public education in Michigan, and much of it directly aligns with the goals of RTTT and could be further leveraged. For example, we have pioneered new assessments that measure student growth over time and provide targeted feedback to teachers and administrators for improving student performance. We have also developed systems for ensuring that schools are governed and managed in the best interest of students and parents, and we created a software system called AOIS that is now being used around the country to streamline and automate the regulatory reporting process so that school leaders can spend more time focusing on their primary mission of educating students. More detailed information on what we do and the impact that it is having can be found online at www.thecenterforcharters.org/racetothetop.

From our founding to today, CMU has been committed to quality and improving public education for all students. We are excited about the vision you outlined in RTTT and would be pleased to work with you and the State of Michigan to help make your vision a reality for students and educators in Michigan and beyond.

Sincerely,

Kathleen M. Wilbur

Kathleen M. Wilbur
Interim President

RECEIVED
JAN 07 2010
SUPERINTENDENT'S OFFICE

c: Michael P. Flanagan, Superintendent of Public Instruction
James N. Goenner, Executive Director, Charter Schools

OFFICE OF THE PRESIDENT • PHONE (989) 774-3131
CENTRAL MICHIGAN UNIVERSITY • MOUNT PLEASANT, MICHIGAN 48859

EASTERN MICHIGAN UNIVERSITY

January 5, 2010

RECEIVED

JAN 07 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Mr. Michael P. Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
P. O. Box 30008
Lansing, Michigan 48909

Dear ~~Superintendent~~ Mike Flanagan:

I would like to express Eastern Michigan University's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and school leaders; and,

4) Building information systems that more accurately assess/measure student performance and inform teachers and school leadership on how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed stakeholders who will support the implementation of proposals outlined in our state application.

Sincerely,

Sue

Susan W. Martin
President

RECEIVED

JAN 07 2010

SUPERINTENDENT'S OFFICE

Office of the President • 202 Welch Hall • Ypsilanti, Michigan 48197
Phone: 734.487.2211 • FAX: 734.487.9100

RECEIVED

JAN 1 2 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

FERRIS STATE UNIVERSITY
OFFICE OF THE PRESIDENT

January 7, 2010

RECEIVED

JAN 1 1 2010

SUPERINTENDENT'S OFFICE

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

Ferris State University supports the State of Michigan's application for federal Race to the Top funds. For 125 years, Ferris State University has provided higher education opportunities to a diversity of students. The words and deeds of the founder of our great institution, Woodbridge N. Ferris, was and is the inspiration for our efforts. Mr. Ferris said, "In America, our slogan ought to be Education for all the people all of the time."

It is my understanding that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

The Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement. Succinctly stated, it is an essential element in Michigan's efforts to "educate all of the people all of the time."

FERRIS 125

1201 S. State Street, CSS 301
Big Rapids, MI 49307-2747

Phone: (231) 591-2500
Web: www.ferris.edu

As an institution with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application. Both our College of Education and Human Services and our Charter Schools Office stand ready to assist.

Sincerely,

David L. Eisler
President

c: Fritz Erickson, Provost and Vice President for Academic Affairs
Lawrence Wells, Director, Charter Schools Office

GRCC

Steven C. Ender, Ed.D.
President

RECEIVED

MAY 18 2010

SUPERINTENDENT'S OFFICE

May 12, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan,

I would like to express Grand Rapids Community College's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

Steven C. Ender, Ed.D
President

Grand Rapids Community College

143 Bostwick Avenue, NE • Grand Rapids, Michigan 49503-3295 • ph: (616) 234-3901 • fax: (616) 234-3907 • www.grcc.edu

GRAND VALLEY STATE UNIVERSITY
COLLEGE OF EDUCATION

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Grand Valley State University's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Elaine C. Collins

Elaine C. Collins, Dean
Grand Valley State University
College of Education

KALAMAZOO VALLEY COMMUNITY COLLEGE

Texas Township Campus
6767 West O Avenue
P.O. Box 4070
Kalamazoo, Michigan
49003-4070
P 269.488.4200
F 269.488.4220

Arcadia Commons Campus
202 North Rose Street
P.O. Box 4070
Kalamazoo, Michigan
49003-4070
P 269.373.7800
F 269.373.7892

Kalamazoo Valley Museum
230 North Rose Street
P.O. Box 4070
Kalamazoo, Michigan
49003-4070
P 269.373.7990
F 269.373.7997

MTEC
Michigan Technical Education Center
7107 Elm Valley Drive
P.O. Box 4070
Kalamazoo, Michigan
49003-4070
P 269.353.1253
F 269.353.1299

Office of the President

May 13, 2010

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MAY 18 2010

SUPERINTENDENT'S OFFICE

Mr. Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express Kalamazoo Valley Community College's support of Michigan's application for the federal *Race to the Top* funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We believe that *Race to the Top* represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop our state's workforce and foster education innovation that will accelerate and drive student achievement.

As an organization whose mission is to enrich the lives of our community's residents through higher education, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals as outlined by the state.

Sincerely,

Marilyn Schlack

Marilyn Schlack
President

LAKE SUPERIOR
STATE UNIVERSITY

January 4, 2010

RECEIVED
JAN 0 6 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Lake Superior State University's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Anthony P. Blose

Anthony P. Blose, Ph.D.
Provost/VPAA

RECEIVED
JAN 0 6 2010
SUPERINTENDENT'S OFFICE

Office of the Provost and Vice President for Academic Affairs
650 W. Easterday Ave., Sault Ste. Marie, MI 49783
Telephone: 906-635-2211 • Fax: 906-635-6671
www.lssu.edu

LANSING COMMUNITY COLLEGE
Where Success Begins

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MAY 14 2010
SUPERINTENDENT'S OFFICE

May 13, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
PO Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express Lansing Community College's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals on how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

Lansing Community College has a vested interest in improving the education of Michigan children. We recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's students.

Sincerely,

Brent Knight
President

RECEIVED
MAY 14 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Dr. Brent Knight, President
Mail code 8100 ♦ P.O. Box 40010 ♦ Lansing, MI 48901-7210 ♦ 517-483-1851 ♦ Fax 517-483-1845

maccs MICHIGAN ASSOCIATION OF CAREER COLLEGES & SCHOOLS

30821 Barrington Avenue
Madison Heights, MI 48071
(248) 585-9200

May 13, 20010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

The Michigan Association of Career Colleges and Schools wishes to express firm support of Michigan's application for the federal Race to the Top funds. We firmly believe that a dramatic improvement in K-12 education will benefit the residents of Michigan and aid in the economic resurgence of our state. Michigan needs to dramatically improve our K-12 schools and this grant will be a strong aid as we move in a positive direction. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success to be utilized by teachers and principals to improve their practices.

We firmly believe that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an educational association, we have a vested interest in improving the education of Michigan residents and this important work begins with our children. We believe that it is imperative to the children of Michigan that we receive this grant. We are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

Patricia Fischer

Michigan Association of Career Colleges and Schools
Patricia Fischer, President
30775 Barrington Avenue
Madison Heights, MI 48071

MACRAO
Michigan Association of Collegiate Registrars & Admissions Officers

January 7, 2010

RECEIVED

JAN 12 2010

SUPERINTENDENT'S OFFICE

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express the Michigan Association of Collegiate Registrars and Admissions Officers' (MACRAO) support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Debbie Harju, MACRAO President
Office of the Registrar
University of Michigan
1210 LSA Building
500 S. State Street
Ann Arbor, MI 48109-1382

Cc: Dorene Root, Central Michigan University
Ron Hughes, Macomb Community College
Howard Shanken, Grand Rapids Community College

RECEIVED

JAN 13 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

www.macrao.org

MICHIGAN STATE
UNIVERSITY

May 6, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Michigan State University College of Education's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

COLLEGE OF EDUCATION
MICHIGAN STATE UNIVERSITY
Office of the Dean
Michigan State University
501 Erickson Hall
East Lansing, MI
48824-1034
517/355-1734
Fax: 517/353-6393

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Carole Ames
Dean

MICHIGAN TECHNOLOGICAL UNIVERSITY

OFFICE OF THE PRESIDENT

RECEIVED
MAY 14 2010
SUPERINTENDENT'S OFFICE

May 12, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Michigan Technological University's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

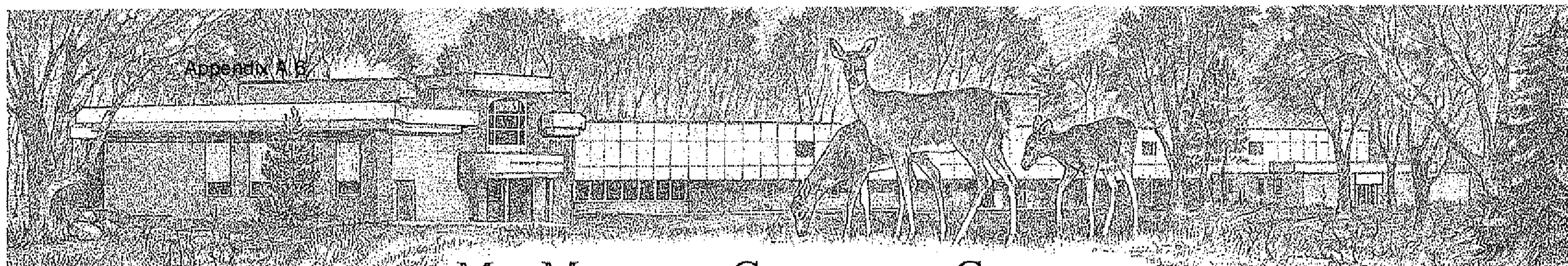
As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Glenn D. Mroz
President

RECEIVED
MAY 14 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

500 Administration Building • 1400 Townsend Drive • Houghton, Michigan 49931-1295 • 906-487-2200 • Fax 906-487-2935



MID MICHIGAN COMMUNITY COLLEGE
OFFICE OF THE PRESIDENT

May 12, 2010

RECEIVED
MAY 14 2010
SUPERINTENDENT'S OFFICE

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express the support of Mid Michigan Community College for Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a recipient of students from our K-12 systems, our institution has a strong interest in improving the education of Michigan children so that we can further support their success on the postsecondary level. We recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application.

Sincerely,

Carol A. Churchill

Carol A. Churchill
President

RECEIVED
MAY 14 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

1375 S. CLARE AVE. • HARRISON, MICHIGAN 48625 • TELEPHONE 989/386-6622

MONROE COUNTY
COMMUNITY COLLEGE

enriching lives

RECEIVED

MAY 14 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

May 13, 2010

Michigan Department of Education
Attention: Race to the Top
PO Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express Monroe County Community College's support of Michigan's application for the federal Race to the Top funds. As one of Michigan's community colleges, we have a front row seat for measuring student success in Michigan's K-12 system. Too many of them are not ready for college. Here in Monroe, upwards of 60 percent need remedial classes or tutoring in mathematics, reading, and writing.

Fundamental reforms are needed in Michigan to develop the state's workforce and fuel education innovation. Those reforms are needed at the foundation of Michigan's public education. As we understand, the grant from the U.S. Department of Education would challenge and dramatically improve K-12 education by:

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

As an association with a vested interest in improving the education of Michigan students, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

David E. Nixon, Ed.D.
President

Main Campus 1555 South Raisinville Road Monroe, MI 48161-9746 1-734-242-7300
Whitman Center 7777 Lewis Avenue Temperance, MI 48182 1-734-847-0559

www.monroeccc.edu

Muskegon Community College
221 South Quarterline Road • Muskegon, Michigan 49442
Office of the President • Telephone: 231.777.0311

RECEIVED
MAY 18 2010
SUPERINTENDENT'S OFFICE

May 17, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I am writing to offer Muskegon Community College's wholehearted support of Michigan's application for federal *Race to the Top* funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education.

Muskegon Community College is located in a community where fewer than 10% of the residents hold a four-year college degree and where unemployment is consistently over 16%. We are keenly aware of the connection between low education levels and high unemployment rates and have been working with our local school districts to address these challenges. Many of the students who come to our door are simply not ready for college-level work.

We agree that *Race to the Top* represents an important opportunity for Michigan to engage in the fundamental reforms needed to fuel education innovation that will accelerate and drive growth in student achievement and develop the state's workforce.

As an institution with a vested interest in improving the education of Michigan residents, we recognize the importance of our state receiving this grant. We will support our local school districts' efforts to implement the activities outlined in our state application.

Sincerely,

Dale K. Nesbary, PhD
President

North Central
MICHIGAN COLLEGE

RECEIVED
MAY 2 0 2010
SUPERINTENDENT'S OFFICE

May 18, 2010

Mr. Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
ATTN: Race to the Top
P. O. Box 30008
Lansing MI 48909

Dear Superintendent Flanagan:

On behalf of North Central Michigan College, I would like to offer a letter of support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

North Central Michigan College is an Achieving the Dream College. "Achieving the Dream: Community Colleges Count," is a national initiative to help a higher percentage of community college students be successful in school. North Central is one of 102 institutions in 22 states participating in this important effort. Achieving the Dream was initiated in 2004 by the Lumina Foundation. North Central received grant funds from The W. K. Kellogg Foundation to support our Achieving the Dream initiative.

Through this effort, the College seeks to cause an increased percentage of targeted student populations to do the following:

- Successfully complete developmental courses and progress to credit-bearing courses;

- Enroll in and successfully complete gatekeeper courses;
- Complete the courses they take with a grade of C or better;
- Re-enroll from one semester to the next;
- Earn certificates or degrees.

Without the support, focus, and funding, we would not have been able to thoroughly examine student success. The Race to the Top provides the support, focus, and funding to allow our K-12 counterparts to go through that deliberate analysis that can result in system changes.

I agree that the Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an organization with a vested interest in improving the education of Michigan children and young adults, I recognize the importance of our state receiving this grant. North Central is committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children and young adults.

Sincerely,

Cameron Brunet-Koch

Cameron Brunet-Koch, Ph.D.
President

Oakland UNIVERSITY

Office of Public School Academies and Urban Partnerships

School of Education and Human Services
420 Pawley Hall
Rochester, Mi 48309-4494
Tel: (248) 370-4596: Fax: (248) 370-4239

January 5, 2010

Michael P. Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express Oakland University's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an institution with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Mildred Taylor

Mildred Taylor
Director
Oakland University
Office of Public School Academies

RECEIVED

JAN 0 8 2010

SUPERINTENDENT'S OFFICE

RECEIVED

JAN 0 8 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

101 S. Washington Square
Suite 600
Lansing, Michigan 48933

Presidents Council
State Universities of Michigan

Phone: 517.482.1563
Facsimile: 517.482.1241
www.pcsum.org

May 5, 2010

Mr. Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Post Office Box 30008
Lansing, Michigan 48909

Attention: Race to the Top

Dear Superintendent Flanagan:

I would like to express the Presidents Council, State Universities of Michigan's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Michael A. Boulus
Executive Director

Central Michigan University
Eastern Michigan University
Ferris State University
Grand Valley State University
Lake Superior State University
Michigan State University
Michigan Technological University
Northern Michigan University

THE MICHIGAN FIFTEEN
PUBLIC UNIVERSITIES
Gateways to Opportunity

Oakland University
Saginaw Valley State University
The University of Michigan – Ann Arbor
The University of Michigan – Dearborn
The University of Michigan – Flint
Wayne State University
Western Michigan University

SAGINAW VALLEY STATE UNIVERSITY.

(989) 964-4000 • From Midland: 695-5325
7400 Bay Road • University Center, MI 48710 • USA
www.svsu.edu

School/University Partnership Office
(989) 964-4623
Fax: (989) 964-4636

January 5, 2010

RECEIVED

JAN 11 2010

SUPERINTENDENT'S OFFICE

Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Post Office Box 30008
Lansing, Michigan 48909

RE: Race to the Top

Dear Superintendent Flanagan:

I would like to express Saginaw Valley State University's support of Michigan's application for the federal Race to the Top funds. We understand that the state is seeking a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

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

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a university authorizer of eighteen public school academies, we have demonstrated a strong commitment to improving the education of Michigan children. To this end, our focus has gone far beyond oversight and involves critical areas of leadership development, curriculum alignment, and instructional improvement.

We recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Joseph G. Rousseau

Joseph G. Rousseau
Director

RECEIVED

JAN 12 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

St. Clair County Community College
323 Erie Street, P.O. Box 5015, Port Huron, Michigan 48061-5015
(810) 989-5545 • Fax (810) 989-5542 • www.sc4.edu

Office of the President

RECEIVED
MAY 18 2010
SUPERINTENDENT'S OFFICE

May 13, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I would like to express St. Clair County Community College's support of Michigan's application for the federal Race to the Top funds. We understand that the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an association with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

Kevin A. Pollock, Ph.D.
President

DEBORAH LOEWENBERG BALL
DEAN AND WILLIAM H. PAYNE COLLEGIATE PROFESSOR
UNIVERSITY OF MICHIGAN
SCHOOL OF EDUCATION

610 E. UNIVERSITY AVENUE, SUITE 1110
ANN ARBOR, MICHIGAN 48109-1259
734 647-1637 FAX: 734 764-3473
dball@umich.edu

RECEIVED

JAN 11 2010

SUPERINTENDENT'S OFFICE

January 4, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I am writing to express support of Michigan's application for the federal Race to the Top funds. I understand that the state will be seeking grant funds from the U.S. Department of Education to support the improvement of K-12 education. As you know, we support the central goals of the state reform efforts and the federal incentives. Specifically, we have been working at our own institution to change the ways in which teachers are prepared for work of teaching, and how we can better document and assess these professional learning outcomes.

To this end, we agree that Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the as a leader in teacher preparation that will support educational innovation and growth in student achievement.

We at the School of Education clearly have a vested interest in improving the education of Michigan children. We recognize how important it is that the state receives this grant and we are pleased to be part of a stakeholder group that will support the implementation of proposals outlined in the state's application.

Sincerely,

Deborah Loewenberg Ball

Deborah Loewenberg Ball
Dean and William H. Payne Collegiate Professor

RECEIVED

JAN 12 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

EDWARD J. BAGALE
VICE CHANCELLOR

UNIVERSITY OF MICHIGAN-DEARBORN

GOVERNMENT RELATIONS
4901 EVERGREEN ROAD - 1130 AB
DEARBORN, MICHIGAN 48128-2406
313 593-5140 FAX: 313 593-5403
ebagale@umich.edu

RECEIVED
MAY 14 2010
SUPERINTENDENT'S OFFICE

May 12, 2010

Mike Flanagan
State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
P. O. Box 30008
Lansing, MI 48909

Dear Superintendent Flanagan:

I wish to express the University of Michigan-Dearborn's enthusiastic support of Michigan's application for the federal *Race to the Top* funds. We applaud the unified bipartisan decision of the State Board of Education in seeking a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

We agree that the *Race to the Top* represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and to fuel the educational innovation that will accelerate and drive growth in student achievement.

As a University with a mission to improve the education of Michigan children, we recognize the importance of our state receiving this grant and are committed to supporting the implementation of proposals outlined in our state application which will positively impact all of Michigan's children.

Sincerely,

Edward J. Bagale

cc: Daniel Little, Chancellor

smr

RECEIVED
MAY 14 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

WAYNE STATE UNIVERSITY
COLLEGE OF EDUCATION

OFFICE OF THE DEAN
441 EDUCATION BUILDING
5425 GULLEN MALL
DETROIT, MICHIGAN 48202-3489
313-577-1620 • FAX: 313-577-3606

RECEIVED
MAY 1 1 2010
DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

May 10, 2010

Mr. Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Post Office Box 30008
Lansing, Michigan 48909

Attention: Race to the Top

Dear Superintendent Flanagan:

I would like to express the support of the College of Education at Wayne State University for Michigan's application for the federal Race to the Top funds.

It is my understanding that the state is seeking a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals;

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

Race to the Top represents a critical opportunity for the state of Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As an entity with a vested interest in improving the education of Michigan's children, we recognize the importance of our state receiving this grant and are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Paula C. Wood

Paula C. Wood
Dean

WESTERN MICHIGAN UNIVERSITY

Department of Educational Leadership, Research, and Technology
College of Education

RECEIVED

MA...

SUPERINTENDENT'S O...

May 7, 2010

Mike Flanagan, State Superintendent of Public Instruction
Michigan Department of Education
Attention: Race to the Top
Post Office Box 30008
Lansing, Michigan 48909

Dear Superintendent Flanagan:

I would like to express support of Michigan's application for the federal Race to the Top funds. We understand the state seeks a grant from the U.S. Department of Education to challenge and dramatically improve K-12 education by:

1) Adopting internationally-benchmarked standards and assessments that prepare students for success in college and the workplace;

2) Turning around our lowest-performing schools;

3) Recruiting, developing, retaining, and rewarding effective teachers and principals; and,

4) Building data systems that measure student success and inform teachers and principals how they can improve their practices.

Race to the Top represents a critical opportunity for Michigan to engage in the fundamental reforms that are needed to develop the state's workforce and fuel education innovation that will accelerate and drive growth in student achievement.

As a university with a vested interest in improving the education of Michigan children, we recognize the importance of our state receiving this grant and we are committed to being part of a stakeholder group that will support the implementation of proposals outlined in our state application.

Sincerely,

Van E. Cooley

Van E. Cooley
Professor and Chair

RECEIVED

MAY 12 2010

DEPUTY SUPERINTENDENT
CHIEF ACADEMIC OFFICER

Kalamazoo, MI 49008-5283
PHONE: (269) 387-3896 FAX: (269) 387-3696
www.wmich.edu/coe/elrt

Appendix A.7

Stakeholder meetings (Phase 1) and Stakeholders that participated in workgroups (Phase 2)

Participation in State Stakeholders Meetings (Phase 1)				
Role	Wayne RESA 12/11/09	TBA ISD 12/15/09	Marquette RESA 12/16/09	Kent ISD 12/17/09
Superintendent	36	18	9	31
Administrator	52	64	3	56
Board Member	8	12	2	7
Teacher	18	15		11
Parent		5		
Consultant	3			
Union Leader	12	21	3	10
Legislator		4	3	2
Community Leader	5	3		4
Higher Education		5	5	
Admin. Assistant	3			
Total	**134**	**147**	**25**	**121**

Stakeholders Participating in Race to the Top Workgroups (Phase 2)		
Workgroup	*Stakeholder Organizations*	*Organization Type (# of Participants)*
Section A	SBE, MDE, MASB, MEA, MCEA, MASA, MSU, WSU, Legislature, Economic Recovery Office	State government (4), Ed association (3), Union (1), University (3), Legislators (2)
Section B & C	MSU, MDE, CEPI, WSU, MASB, MEA, MASA	University (4), State government (6), Ed association (2), Union (1)
Section D 1, 3, 4, 5	MDE, MEMPSA, MNA, Kent ISD MASA, MEA, MCEA, Farmington Public Schools, MSU, U of M, WSU, EMU, Legislature	State government (4), Ed association (6), Union (1), University (7), School district (2), Legislators (1)
Section D 2	MDE, MEA, AFT-MI, MSDC, MAPSA, Holland Public Schools, Grand Rapids Public Schools, Michigan ASCD, MASA, U of M, MSU, Governor's office	State government (1), Union (3), School district (2), Ed association (5), University (6)
Section E	MDE, MAPSA, AFT-MI, MCCSA, MEA MASA	State government (2), Ed association (3), Union (2)
Section F	MDE, MASA, MAPSA, MSBO	State government (1), Ed association (3)

Notes: SBE- State Board of Education, MDE- Michigan Department of Education, MASB- Michigan Association of School Boards, MEA- Michigan Education Association, MCEA- Middle Cities Education Association, MASA- Michigan Association of School Administrators, MSU- Michigan State University, WSU- Wayne State University, CEPI- Center for Educational Performance and Information, MEMPSA- Michigan Elementary and Middle School Principals Association, MNA- Michigan Nonprofit Association, ISD- Intermediate School District, U of M- University of Michigan, EMU- Eastern Michigan University, AFT-MI- American Federation of Teachers-Michigan, MSDC- Michigan Staff Development Council, MAPSA- Michigan Association of Public School Academies, Michigan ASCD- Michigan Association for Supervision and Curriculum Development, MCCSA- Michigan Council of Charter School Authorizers, MSBO- Michigan School Business Officials

mographic Analysis (State Level)
ade 04
Subjects
nter 2003

Report Codes	
SS	Scale Score
n	Number of students
%M	Percent Met or Exceeded Michigan Standards (Level 1, 2, or M)
<10	No scores provided if <10 students

SS = Scale Score	
Mathematics	335 - 702
Reading	377 - 727
Writing	440 - 620
Listening	480 - 557
Total ELA	408.5 - 673.5

Levels	
1	Exceeded Standards
2	Met Standards
3	At Basic Level
4	Apprentice
	Listening Levels
M	Met/Exceeded Standards
D	Did Not Meet Standards

B - Operational Test		Mathematics			Science			Social Studies			Reading			Writing			ELA			Listening	
		SS	n	%M	SS	n	%M	SS	n	%M	SS	n	%M	SS	n	%M	SS	n	%M	SS	n
	M	544	62,475	66							546	61,647	73	516	61,692	40	532	61,003	55	539	42,992
	F	543	60,684	65							550	60,377	77	525	60,348	55	538	59,854	65	539	42,059
	No Record	538	413	60							543	405	70	513	415	35	528	405	46	540	404
	Amer. Indian or Alaskan Natv.	538	1,192	61							545	1,162	72	518	1,170	43	532	1,154	54	537	830
	Asian or Pacific Islander	561	2,811	80							557	2,778	82	529	2,784	59	543	2,770	72	541	2,156
	Black, Not Of Hispanic Origin	526	27,028	43							533	26,864	56	512	26,611	33	523	26,285	39	529	11,934
	Hispanic	533	4,492	51							538	4,429	64	517	4,365	40	528	4,319	48	533	2,993
	White, Not Of Hispanic Origin	549	86,560	73							554	85,725	81	523	86,102	51	539	85,366	66	541	66,318
	Multiracial	538	480	58							543	470	69	520	437	43	532	430	53	537	337
	Other	542	843	65							542	840	68	523	844	53	533	839	56	527	778
	Unspecified	521	166	40							528	161	52	507	142	22	518	99	31	531	109
Disadvantaged	Yes	531	40,045	49							536	39,515	61	514	39,297	37	526	38,845	44	533	23,400
	No	550	83,527	73							554	82,914	82	524	83,158	52	539	82,417	67	541	62,055
ation	Yes	524	12,123	40							526	11,068	48	508	11,479	27	517	10,878	31	530	8,094
	No	546	111,449	68							551	111,361	78	522	110,976	49	536	110,384	62	540	77,361
ommodations	Yes	517	6,532	31							518	5,197	37	503	5,557	19	511	5,099	20	527	3,909
	No	545	117,040	67							550	117,232	77	522	116,898	48	536	116,163	61	540	81,546
l Accommodations	Yes	512	307	27							530	1,065	53	503	538	19				526	776
	No	543	123,572	65							548	122,429	75	521	122,455	47	535	121,262	60	539	85,455
sh Proficient	Yes	534	3,491	51							533	3,444	55	518	3,375	42	526	3,356	43	527	2,397
	No	544	120,081	65							549	118,985	75	521	119,080	47	535	117,906	60	539	83,058
	Yes	547	759	72							548	747	74	526	748	58	537	741	64	534	560
	No	543	122,813	65							548	121,682	75	521	121,707	47	535	120,521	60	539	84,895
	Yes	528	428	49							530	420	52	511	405	30	521	399	34	527	222
	No	544	123,144	65							548	122,009	75	521	122,050	47	535	120,863	60	539	85,233
	Yes																				
	No																				
	Yes																				
	No																				
ary - Grade 04		543	123,572	65%							548	122,429	75%	521	122,455	47%	534	121,262	60%	539	85,455

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 08
Fall 2008

meap Michigan Educational Assessment Program

READING

State	No. of Students Assessed	Mean Scale Score	Percent at Level 4	Percent at Level 3	Percent at Level 2	Percent at Level 1	Percent at Levels 1 □ 2 *
Total All Students	119665	820	8□	17□	44□	32□	76□
Gender							
Male	61132	818	10□	18□	43□	30□	73□
Female	58533	822	6□	16□	45□	33□	79□
Ethnicity							
American Indian/Alaskan Native	1109	815	9□	18□	48□	24□	73□
Asian/Pacific Islander	2934	833	4□	10□	36□	50□	86□
Black, Not of Hispanic Origin	22781	805	15□	28□	43□	13□	57□
Hispanic	5444	810	12□	23□	48□	18□	65□
White, Not of Hispanic Origin	86283	824	6□	14□	44□	37□	81□
Multiracial	1089	820	7□	18□	44□	31□	75□
Additional Reporting Groups							
Economically Disadvantaged: Yes	46849	809	13□	24□	45□	18□	63□
No	72816	827	4□	12□	43□	41□	84□
English Language Learners: Yes	3465	799	19□	34□	40□	7□	46□
No	116200	821	7□	16□	44□	32□	76□
Formally Limited English	418	818	7□	16□	53□	24□	78□
Migrant	201	803	19□	26□	42□	12□	54□
Homeless	378	805	16□	28□	42□	15□	56□
Accommodations							
Standard -- All	4157	792	32□	34□	27□	7□	33□
Nonstandard -- All **	< 10						
Standard -- ELL Only	194	789	37□	38□	22□	4□	26□
Nonstandard -- ELL Only **							

WRITING

State	No. of Students Assessed	Mean Scale Score	Percent at Level 4	Percent at Level 3	Percent at Level 2	Percent at Level 1	Percent at Levels 1 □ 2 *
Total All Students	119485	811	7□	19□	73□	1□	74□
Gender							
Male	61029	807	10□	22□	67□	0□	68□
Female	58456	814	4□	15□	80□	2□	81□
Ethnicity							
American Indian/Alaskan Native	1108	807	10□	22□	68□	0□	68□
Asian/Pacific Islander	2933	820	3□	10□	83□	4□	87□
Black, Not of Hispanic Origin	22722	802	13□	30□	56□	0□	57□
Hispanic	5419	806	11□	24□	65□	0□	65□
White, Not of Hispanic Origin	86191	813	6□	15□	78□	1□	79□
Multiracial	1087	811	8□	18□	73□	1□	74□
Additional Reporting Groups							
Economically Disadvantaged: Yes	46730	804	12□	26□	61□	0□	62□
No	72755	815	4□	13□	81□	1□	82□
English Language Learners: Yes	3457	800	15□	33□	52□	0□	52□
No	116028	811	7□	18□	74□	1□	75□
Formally Limited English	415	811	5□	16□	78□	0□	79□
Migrant	189	801	17□	29□	54□	0□	54□
Homeless	374	800	19□	28□	53□	0□	53□
Accommodations							
Standard -- All	4223	793	27□	42□	31□	0□	31□
Nonstandard -- All **	< 10						
Standard -- ELL Only	210	792	27□	44□	30□	0□	30□
Nonstandard -- ELL Only **							

TOTAL ELA

State	No. of Students Assessed	Mean Scale Score	Percent at Level 4	Percent at Level 3	Percent at Level 2	Percent at Level 1	Percent at Levels 1 □ 2 *
Total All Students	119121	817	6□	18□	58□	19□	77□
Gender							
Male	60822	815	7□	20□	56□	17□	73□
Female	58299	820	4□	16□	60□	21□	81□
Ethnicity							
American Indian/Alaskan Native	1101	812	7□	20□	63□	11□	73□
Asian/Pacific Islander	2926	829	2□	10□	51□	37□	88□
Black, Not of Hispanic Origin	22535	804	11□	31□	52□	6□	58□
Hispanic	5396	809	9□	24□	57□	9□	67□
White, Not of Hispanic Origin	86062	821	4□	14□	59□	23□	82□
Multiracial	1082	817	5□	19□	57□	18□	76□
Additional Reporting Groups							
Economically Disadvantaged: Yes	46482	808	9□	26□	55□	9□	64□
No	72639	823	3□	12□	59□	26□	85□
English Language Learners: Yes	3437	799	14□	37□	46□	3□	48□
No	115684	818	5□	17□	58□	20□	78□
Formally Limited English	413	816	4□	15□	67□	14□	80□
Migrant	187	802	18□	26□	51□	5□	56□
Homeless	371	803	13□	31□	50□	5□	56□
Accommodations							
Standard -- All	4620	793	25□	42□	31□	2□	33□
Nonstandard -- All **	< 10						
Standard -- ELL Only	233	790	29□	45□	25□	1□	26□
Nonstandard -- ELL Only **							

* □alue may not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Results for these students are invalid and not reported.

< 10 = No summary scores provided if less than 10 students.

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 08
Fall 2008

meap Michigan Educational Assessment Program

	MATHEMATICS							SCIENCE						
State	No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *
Total All Students	120049	819	7□	18□	32□	43□	75□	119827	820	6□	17□	42□	35□	76□
Gender														
Male	61383	821	7□	18□	30□	45□	75□	61266	822	7□	17□	38□	38□	75□
Female	58666	818	7□	19□	34□	41□	74□	58561	819	5□	18□	46□	32□	77□
Ethnicity														
American Indian/Alaskan Native	1112	813	7□	21□	40□	32□	72□	1114	816	6□	19□	49□	25□	74□
Asian/Pacific Islander	2990	846	2□	8□	18□	71□	89□	2976	834	3□	10□	34□	54□	87□
Black, Not of Hispanic Origin	22866	802	15□	33□	35□	17□	52□	22723	802	16□	34□	40□	10□	51□
Hispanic	5504	809	10□	26□	38□	27□	64□	5450	810	10□	26□	46□	18□	64□
White, Not of Hispanic Origin	86454	824	5□	14□	31□	50□	81□	86443	826	4□	13□	42□	42□	84□
Multiracial	1095	817	7□	22□	32□	38□	70□	1096	818	7□	19□	44□	30□	74□
Additional Reporting Groups														
Economically Disadvantaged: Yes	47099	808	11□	27□	37□	25□	62□	46926	809	11□	27□	44□	18□	62□
No	72950	827	4□	13□	29□	54□	83□	72901	828	3□	11□	40□	45□	86□
English Language Learners: Yes	3658	805	13□	30□	37□	20□	57□	3624	800	16□	36□	41□	7□	48□
No	116391	820	7□	18□	32□	43□	75□	116203	821	6□	17□	42□	36□	77□
Formally Limited English	420	819	7□	19□	32□	42□	74□	414	816	5□	17□	55□	23□	78□
Migrant	214	807	10□	26□	42□	22□	64□	184	803	14□	30□	48□	8□	55□
Homeless	382	802	14□	36□	32□	18□	51□	376	804	14□	33□	40□	13□	53□
Accommodations														
Standard -- All	7348	795	24□	40□	28□	9□	36□	7221	797	21□	38□	34□	7□	41□
Nonstandard -- All **	< 10							< 10						
Standard -- ELL Only	553	804	17□	30□	34□	19□	53□	522	794	25□	39□	32□	4□	35□
Nonstandard -- ELL Only **														

* □alue may not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Results for these students are invalid and not reported.

< 10 = No summary scores provided if less than 10 students.

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

meap™ Michigan Educational Assessment Program

Grade 06
Fall 2008

State	READING No. of Students Assessed	READING Mean Scale Score	READING Percent at Level 4	READING Percent at Level 3	READING Percent at Level 2	READING Percent at Level 1	READING Percent at Levels 1 □ 2 *	WRITING No. of Students Assessed	WRITING Mean Scale Score	WRITING Percent at Level 4	WRITING Percent at Level 3	WRITING Percent at Level 2	WRITING Percent at Level 1	WRITING Percent at Levels 1 □ 2 *	TOTAL ELA No. of Students Assessed	TOTAL ELA Mean Scale Score	TOTAL ELA Percent at Level 4	TOTAL ELA Percent at Level 3	TOTAL ELA Percent at Level 2	TOTAL ELA Percent at Level 1	TOTAL ELA Percent at Levels 1 □ 2 *
Total All Students	115728	625	6□	14□	45□	35□	81□	115651	610	3□	21□	76□	0□	76□	115333	620	2□	19□	61□	18□	80□
Gender																					
Male	58820	624	7□	15□	44□	34□	78□	58778	608	4□	25□	71□	0□	71□	58596	619	2□	21□	60□	17□	77□
Female	56908	627	5□	12□	47□	36□	83□	56873	612	2□	18□	80□	0□	80□	56737	622	1□	16□	63□	19□	82□
Ethnicity																					
American Indian/Alaskan Native	1079	621	6□	16□	51□	27□	78□	1076	607	3□	25□	72□	0□	72□	1074	616	2□	21□	64□	13□	77□
Asian/Pacific Islander	3148	637	3□	8□	38□	51□	89□	3146	617	2□	11□	87□	0□	87□	3145	630	1□	10□	57□	32□	89□
Black, Not of Hispanic Origin	22483	610	12□	25□	47□	17□	63□	22476	603	6□	36□	58□	0□	58□	22307	608	3□	35□	54□	7□	61□
Hispanic	5448	614	9□	22□	49□	20□	69□	5423	605	4□	32□	64□	0□	64□	5406	611	2□	30□	59□	9□	68□
White, Not of Hispanic Origin	82231	630	4□	10□	45□	41□	86□	82194	612	2□	17□	81□	0□	81□	82070	624	1□	14□	63□	22□	85□
Multiracial	1305	624	7□	14□	46□	34□	80□	1304	609	3□	23□	74□	0□	74□	1302	619	2□	20□	61□	17□	78□
Additional Reporting Groups																					
Economically Disadvantaged: Yes	48528	614	10□	21□	49□	20□	69□	48473	604	5□	31□	64□	0□	64□	48247	611	3□	30□	59□	8□	68□
No	67200	633	3□	8□	43□	46□	89□	67178	614	2□	14□	84□	0□	84□	67086	627	1□	11□	63□	25□	88□
English Language Learners: Yes	3383	601	16□	33□	44□	7□	51□	3367	599	8□	43□	49□	0□	49□	3354	601	5□	46□	47□	2□	50□
No	112345	626	6□	13□	45□	36□	81□	112284	610	3□	21□	76□	0□	76□	111979	621	2□	18□	62□	19□	80□
Formally Limited English	758	620	5□	15□	55□	25□	80□	755	610	2□	20□	77□	0□	78□	755	617	2□	18□	69□	11□	80□
Migrant	207	608	13□	25□	47□	14□	62□	192	603	6□	34□	60□	0□	60□	191	606	4□	39□	53□	5□	58□
Homeless	439	609	13□	24□	48□	16□	64□	438	601	7□	37□	56□	0□	56□	434	606	4□	37□	54□	5□	59□
Accommodations																					
Standard -- All	4819	596	25□	34□	35□	6□	41□	4888	593	15□	53□	32□	0□	32□	5279	595	9□	55□	34□	2□	36□
Nonstandard -- All **	11							13							13						
Standard -- ELL Only	159	592	23□	40□	37□	0□	37□	165	593	18□	47□	35□	0□	35□	197	593	10□	57□	33□	0□	33□
Nonstandard -- ELL Only **																					

* □alue may not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Results for these students are invalid and not reported.

< 10 = No summary scores provided if less than 10 students.

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 06
Fall 2008

meap Michigan Educational Assessment Program

State	MATHEMATICS No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	SOCIAL STUDIES No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *
Total All Students	116266	624	3□	17□	29□	51□	80□	116272	615	13□	13□	30□	44□	74□
Gender														
Male	59186	625	4□	18□	28□	51□	79□	59206	616	14□	12□	28□	46□	74□
Female	57080	623	3□	16□	31□	50□	81□	57066	614	12□	14□	32□	42□	73□
Ethnicity														
American Indian/Alaskan Native	1086	618	4□	20□	35□	42□	77□	1088	612	15□	15□	34□	37□	71□
Asian/Pacific Islander	3204	650	1□	6□	16□	77□	93□	3198	624	8□	8□	24□	60□	84□
Black, Not of Hispanic Origin	22567	609	7□	32□	36□	25□	61□	22522	600	28□	23□	30□	18□	48□
Hispanic	5507	614	4□	25□	36□	35□	71□	5479	605	21□	20□	35□	24□	59□
White, Not of Hispanic Origin	82552	628	2□	13□	27□	58□	85□	82615	619	9□	10□	29□	52□	81□
Multiracial	1309	623	3□	18□	31□	49□	79□	1310	613	15□	15□	30□	40□	71□
Additional Reporting Groups														
Economically Disadvantaged: Yes	48902	613	5□	26□	35□	34□	69□	48877	605	22□	19□	33□	26□	59□
No	67364	632	2□	11□	25□	63□	88□	67395	622	7□	9□	27□	57□	84□
English Language Learners: Yes	3567	610	7□	31□	35□	27□	62□	3538	595	35□	24□	30□	11□	41□
No	112699	624	3□	17□	29□	51□	80□	112734	615	12□	13□	30□	45□	75□
Formally Limited English	763	627	2□	13□	30□	55□	85□	758	611	13□	15□	36□	36□	72□
Migrant	211	613	5□	23□	36□	36□	73□	189	598	27□	25□	33□	15□	48□
Homeless	442	609	8□	30□	36□	26□	62□	440	600	28□	21□	34□	17□	51□
Accommodations														
Standard -- All	8165	599	14□	45□	28□	13□	41□	7985	593	42□	23□	24□	10□	35□
Nonstandard -- All **	< 10							< 10						
Standard -- ELL Only	466	611	9□	32□	32□	28□	59□	462	589	49□	22□	21□	8□	29□
Nonstandard -- ELL Only **														

* □alue may not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Results for these students are invalid and not reported.

< 10 = No summary scores provided if less than 10 students.

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 03
Fall 2008

meap™ Michigan Educational Assessment Program

	READING							WRITING							TOTAL ELA						
			Percent at							Percent at							Percent at				
State	No. of Students Assessed	Mean Scale Score	Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	No. of Students Assessed	Mean Scale Score	Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	No. of Students Assessed	Mean Scale Score	Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *
Total All Students	114591	331	1□	13□	46□	41□	86□	114470	303	4□	35□	61□	0□	61□	114162	321	1□	16□	66□	17□	83□
Gender																					
Male	58011	329	1□	14□	47□	38□	85□	57940	301	5□	38□	56□	0□	56□	57772	320	1□	18□	66□	15□	81□
Female	56580	333	1□	11□	45□	44□	88□	56530	305	3□	31□	66□	0□	66□	56390	323	1□	14□	66□	19□	86□
Ethnicity																					
American Indian/Alaskan Native	985	327	1□	15□	50□	34□	85□	976	300	5□	40□	54□	0□	54□	971	318	1□	19□	69□	11□	80□
Asian/Pacific Islander	3413	341	0□	7□	36□	57□	93□	3406	310	1□	21□	77□	0□	77□	3403	331	0□	8□	61□	31□	92□
Black, Not of Hispanic Origin	22658	319	2□	23□	53□	22□	75□	22622	296	8□	49□	43□	0□	43□	22455	311	1□	29□	62□	7□	69□
Hispanic	6266	321	1□	20□	56□	24□	79□	6222	298	6□	46□	47□	0□	47□	6204	313	1□	25□	67□	7□	74□
White, Not of Hispanic Origin	79732	335	1□	9□	43□	47□	90□	79702	305	3□	30□	67□	0□	67□	79603	325	1□	12□	68□	20□	87□
Multiracial	1504	329	1□	14□	48□	38□	85□	1504	302	5□	35□	61□	0□	61□	1501	320	1□	17□	67□	15□	82□
Additional Reporting Groups																					
Economically Disadvantaged: Yes	50953	322	1□	19□	53□	27□	79□	50854	298	7□	45□	48□	0□	48□	50643	314	1□	25□	66□	8□	74□
No	63638	338	0□	7□	40□	52□	92□	63616	307	2□	26□	72□	0□	72□	63519	327	0□	9□	67□	24□	90□
English Language Learners: Yes	5413	317	2□	23□	58□	17□	75□	5387	296	7□	50□	43□	0□	43□	5377	310	2□	29□	64□	5□	69□
No	109178	331	1□	12□	45□	42□	87□	109083	303	4□	34□	62□	0□	62□	108785	322	1□	15□	66□	17□	84□
Formally Limited English	857	334	0□	9□	46□	45□	91□	840	307	2□	27□	71□	0□	71□	838	325	0□	11□	73□	17□	89□
Migrant	296	312	5□	23□	61□	11□	73□	282	293	12□	54□	35□	0□	35□	280	306	4□	31□	63□	1□	64□
Homeless	457	318	2□	22□	56□	19□	75□	455	296	6□	53□	41□	0□	41□	454	311	2□	27□	67□	5□	72□
Accommodations																					
Standard -- All	3790	305	4□	44□	44□	8□	52□	3749	286	21□	61□	18□	0□	18□	4132	299	4□	55□	39□	2□	41□
Nonstandard -- All **	< 10							14							17						
Standard -- ELL Only	418	309	3□	37□	52□	9□	61□	423	290	12□	61□	27□	0□	27□	459	302	3□	45□	49□	3□	51□
Nonstandard -- ELL Only **																					

* □alue may not e□ual the exact sum of level 1 □ level 2 due to rounding.

** Results for these students are invalid and not reported.

< 10 = No summary scores provided if less than 10 students.

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

meap Michigan Educational Assessment Program

Grade 03
Fall 2008

State		MATHEMATICS No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *
Total All Students		115323	331	0□	9□	35□	56□	91□
Gender								
Male		58475	333	0□	8□	33□	58□	92□
Female		56848	330	0□	9□	37□	54□	91□
Ethnicity								
American Indian/Alaskan Native		989	327	0□	8□	43□	50□	92□
Asian/Pacific Islander		3519	348	0□	4□	19□	77□	96□
Black, Not of Hispanic Origin		22779	317	0□	21□	48□	31□	79□
Hispanic		6331	322	0□	13□	47□	39□	87□
White, Not of Hispanic Origin		80152	335	0□	5□	31□	64□	95□
Multiracial		1511	331	0□	8□	37□	55□	92□
Additional Reporting Groups								
Economically Disadvantaged:	Yes	51406	322	0□	14□	45□	41□	86□
	No	63917	338	0□	4□	27□	69□	96□
English Language Learners:	Yes	5678	322	0□	15□	46□	39□	85□
	No	109645	332	0□	8□	34□	57□	92□
Formally Limited English		862	338	0□	5□	29□	66□	95□
Migrant		298	315	1□	19□	56□	24□	80□
Homeless		459	321	0□	14□	50□	36□	86□
Accommodations								
Standard -- All		6300	313	0□	27□	51□	23□	73□
Nonstandard -- All **		< 10						
Standard -- ELL Only		948	320	0□	21□	42□	36□	79□
Nonstandard -- ELL Only **								

* □alue may not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Results for these students are invalid and not reported.

< 10 = No summary scores provided if less than 10 students.

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 11
Spring 2007

mme™ Michigan Merit Examination

	MME READING							MME WRITING							MME TOTAL ELA						
			Percent at							Percent at							Percent at				
State	No. of Students Assessed	Mean Scale Score	Level 4	Level 3	Level 2	Level 1	Levels 1 & 2 *	No. of Students Assessed	Mean Scale Score	Level 4	Level 3	Level 2	Level 1	Levels 1 & 2 *	No. of Students Assessed	Mean Scale Score	Level 4	Level 3	Level 2	Level 1	Levels 1 & 2 *
Total All Students	113,956	1104	17%	24%	58%	2%	60%	111,479	1090	10%	50%	38%	2%	40%	111,000	1098	12%	37%	49%	2%	51%
Gender																					
Male	56,272	1101	20%	24%	54%	2%	56%	54,428	1085	14%	50%	34%	2%	36%	54,175	1094	16%	37%	45%	2%	47%
Female	57,684	1107	14%	23%	61%	2%	64%	57,051	1094	7%	49%	41%	3%	44%	56,825	1101	9%	36%	53%	2%	55%
Ethnicity																					
American Indian/Alaskan Native	979	1097	20%	31%	48%	1%	49%	947	1081	14%	57%	28%	1%	29%	944	1090	15%	45%	39%	0%	40%
Asian/Pacific Islander	2,732	1111	15%	19%	59%	7%	65%	2,682	1103	6%	38%	45%	10%	55%	2,673	1108	9%	30%	53%	8%	62%
Black, Not of Hispanic Origin	17,032	1085	34%	34%	32%	0%	32%	16,256	1071	21%	64%	15%	0%	15%	16,083	1079	26%	52%	22%	0%	22%
Hispanic	3,407	1091	28%	28%	43%	1%	44%	3,289	1075	19%	59%	21%	1%	21%	3,267	1084	22%	46%	32%	0%	32%
White, Not of Hispanic Origin	89,081	1108	13%	21%	63%	2%	66%	87,599	1093	8%	47%	43%	2%	45%	87,328	1101	9%	34%	55%	2%	57%
Multiracial	706	1103	16%	28%	54%	2%	56%	689	1087	11%	53%	34%	2%	36%	688	1096	12%	41%	46%	1%	47%
Additional Reporting Groups																					
Economically Disadvantaged: Yes	28,028	1090	29%	30%	40%	0%	40%	26,926	1074	20%	61%	19%	0%	19%	26,727	1083	23%	48%	29%	0%	29%
No	85,928	1109	13%	21%	63%	3%	66%	84,553	1095	7%	46%	44%	3%	47%	84,273	1103	9%	33%	56%	2%	58%
English Language Learners: Yes	1,908	1068	56%	29%	15%	0%	15%	1,742	1058	34%	59%	7%	0%	7%	1,732	1065	42%	48%	10%	0%	10%
No	112,048	1105	16%	23%	58%	2%	60%	109,737	1090	10%	50%	38%	2%	41%	109,268	1098	12%	37%	50%	2%	52%
Formerly Limited English Proficient	227	1086	37%	26%	37%	0%	38%	219	1073	19%	67%	13%	1%	15%	218	1081	22%	53%	24%	0%	25%
Migrant	101	1073	50%	29%	21%	0%	21%	98	1056	37%	59%	4%	0%	4%	98	1066	41%	50%	9%	0%	9%
Homeless	261	1081	34%	33%	33%	0%	33%	240	1065	28%	62%	10%	1%	11%	239	1074	32%	49%	18%	1%	19%
Accommodations																					
Standard - All	7,916	1070	57%	23%	20%	0%	20%	7,321	1051	44%	49%	7%	0%	7%	7,195	1062	52%	35%	12%	0%	12%
Nonstandard - All **	44							41							44						
Standard ELL Only	373	1044	84%	13%	3%	0%	3%	309	1033	62%	36%	1%	0%	1%	304	1041	76%	22%	2%	0%	2%
Nonstandard ELL Only **	<							<							<						

* Percent proficient may not equal the sum of level 1 & level 2 due to rounding.
** Results for these students are invalid and not reported.

< = No summary scores provided if <10 students

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 11
Spring 2007

mme™ Michigan Merit Examination

State	MME MATHEMATICS No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 & 2 *	MME SCIENCE No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 & 2 *	MME SOCIAL STUDIES No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 & 2 *
Total All Students	113,839	1093	38%	16%	37%	10%	46%	113,630	1098	28%	16%	50%	6%	56%	113,718	1124	7%	9%	42%	41%	83%
Gender																					
Male	56,194	1094	36%	15%	37%	12%	49%	56,098	1098	29%	14%	49%	7%	57%	55,666	1124	9%	9%	39%	43%	82%
Female	57,645	1093	39%	17%	37%	8%	44%	57,532	1098	27%	18%	51%	4%	55%	58,052	1123	6%	9%	45%	40%	85%
Ethnicity																					
American Indian/Alaskan Native	977	1088	46%	18%	31%	5%	36%	972	1091	33%	21%	44%	3%	47%	973	1117	9%	13%	48%	30%	78%
Asian/Pacific Islander	2,731	1109	23%	11%	36%	29%	66%	2,736	1110	19%	13%	51%	17%	67%	2,713	1130	5%	7%	36%	52%	88%
Black, Not of Hispanic Origin	16,986	1070	73%	14%	13%	1%	14%	16,852	1073	58%	20%	22%	0%	22%	17,230	1107	17%	20%	50%	13%	63%
Hispanic	3,398	1081	56%	17%	24%	3%	27%	3,396	1083	45%	20%	34%	2%	36%	3,365	1114	12%	15%	48%	25%	73%
White, Not of Hispanic Origin	89,023	1098	31%	16%	42%	11%	53%	88,950	1103	22%	15%	56%	6%	63%	88,715	1127	5%	7%	40%	47%	88%
Multiracial	705	1091	41%	17%	34%	7%	42%	705	1094	33%	15%	48%	4%	52%	703	1121	8%	11%	47%	34%	82%
Additional Reporting Groups																					
Economically Disadvantaged: Yes	27,975	1078	60%	16%	22%	2%	24%	27,824	1081	47%	19%	32%	1%	34%	27,899	1112	14%	16%	48%	21%	70%
No	85,864	1098	30%	16%	42%	12%	54%	85,806	1104	22%	15%	56%	7%	63%	85,819	1128	5%	7%	40%	48%	88%
English Language Learners: Yes	1,901	1066	75%	10%	13%	2%	15%	1,895	1063	69%	16%	15%	0%	15%	1,821	1100	27%	25%	42%	7%	49%
No	111,938	1094	37%	16%	37%	10%	47%	111,735	1099	27%	16%	51%	6%	57%	111,897	1124	7%	9%	42%	42%	84%
Formerly Limited English Proficient	227	1078	60%	17%	19%	4%	23%	227	1080	49%	23%	26%	1%	28%	225	1110	12%	21%	51%	16%	67%
Migrant	101	1070	74%	17%	9%	0%	9%	100	1068	73%	14%	13%	0%	13%	104	1101	22%	26%	46%	6%	52%
Homeless	261	1070	68%	14%	17%	1%	18%	254	1070	59%	17%	23%	0%	24%	251	1106	21%	17%	48%	14%	62%
Accommodations																					
Standard - All	7,870	1060	81%	9%	9%	1%	11%	7,956	1059	72%	12%	15%	1%	16%	7,581	1098	32%	25%	35%	9%	44%
Nonstandard - All **	42							46							44						
Standard ELL Only	367	1051	86%	6%	7%	1%	8%	374	1043	87%	9%	3%	0%	4%	342	1089	47%	29%	23%	1%	24%
Nonstandard ELL Only **	<							<							<						

* Percent proficient may not equal the sum of level 1 & level 2 due to rounding.
** Results for these students are invalid and not reported.

< = No summary scores provided if <10 students

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

mme™ Michigan Merit Examination

Grade 11
Spring 2009

State	MME READING No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	MME WRITING No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	MME TOTAL ELA No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *
Total All Students	111,804	1106	16	24	57	3	60	112,677	1091	10	47	40	4	43	111,573	1099	12	36	49	3	52
Gender																					
Male	55,729	1102	20	25	53	2	56	56,130	1084	14	48	35	3	38	55,554	1094	16	37	45	2	47
Female	56,075	1109	13	23	61	3	64	56,547	1097	7	45	44	5	49	56,019	1103	9	34	54	4	57
Ethnicity																					
American Indian/Alaskan Native	1,005	1097	23	25	51	1	52	1,009	1080	14	57	28	2	29	1,002	1089	17	45	37	1	38
Asian/Pacific Islander	2,758	1115	14	19	58	9	67	2,759	1106	6	35	44	15	59	2,748	1111	9	27	52	12	64
Black, Not of Hispanic Origin	18,392	1087	34	33	33	0	33	18,862	1069	21	62	16	0	17	18,328	1079	26	50	23	0	24
Hispanic	3,721	1093	27	29	43	1	45	3,746	1076	16	58	24	1	26	3,707	1085	21	45	34	1	35
White, Not of Hispanic Origin	85,067	1110	12	22	63	3	66	85,408	1096	7	43	45	4	50	84,931	1103	9	32	55	3	59
Multiracial	837	1107	16	23	57	3	61	840	1091	10	46	40	4	44	834	1099	12	36	49	3	52
Additional Reporting Groups																					
Economically Disadvantaged: Yes	33,715	1092	27	30	42	1	42	34,140	1074	18	59	23	1	24	33,585	1084	22	46	31	1	32
No	78,089	1111	12	21	64	4	67	78,537	1098	7	41	47	5	52	77,988	1105	8	31	57	4	61
English Language Learners: Yes	2,174	1070	51	31	18	0	19	2,176	1059	29	62	9	0	9	2,152	1066	40	48	12	0	12
No	109,630	1106	16	24	58	3	61	110,501	1091	10	46	40	4	44	109,421	1099	12	35	50	3	53
Formerly Limited English Proficient	153	1098	21	31	48	1	48	153	1084	11	53	35	1	36	153	1091	15	42	42	1	42
Migrant	70	1088	30	27	43	0	43	71	1072	18	69	13	0	13	70	1080	24	49	27	0	27
Homeless	544	1089	31	30	38	1	39	552	1070	20	59	20	0	20	538	1080	25	46	30	0	30
Accommodations																					
Standard -- All	6,712	1076	45	28	26	1	27	6,415	1057	30	59	11	0	11	6,686	1067	40	43	16	0	17
Nonstandard -- All **	26														26						
Standard -- ELL Only	222	1053	69	22	9	0	9	151	1041	40	58	3	0	3	219	1047	64	31	5	0	5
Nonstandard -- ELL Only **																					

* □alue might not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Students not included in Number of Students Assessed.

< 10 = No summary scores provided if less than 10 students.

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

All Students

Grade 11
Spring 2009

mme™ Michigan Merit Examination

State	MME MATHEMATICS No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	MME SCIENCE No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *	MME SOCIAL STUDIES No. of Students Assessed	Mean Scale Score	Percent at Level 4	Level 3	Level 2	Level 1	Levels 1 □ 2 *
Total All Students	110,876	1094	36	15	37	12	49	111,346	1099	29	15	48	8	56	111,455	1127	8	11	39	42	81
Gender																					
Male	55,200	1095	35	14	37	15	52	55,431	1100	29	14	47	10	57	55,512	1130	8	10	35	48	82
Female	55,676	1093	37	16	37	10	47	55,915	1098	29	16	49	5	54	55,943	1123	8	12	44	37	80
Ethnicity																					
American Indian/Alaskan Native	994	1087	45	19	31	5	36	997	1092	36	20	42	3	45	998	1118	11	12	47	30	77
Asian/Pacific Islander	2,751	1115	18	10	36	36	72	2,759	1114	17	11	50	21	71	2,755	1138	5	8	30	57	87
Black, Not of Hispanic Origin	17,939	1069	69	14	15	1	16	18,167	1072	60	18	22	1	22	18,204	1105	20	22	44	13	58
Hispanic	3,682	1083	50	17	28	5	32	3,700	1086	44	18	36	3	39	3,724	1116	12	16	46	26	72
White, Not of Hispanic Origin	84,664	1100	28	15	42	14	56	84,873	1105	22	15	54	9	63	84,923	1131	5	8	38	49	87
Multiracial	828	1095	36	16	34	14	48	831	1099	29	17	47	7	54	832	1127	7	10	41	42	83
Additional Reporting Groups																					
Economically Disadvantaged: Yes	33,204	1080	55	16	25	4	29	33,449	1083	47	18	33	2	35	33,511	1113	14	17	45	23	68
No	77,672	1101	27	14	42	16	58	77,897	1106	21	14	54	10	64	77,944	1132	5	8	37	50	87
English Language Learners: Yes	2,147	1071	65	14	17	3	20	2,169	1066	66	15	18	1	18	2,173	1102	24	24	42	10	52
No	108,729	1095	35	15	37	13	50	109,177	1100	28	15	48	8	56	109,282	1127	8	11	39	43	82
Formerly Limited English Proficient	150	1094	37	19	33	11	44	149	1093	36	19	42	3	45	151	1121	8	10	50	32	82
Migrant	68	1081	54	13	31	1	32	69	1073	54	17	29	0	29	71	1109	14	23	46	17	63
Homeless	531	1075	60	14	24	2	26	537	1080	53	16	31	1	31	544	1110	17	18	44	21	65
Accommodations																					
Standard -- All	7,699	1059	78	9	11	2	12	7,670	1064	69	14	16	1	17	7,220	1104	20	28	38	14	52
Nonstandard -- All **	26							19							26						
Standard -- ELL Only	260	1046	86	7	6	1	7	262	1049	83	11	6	0	6	251	1096	25	35	35	4	39
Nonstandard -- ELL Only **	< 10														< 10						

* □alue might not e□ual the exact sum of level 1 □ level 2 due to rounding.
** Students not included in Number of Students Assessed.

< 10 = No summary scores provided if less than 10 students.

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
ELPA
Grade K
Spring 2006

MICHIGAN
ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

		NUMBER OF STUDENTS ASSESSED	MEAN SCALE SCORE: Listening	Reading	Writing	Speaking	Comprehension	Overall	PERCENT OF STUDENTS AT EACH PROFICIENCY LEVEL: BASIC	LOW INTERMEDIATE	HIGH INTERMEDIATE	PROFICIENT
*Cut Score			57	51	48	59	55	531				
Total All Students		8295	54.3	49.4	44.3	53.9	52.7	514.9	15	36	24	25
Gender		8294	54.3	49.4	44.3	53.9	52.7	514.9	15	36	24	25
Male		4312	54.1	49.2	43.7	53.6	52.5	512.8	17	39	24	21
Female		3982	54.5	49.6	44.9	54.3	52.8	517.2	13	34	25	29
Ethnicity												
American Indian/Alaskan Native		38	53.7	50.7	46.6	54.6	52.6	520.6	14	32	16	38
Asian/Pacific Islander		1351	54.8	50.5	46.2	53.8	53.2	520.7	14	27	23	36
Black, not of Hispanic origin		252	53.8	48.8	43.5	53.9	52.1	512.0	20	38	20	22
Hispanic		3695	54.1	49.1	43.7	53.5	52.5	512.2	16	39	24	20
White, not of Hispanic origin		2777	54.3	49.1	44.0	54.3	52.6	515.2	13	38	25	24
Multiracial		72	54.8	49.5	44.1	54.7	52.8	517.8	11	35	27	27
Economically Disadvantaged	Yes	4456	54.2	49.3	44.0	53.7	52.7	513.8	15	38	24	23
	No	3839	54.4	49.4	44.5	54.1	52.7	516.2	15	34	24	27
Students with Disabilities	Yes	251	53.6	48.2	42.6	52.3	52.0	506.2	25	41	21	13
	No	8044	54.3	49.4	44.3	54.0	52.7	515.2	15	36	24	25
Standard Accommodations		22	51.8	48.0	43.9	51.5	51.1	505.7	30	35	15	20
Nonstandard Accommodations		0										
English Language Learners	Yes	7729	54.3	49.4	44.3	53.9	52.7	514.8	15	37	24	25
	No	566	54.3	49.3	44.2	54.8	52.7	516.5	14	33	26	28
Standard Accommodations		513	53.3	50.3	46.6	54.7	52.1	516.3	17	30	24	28
Nonstandard Accommodations		28										
Standard Accommodations - All		552	53.4	50.2	46.5	54.6	52.2	516.4	17	30	25	28
Nonstandard Accommodations - All		28										
FLEP		134	55.2	50.0	45.6	55.3	53.6	522.2	4	31	30	34
Less than Full Academic Year		963	54.6	49.7	44.5	53.5	53.0	515.7	16	34	22	27
Homeless		19	53.8	47.6	40.1	52.9	51.7	503.8	17	61	6	17

* = Minimum expected score for a proficient student.
< = No summary scores provided if <10 students.

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Michigan Department of Education

STATE DEMOGRAPHIC REPORT
ELPA
Grade 01
Spring 2006

MICHIGAN ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

	NUMBER OF STUDENTS ASSESSED	MEAN SCALE SCORE: Listening	Reading	Writing	Speaking	Comprehension	Overall	PERCENT OF STUDENTS AT EACH PROFICIENCY LEVEL: BASIC	LOW INTERMEDIATE	HIGH INTERMEDIATE	PROFICIENT
*Cut Score		60	58	57	63	59	575				
Total All Students	7591	57.4	55.2	53.2	57.7	56.3	555.0	8	18	50	24
Gender	7591	57.4	55.2	53.2	57.7	56.3	555.0	8	18	50	24
Male	3992	57.4	54.9	52.5	57.6	56.2	552.7	9	21	50	21
Female	3599	57.4	55.6	54.0	57.8	56.5	557.5	8	15	50	27
Ethnicity											
American Indian/Alaskan Native	22	56.9	53.3	50.6	56.2	55.3	542.3	14	32	36	18
Asian/Pacific Islander	1170	58.7	57.3	55.0	57.8	57.7	564.8	6	12	45	37
Black, not of Hispanic origin	227	57.0	54.5	51.7	56.2	55.9	548.0	12	23	46	19
Hispanic	3283	56.9	54.3	52.1	57.3	55.7	548.8	11	23	50	16
White, not of Hispanic origin	2773	57.5	55.6	54.0	58.2	56.5	558.5	6	15	51	27
Multiracial	55	58.2	55.9	53.4	59.1	57.0	560.5	6	19	42	33
Economically Disadvantaged Yes	4563	57.0	54.7	52.9	57.5	55.9	552.0	9	20	51	20
No	3028	58.1	56.0	53.8	58.0	56.9	559.4	7	15	49	29
Students with Disabilities Yes	342	56.0	53.4	50.6	56.0	55.0	541.2	16	27	48	9
No	7249	57.5	55.3	53.4	57.8	56.4	555.6	8	18	50	24
Standard Accommodations	25	55.5	51.5	51.1	54.1	54.4	542.7	22	13	57	9
Nonstandard Accommodations	1										
English Language Learners Yes	7120	57.4	55.3	53.3	57.7	56.3	555.0	8	18	50	23
No	471	57.4	54.9	52.5	58.4	56.2	554.2	13	14	45	27
Standard Accommodations	416	57.0	57.9	52.6	58.3	56.2	554.9	10	17	47	26
Nonstandard Accommodations	1										
Standard Accommodations - All	447	56.8	56.2	52.3	58.0	56.0	553.6	12	17	46	25
Nonstandard Accommodations - All	1										
FLEP	142	58.4	57.2	54.2	58.8	57.6	565.3	5	9	53	33
Less than Full Academic Year	1371	57.2	54.9	52.9	57.4	56.2	552.8	9	20	49	22
Homeless	21	57.4	54.0	53.2	57.7	55.8	553.8	5	20	60	15

* = Minimum expected score for a proficient student.
< = No summary scores provided if <10 students.

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MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
ELPA
Grade 06
Spring 2006

MICHIGAN
ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

		NUMBER OF STUDENTS ASSESSED	MEAN SCALE SCORE: Listening	Reading	Writing	Speaking	Comprehension	Overall	PERCENT OF STUDENTS AT EACH PROFICIENCY LEVEL: BASIC	LOW INTERMEDIATE	HIGH INTERMEDIATE	PROFICIENT
*Cut Score			69	65	63	73	66	635				
Total All Students		4645	65.6	62.9	60.5	68.8	63.6	618.0	4	17	48	32
Gender		4645	65.6	62.9	60.5	68.8	63.6	618.0	4	17	48	32
Male		2495	65.2	62.5	59.6	68.6	63.2	614.1	4	20	50	26
Female		2150	66.1	63.5	61.5	69.1	64.1	622.6	3	13	45	38
Ethnicity												
American Indian/Alaskan Native		9	<	<	<	<	<	<	<	<	<	<
Asian/Pacific Islander		557	65.4	63.4	60.8	67.5	63.8	617.4	5	17	42	36
Black, not of Hispanic origin		135	65.0	61.9	59.0	68.0	62.8	609.7	7	25	40	28
Hispanic		2007	65.3	62.3	59.8	68.5	63.2	614.2	4	19	52	25
White, not of Hispanic origin		1865	66.2	63.6	61.4	69.6	64.1	623.4	2	14	46	38
Multiracial		35	65.7	62.8	60.5	68.7	63.4	616.1	6	14	40	40
Economically Disadvantaged	Yes	3204	65.6	62.8	60.4	68.9	63.5	617.6	3	18	49	30
	No	1441	65.7	63.3	60.7	68.7	63.8	619.0	5	15	45	35
Students with Disabilities	Yes	466	63.3	60.1	57.6	67.5	61.5	600.3	3	42	48	7
	No	4179	65.9	63.3	60.8	69.0	63.8	620.0	4	14	48	35
Standard Accommodations		55	62.5	63.0	58.5	66.8	60.6	594.4	6	54	40	0
Nonstandard Accommodations		1										
English Language Learners	Yes	4098	65.3	62.6	60.3	68.6	63.3	616.0	4	18	50	29
	No	547	67.8	65.3	62.3	70.7	65.6	633.9	3	8	32	56
Standard Accommodations		320	64.2	63.0	59.7	67.4	62.3	607.7	4	27	54	15
Nonstandard Accommodations		2										
Standard Accommodations - All		360	64.5	63.0	60.3	68.2	62.6	610.4	4	25	52	19
Nonstandard Accommodations - All		3										
FLEP		555	68.0	65.6	62.9	71.3	65.9	637.6	1	7	34	59
Less than Full Academic Year		712	65.6	62.9	60.6	68.7	63.6	617.9	4	15	49	32
Homeless		9	<	<	<	<	<	<	<	<	<	<

* = Minimum expected score for a proficient student.
< = No summary scores provided if <10 students.

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MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
ELPA
Grade 08
Spring 2006

MICHIGAN ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

	NUMBER OF STUDENTS ASSESSED	MEAN SCALE SCORE: Listening	Reading	Writing	Speaking	Comprehension	Overall	PERCENT OF STUDENTS AT EACH PROFICIENCY LEVEL: BASIC	LOW INTERMEDIATE	HIGH INTERMEDIATE	PROFICIENT
*Cut Score		70	68	65	73	68	648				
Total All Students	3890	66.8	64.6	61.9	69.6	64.9	628.0	5	18	48	29
Gender	3889	66.8	64.6	61.9	69.6	64.9	628.0	5	18	48	29
Male	2048	66.4	64.0	60.9	69.4	64.4	623.7	5	21	50	24
Female	1841	67.2	65.3	62.9	69.8	65.5	632.8	5	14	45	36
Ethnicity											
American Indian/Alaskan Native	15	70.8	66.5	65.4	71.7	67.5	650.9	0	0	40	60
Asian/Pacific Islander	464	67.1	65.1	62.4	68.4	65.4	629.3	6	17	45	33
Black, not of Hispanic origin	153	66.3	63.2	60.2	68.2	63.9	617.8	9	31	38	23
Hispanic	1721	66.4	64.0	61.1	69.7	64.4	624.5	6	19	49	26
White, not of Hispanic origin	1491	67.2	65.2	62.7	70.0	65.4	632.5	4	15	48	33
Multiracial	25	66.5	63.9	61.4	70.4	64.2	625.1	4	24	44	28
Economically Disadvantaged Yes	2624	66.6	64.4	61.6	69.4	64.7	626.3	5	19	48	28
No	1266	67.3	65.1	62.4	70.0	65.4	631.6	4	15	47	33
Students with Disabilities Yes	347	64.5	61.4	59.0	68.7	62.4	609.1	4	44	47	6
No	3543	67.0	64.9	62.1	69.7	65.1	629.9	5	15	48	32
Standard Accommodations	57	64.9	62.5	58.8	68.2	62.4	608.4	5	43	48	4
Nonstandard Accommodations	0										
English Language Learners Yes	3451	66.5	64.3	61.6	69.3	64.6	625.8	5	19	50	26
No	439	68.9	67.1	64.0	71.9	67.0	645.2	3	9	32	56
Standard Accommodations	365	65.6	65.6	61.0	67.6	63.7	619.7	6	24	54	16
Nonstandard Accommodations	2										
Standard Accommodations - All	407	65.9	65.8	61.6	67.9	64.0	621.7	5	23	51	20
Nonstandard Accommodations - All	2										
FLEP	408	69.7	67.9	64.7	72.0	67.7	650.1	1	7	32	60
Less than Full Academic Year	556	66.0	63.7	60.7	68.2	64.1	619.7	10	23	45	23
Homeless	6	<	<	<	<	<	<	<	<	<	<

* = Minimum expected score for a proficient student.
< = No summary scores provided if <10 students.

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Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
ELPA
Grade 11
Spring 2006

MICHIGAN
ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

	NUMBER OF STUDENTS ASSESSED	MEAN SCALE SCORE						PERCENT OF STUDENTS AT EACH PROFICIENCY LEVEL			
		Listening	Reading	Writing	Speaking	Comprehension	Overall	BASIC	LOW INTERMEDIATE	HIGH INTERMEDIATE	PROFICIENT
*Cut Score		72	71	66	75	69	664				
Total All Students	2174	67.6	66.8	62.4	71.1	66.2	639.0	7	32	37	23
Gender	2174	67.6	66.8	62.4	71.1	66.2	639.0	7	32	37	23
Male	1134	67.3	66.2	61.5	70.8	65.8	634.4	9	36	37	19
Female	1040	68.0	67.5	63.5	71.5	66.7	643.9	6	28	38	28
Ethnicity											
American Indian/Alaskan Native	8	<	<	<	<	<	<	<	<	<	<
Asian/Pacific Islander	323	67.6	67.7	63.3	69.4	66.7	640.9	6	34	35	26
Black, not of Hispanic origin	120	65.8	65.4	61.2	70.3	64.8	629.1	13	38	31	18
Hispanic	783	67.9	67.1	62.1	71.9	66.4	640.3	8	28	39	25
White, not of Hispanic origin	912	67.6	66.5	62.7	71.2	66.1	638.6	6	34	37	23
Multiracial	21	67.1	67.3	61.6	71.6	66.4	637.8	14	19	57	10
Economically Disadvantaged Yes	1216	67.5	66.6	62.2	71.4	66.0	637.8	8	33	37	22
No	958	67.7	67.2	62.7	70.8	66.5	640.4	7	31	37	25
Students with Disabilities Yes	139	65.1	63.2	59.0	70.9	63.5	619.4	15	54	25	6
No	2035	67.8	67.1	62.7	71.2	66.4	640.2	7	31	38	25
Standard Accommodations	18	67.9	58.0	0.0	74.3	64.0	620.9	18	47	35	0
Nonstandard Accommodations	0										
English Language Learners Yes	1953	67.4	66.7	62.3	70.9	66.1	637.6	8	33	37	22
No	221	69.7	68.4	63.8	73.1	67.7	652.0	4	20	36	40
Standard Accommodations	280	67.8	58.0	60.8	71.1	66.1	637.4	6	36	38	21
Nonstandard Accommodations	0										
Standard Accommodations - All	308	68.1	58.0	61.3	71.3	66.3	639.5	5	33	39	23
Nonstandard Accommodations - All	0										
FLEP	192	70.1	68.5	63.8	73.2	67.8	652.7	1	23	38	38
Less than Full Academic Year	247	67.1	66.6	61.3	70.5	65.9	633.6	12	31	37	20
Homeless	7	<	<	<	<	<	<	<	<	<	<

* = Minimum expected score for a proficient student.
< = No summary scores provided if <10 students.

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MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
ELPA
Grade 12
Spring 2006

MICHIGAN
ENGLISH LANGUAGE PROFICIENCY ASSESSMENT

		NUMBER OF STUDENTS ASSESSED	MEAN SCALE SCORE						PERCENT OF STUDENTS AT EACH PROFICIENCY LEVEL			
			Listening	Reading	Writing	Speaking	Comprehension	Overall	BASIC	LOW INTERMEDIATE	HIGH INTERMEDIATE	PROFICIENT
*Cut Score			74	72	67	75	70	672				
Total All Students		1662	68.4	67.6	63.1	72.0	66.9	644.3	7	34	36	23
Gender		1662	68.4	67.6	63.1	72.0	66.9	644.3	7	34	36	23
Male		850	68.1	67.2	62.4	71.7	66.5	640.7	7	38	35	19
Female		812	68.7	67.9	63.9	72.3	67.2	648.1	6	30	38	27
Ethnicity												
American Indian/Alaskan Native		6	<	<	<	<	<	<	<	<	<	<
Asian/Pacific Islander		277	68.8	68.4	64.0	70.5	67.5	647.3	4	33	36	27
Black, not of Hispanic origin		76	66.7	66.9	62.3	71.1	65.5	637.4	8	51	28	13
Hispanic		629	68.4	67.9	62.7	72.9	67.0	645.2	8	30	39	23
White, not of Hispanic origin		661	68.3	67.0	63.3	71.7	66.6	642.9	6	37	35	22
Multiracial		8	<	<	<	<	<	<	<	<	<	<
Economically Disadvantaged	Yes	827	67.9	67.0	62.5	71.9	66.4	640.8	7	37	37	19
	No	835	68.8	68.1	63.7	72.0	67.3	647.8	6	32	36	27
Students with Disabilities	Yes	75	65.0	63.6	59.0	71.0	63.5	618.9	17	58	23	2
	No	1587	68.5	67.7	63.3	72.0	67.0	645.4	6	33	37	24
Standard Accommodations		4	<	<	<	<	<	<	<	<	<	<
Nonstandard Accommodations		0										
English Language Learners	Yes	1487	68.2	67.4	63.0	71.8	66.7	643.2	7	36	36	22
	No	175	70.0	68.7	64.0	73.6	68.1	654.1	7	18	41	35
Standard Accommodations		147	68.2	0.0	63.9	71.2	66.3	638.6	4	49	34	13
Nonstandard Accommodations		0										
Standard Accommodations - All		164	68.5	0.0	63.9	72.3	66.5	640.3	4	46	36	14
Nonstandard Accommodations - All		0										
FLEP		143	70.0	68.3	63.4	73.3	67.9	651.5	4	26	40	30
Less than Full Academic Year		135	67.4	67.0	62.6	72.2	66.2	640.7	9	37	33	21
Homeless		4	<	<	<	<	<	<	<	<	<	<

* = Minimum expected score for a proficient student.
< = No summary scores provided if <10 students.

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Appendix A.8

STATE DEMOGRAPHIC REPORT
Functional Independence
Grade 8
Fall 2005

	English Language Arts								Mathematics							
	Students Assessed	Mean Scale Score	Emerging		Attained		Surpassed		Students Assessed	Mean Scale Score	Emerging		Attained		Surpassed	
			#	%	#	%	#	%			#	%	#	%	#	%
State																
All Students	3183	2835	288	9.0	522	16.4	2373	74.6	3164	2822	596	18.8	744	23.5	1824	57.6
Gender																
Male	2048	2833	200	9.8	355	17.3	1493	72.9	1983	2824	356	18.0	441	22.2	1186	59.8
Female	1134	2837	87	7.7	167	14.7	880	77.6	1181	2819	240	20.3	303	25.7	638	54.0
Ethnicity																
American Indian/Alaskan Native	56	2837	5	8.9	4	7.1	47	83.9	52	2823	5	9.6	9	17.3	38	73.1
Asian/Pacific Islander	19	2829	2	10.5	3	15.8	14	73.7	18	2818	6	33.3	4	22.2	8	44.4
Black, Not of Hispanic Origin	960	2827	139	14.5	200	20.8	621	64.7	946	2813	280	29.6	267	28.2	399	42.2
Hispanic	114	2833	15	13.2	20	17.5	79	69.3	107	2824	17	15.9	25	23.4	65	60.7
White, Not of Hispanic Origin	1924	2838	118	6.1	277	14.4	1529	79.5	1926	2826	264	13.7	415	21.5	1247	64.7
Multiracial	16	2834	1	6.3	3	18.8	12	75.0	16	2828	0	0.0	4	25.0	12	75.0
Other or Not Reported	94	2835	8	8.5	15	16.0	71	75.5	99	2819	24	24.2	20	20.2	55	55.6
Additional Reporting Groups																
Economically Disadvantaged: Yes	1576	2832	173	11.0	282	17.9	1121	71.1	1569	2819	340	21.7	392	25.0	837	53.3
Economically Disadvantaged: No	1607	2837	115	7.2	240	14.9	1252	77.9	1595	2824	256	16.1	352	22.1	987	61.9
English Language Learners: Yes	37	2824	7	18.9	6	16.2	24	64.9	36	2821	7	19.4	7	19.4	22	61.1
English Language Learners: No	3146	2835	281	8.9	516	16.4	2349	74.7	3128	2822	589	18.8	737	23.6	1802	57.6
Formerly Limited English Proficient	18	2826	3	16.7	4	22.2	11	61.1	16	2819	1	6.3	5	31.3	10	62.5
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Standard Accommodations - All	1369	2832	132	9.6	271	19.8	966	70.6	1595	2821	320	20.1	383	24.0	892	55.9
Standard Accommodations - ELL Only	10	2820	3	30.0	1	10.0	6	60.0	18	2824	5	27.8	1	5.6	12	66.7

* < 10 students assessed

Appendix A.8

STATE DEMOGRAPHIC REPORT
Functional Independence
Grade 3
Fall 2005

	English Language Arts								Mathematics							
	Students Assessed	Mean Scale Score	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %	Students Assessed	Mean Scale Score	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %
State																
All Students	2699	2327	363	13.4	458	17.0	1878	69.6	2308	2319	438	19.0	492	21.3	1378	59.7
Gender																
Male	1810	2327	222	12.3	320	17.7	1268	70.1	1509	2320	268	17.8	287	19.0	954	63.2
Female	889	2326	141	15.9	138	15.5	610	68.6	799	2316	170	21.3	205	25.7	424	53.1
Ethnicity																
American Indian/Alaskan Native	37	2332	2	5.4	7	18.9	28	75.7	31	2330	3	9.7	4	12.9	24	77.4
Asian/Pacific Islander	28	2327	4	14.3	7	25.0	17	60.7	21	2316	2	9.5	9	42.9	10	47.6
Black, Not of Hispanic Origin	589	2318	125	21.2	140	23.8	324	55.0	545	2312	144	26.4	136	25.0	265	48.6
Hispanic	106	2325	13	12.3	16	15.1	77	72.6	94	2318	17	18.1	23	24.5	54	57.4
White, Not of Hispanic Origin	1783	2330	191	10.7	260	14.6	1332	74.7	1479	2322	240	16.2	292	19.7	947	64.0
Multiracial	20	2326	3	15.0	3	15.0	14	70.0	18	2321	4	22.2	2	11.1	12	66.7
Other or Not Reported	136	2324	25	18.4	25	18.4	86	63.2	120	2315	28	23.3	26	21.7	66	55.0
Additional Reporting Groups																
Economically Disadvantaged: Yes	1212	2326	158	13.0	216	17.8	838	69.1	1039	2319	200	19.2	225	21.7	614	59.1
Economically Disadvantaged: No	1487	2328	205	13.8	242	16.3	1040	69.9	1269	2319	238	18.8	267	21.0	764	60.2
English Language Learners: Yes	56	2323	10	17.9	10	17.9	36	64.3	49	2316	13	26.5	10	20.4	26	53.1
English Language Learners: No	2643	2327	353	13.4	448	17.0	1842	69.7	2259	2319	425	18.8	482	21.3	1352	59.8
Formerly Limited English Proficient	10	2316	3	30.0	1	10.0	6	60.0	10	2312	2	20.0	3	30.0	5	50.0
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	18	2319	3	16.7	5	27.8	10	55.6	18	2312	5	27.8	5	27.8	8	44.4
Standard Accommodations - All	2040	2327	259	12.7	327	16.0	1454	71.3	1677	2318	307	18.3	384	22.9	986	58.8
Standard Accommodations - ELL Only	48	2322	9	18.8	9	18.8	30	62.5	38	2318	9	23.7	7	18.4	22	57.9

* < 10 students assessed

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
Participation and Supported Independence
Grade 8
Fall 2005

MI-Access Michigan's Alternate Assessment Program

	Participation								Supported Independence							
	Students Assessed	Mean Earned Points	Emerging		Attained		Surpassed		Students Assessed	Mean Earned Points	Emerging		Attained		Surpassed	
			#	%	#	%	#	%			#	%	#	%	#	%
State																
All Students	257	16	47	18.3	72	28.0	138	53.7	658	18	171	26.0	210	31.9	277	42.1
Gender																
Male	155	16	30	19.4	47	30.3	78	50.3	412	17	122	29.6	122	29.6	168	40.8
Female	102	17	17	16.7	25	24.5	60	58.8	246	19	49	19.9	88	35.8	109	44.3
Ethnicity																
American Indian/Alaskan Native	*	*	*	*	*	*	*	*	10	19	2	20.0	2	20.0	6	60.0
Asian/Pacific Islander	*	*	*	*	*	*	*	*	13	19	3	23.1	3	23.1	7	53.8
Black, Not of Hispanic Origin	47	16	10	21.3	13	27.7	24	51.1	182	18	48	26.4	52	28.6	82	45.1
Hispanic	*	*	*	*	*	*	*	*	20	18	3	15.0	10	50.0	7	35.0
White, Not of Hispanic Origin	169	16	28	16.6	48	28.4	93	55.0	389	17	102	26.2	130	33.4	157	40.4
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	23	15	7	30.4	6	26.1	10	43.5	42	16	13	31.0	13	31.0	16	38.1
Additional Reporting Groups																
Economically Disadvantaged: Yes	56	17	5	8.9	16	28.6	35	62.5	220	18	45	20.5	73	33.2	102	46.4
Economically Disadvantaged: No	201	16	42	20.9	56	27.9	103	51.2	438	17	126	28.8	137	31.3	175	40.0
English Language Learners: Yes	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language Learners: No	254	16	47	18.5	71	28.0	136	53.5	651	18	169	26.0	208	32.0	274	42.1
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed

Appendix A.8

STATE DEMOGRAPHIC REPORT
Participation and Supported Independence
Grade 3
Fall 2005

	Participation								Supported Independence							
	Students Assessed	Mean Earned Points	Emerging		Attained		Surpassed		Students Assessed	Mean Earned Points	Emerging		Attained		Surpassed	
			#	%	#	%	#	%			#	%	#	%	#	%
State																
All Students	264	15	65	24.6	85	32.2	114	43.2	554	15	119	21.5	111	20.0	324	58.5
Gender																
Male	163	15	42	25.8	47	28.8	74	45.4	377	14	88	23.3	80	21.2	209	55.4
Female	101	15	23	22.8	38	37.6	40	39.6	177	16	31	17.5	31	17.5	115	65.0
Ethnicity																
American Indian/Alaskan Native	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Asian/Pacific Islander	*	*	*	*	*	*	*	*	12	12	3	25.0	4	33.3	5	41.7
Black, Not of Hispanic Origin	73	14	25	34.2	24	32.9	24	32.9	139	14	37	26.6	26	18.7	76	54.7
Hispanic	*	*	*	*	*	*	*	*	18	17	1	5.6	5	27.8	12	66.7
White, Not of Hispanic Origin	149	16	30	20.1	51	34.2	68	45.6	334	16	65	19.5	62	18.6	207	62.0
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	29	16	7	24.1	7	24.1	15	51.7	45	13	12	26.7	13	28.9	20	44.4
Additional Reporting Groups																
Economically Disadvantaged: Yes	72	14	27	37.5	19	26.4	26	36.1	149	15	35	23.5	29	19.5	85	57.0
Economically Disadvantaged: No	192	16	38	19.8	66	34.4	88	45.8	405	15	84	20.7	82	20.2	239	59.0
English Language Learners: Yes	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language Learners: No	259	15	64	24.7	84	32.4	111	42.9	545	15	118	21.7	111	20.4	316	58.0
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed

STATE DEMOGRAPHIC REPORT
Functional Independence
Grade 11
Spring 2006

	English Language Arts								Mathematics							
	Students Assessed	Mean Scale Score	Emerging		Attained		Surpassed		Students Assessed	Mean Scale Score	Emerging		Attained		Surpassed	
			#	%	#	%	#	%			#	%	#	%	#	%
State																
All Students	2085	3134	170	8.2	589	28.2	1326	63.6	2090	3117	448	21.4	1157	55.4	485	23.2
Gender																
Male	1327	3133	121	9.1	382	28.8	824	62.1	1313	3121	245	18.7	697	53.1	371	28.3
Female	758	3136	49	6.5	207	27.3	502	66.2	777	3112	203	26.1	460	59.2	114	14.7
Ethnicity																
American Indian/Alaskan Native	28	3135	3	10.7	8	28.6	17	60.7	29	3122	4	13.8	19	65.5	6	20.7
Asian/Pacific Islander	18	3132	1	5.6	8	44.4	9	50.0	17	3106	6	35.3	8	47.1	3	17.6
Black, Not of Hispanic Origin	450	3127	70	15.6	145	32.2	235	52.2	448	3108	143	31.9	256	57.1	49	10.9
Hispanic	73	3140	3	4.1	14	19.2	56	76.7	71	3126	4	5.6	43	60.6	24	33.8
White, Not of Hispanic Origin	1372	3137	75	5.5	365	26.6	932	67.9	1373	3121	243	17.7	750	54.6	380	27.7
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	139	3129	18	12.9	49	35.3	72	51.8	147	3110	46	31.3	79	53.7	22	15.0
Additional Reporting Groups																
Economically Disadvantaged: Yes	817	3133	71	8.7	226	27.7	520	63.6	815	3116	180	22.1	454	55.7	181	22.2
Economically Disadvantaged: No	1268	3135	99	7.8	363	28.6	806	63.6	1275	3118	268	21.0	703	55.1	304	23.8
English Language Learners: Yes	17	3137	2	11.8	5	29.4	10	58.8	17	3116	3	17.6	11	64.7	3	17.6
English Language Learners: No	2068	3134	168	8.1	584	28.2	1316	63.6	2073	3117	445	21.5	1146	55.3	482	23.3
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	12	3130	4	33.3	0	0.0	8	66.7	12	3111	4	33.3	6	50.0	2	16.7
Standard Accommodations - All	891	3131	90	10.1	283	31.8	518	58.1	989	3116	229	23.2	546	55.2	214	21.6
Standard Accommodations - ELL Only	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
Functional Independence
Grade 8
Fall 2008

MI Access Michigan's Alternate Assessment Program

	English Language Arts								Mathematics							
	Students Assessed	Mean Scale Score	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %	Students Assessed	Mean Scale Score	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %
State																
All Students	2361	2829	211	8.9	556	23.5	1594	67.5	2312	2815	380	16.4	1013	43.8	919	39.7
Gender																
Male	1523	2828	139	9.1	395	25.9	989	64.9	1457	2816	212	14.6	613	42.1	632	43.4
Female	838	2832	72	8.6	161	19.2	605	72.2	855	2812	168	19.6	400	46.8	287	33.6
Ethnicity																
American Indian/Alaskan Native	40	2835	2	5.0	6	15.0	32	80.0	36	2822	3	8.3	10	27.8	23	63.9
Asian/Pacific Islander	23	2825	2	8.7	6	26.1	15	65.2	22	2809	5	22.7	10	45.5	7	31.8
Black, Not of Hispanic Origin	731	2825	91	12.4	205	28.0	435	59.5	728	2811	160	22.0	350	48.1	218	29.9
Hispanic	102	2829	12	11.8	25	24.5	65	63.7	94	2814	15	16.0	43	45.7	36	38.3
White, Not of Hispanic Origin	1436	2831	101	7.0	309	21.5	1026	71.4	1403	2817	190	13.5	589	42.0	624	44.5
Multiracial	28	2828	3	10.7	5	17.9	20	71.4	28	2813	7	25.0	11	39.3	10	35.7
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	1491	2829	147	9.9	342	22.9	1002	67.2	1460	2815	234	16.0	645	44.2	581	39.8
Economically Disadvantaged: No	870	2830	64	7.4	214	24.6	592	68.0	852	2815	146	17.1	368	43.2	338	39.7
English Language Learners: Yes	60	2825	12	20.0	11	18.3	37	61.7	59	2812	11	18.6	28	47.5	20	33.9
English Language Learners: No	2301	2829	199	8.6	545	23.7	1557	67.7	2253	2815	369	16.4	985	43.7	899	39.9
Formerly Limited English Proficient	36	2824	2	5.6	14	38.9	20	55.6	34	2806	9	26.5	19	55.9	6	17.6
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	16	2825	2	12.5	5	31.3	9	56.3	17	2805	6	35.3	9	52.9	2	11.8
Accommodations																
Standard - All	1175	2828	90	7.7	306	26.0	779	66.3	1253	2815	192	15.3	553	44.1	508	40.5
Nonstandard - All †	(*)								(*)							
Standard ELL Only	25	2818	7	28.0	5	20.0	13	52.0	33	2811	7	21.2	15	45.5	11	33.3
Nonstandard ELL Only †	(*)								(*)							

* < 10 students assessed
† Results for these students are invalid and not reported.
() These students are not included in "All Students."

Note: See reverse for additional information

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

Functional Independence
Grade 3
Fall 2008

MI Access
Michigan's Alternate Assessment Program

	English Language Arts								Mathematics							
	Students Assessed	Mean Scale Score	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %	Students Assessed	Mean Scale Score	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %
State																
All Students	2250	2320	386	17.2	558	24.8	1306	58.0	1905	2318	380	19.9	467	24.5	1058	55.5
Gender																
Male	1539	2320	259	16.8	371	24.1	909	59.1	1271	2319	232	18.3	303	23.8	736	57.9
Female	711	2319	127	17.9	187	26.3	397	55.8	634	2315	148	23.3	164	25.9	322	50.8
Ethnicity																
American Indian/Alaskan Native	25	2323	2	8.0	6	24.0	17	68.0	25	2319	4	16.0	5	20.0	16	64.0
Asian/Pacific Islander	28	2316	3	10.7	9	32.1	16	57.1	27	2314	8	29.6	5	18.5	14	51.9
Black, Not of Hispanic Origin	541	2314	157	29.0	127	23.5	257	47.5	489	2313	140	28.6	124	25.4	225	46.0
Hispanic	124	2317	25	20.2	34	27.4	65	52.4	102	2316	18	17.6	27	26.5	57	55.9
White, Not of Hispanic Origin	1503	2323	192	12.8	377	25.1	934	62.1	1237	2320	205	16.6	302	24.4	730	59.0
Multiracial	25	2321	6	24.0	4	16.0	15	60.0	21	2321	3	14.3	4	19.0	14	66.7
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	1498	2320	276	18.4	356	23.8	866	57.8	1264	2318	257	20.3	304	24.1	703	55.6
Economically Disadvantaged: No	752	2321	110	14.6	202	26.9	440	58.5	641	2318	123	19.2	163	25.4	355	55.4
English Language Learners: Yes	79	2318	15	19.0	22	27.8	42	53.2	63	2317	9	14.3	17	27.0	37	58.7
English Language Learners: No	2171	2320	371	17.1	536	24.7	1264	58.2	1842	2318	371	20.1	450	24.4	1021	55.4
Formerly Limited English Proficient	48	2315	13	27.1	17	35.4	18	37.5	37	2312	13	35.1	9	24.3	15	40.5
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	24	2314	5	20.8	7	29.2	12	50.0	21	2315	3	14.3	11	52.4	7	33.3
Accommodations																
Standard - All	1703	2320	285	16.7	426	25.0	992	58.3	1473	2317	296	20.1	376	25.5	801	54.4
Nonstandard - All †	(*)								(*)							
Standard ELL Only	67	2319	12	17.9	18	26.9	37	55.2	45	2317	6	13.3	13	28.9	26	57.8
Nonstandard ELL Only †	(*)								(*)							

* < 10 students assessed
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() These students are not included in "All Students."

Note: See reverse for additional information

STATE DEMOGRAPHIC REPORT

Participation
Grade 8
Fall 2008

	English Language Arts								Mathematics							
	Students Assessed	Mean Earned Points	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %	Students Assessed	Mean Earned Points	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %
State																
All Students	313	26	143	45.7	108	34.5	62	19.8	313	23	177	56.5	94	30.0	42	13.4
Gender																
Male	199	26	91	45.7	74	37.2	34	17.1	201	24	111	55.2	64	31.8	26	12.9
Female	114	27	52	45.6	34	29.8	28	24.6	112	21	66	58.9	30	26.8	16	14.3
Ethnicity																
American Indian/Alaskan Native	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Asian/Pacific Islander	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Black, Not of Hispanic Origin	76	30	30	39.5	27	35.5	19	25.0	77	24	39	50.6	25	32.5	13	16.9
Hispanic	22	25	8	36.4	9	40.9	5	22.7	22	21	13	59.1	6	27.3	3	13.6
White, Not of Hispanic Origin	203	25	101	49.8	67	33.0	35	17.2	203	22	120	59.1	59	29.1	24	11.8
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	109	26	49	45.0	39	35.8	21	19.3	109	23	62	56.9	33	30.3	14	12.8
Economically Disadvantaged: No	204	26	94	46.1	69	33.8	41	20.1	204	23	115	56.4	61	29.9	28	13.7
English Language Learners: Yes	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language Learners: No	307	26	139	45.3	107	34.9	61	19.9	307	23	173	56.4	93	30.3	41	13.4
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed
† Results for these students are invalid and not reported.
() These students are not included in "All Students."

Note: See reverse for additional information

Appendix A.8

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT

Participation
Grade 3
Fall 2008

MI Access
Michigan's Alternate Assessment Program

	English Language Arts								Mathematics							
	Students Assessed	Mean Earned Points	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %	Students Assessed	Mean Earned Points	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %
State																
All Students	371	28	141	38.0	139	37.5	91	24.5	370	28	118	31.9	121	32.7	131	35.4
Gender																
Male	230	28	88	38.3	85	37.0	57	24.8	229	28	70	30.6	79	34.5	80	34.9
Female	141	28	53	37.6	54	38.3	34	24.1	141	28	48	34.0	42	29.8	51	36.2
Ethnicity																
American Indian/Alaskan Native	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Asian/Pacific Islander	12	27	3	25.0	8	66.7	1	8.3	12	33	2	16.7	5	41.7	5	41.7
Black, Not of Hispanic Origin	96	26	39	40.6	36	37.5	21	21.9	96	28	32	33.3	29	30.2	35	36.5
Hispanic	19	18	10	52.6	8	42.1	1	5.3	19	20	8	42.1	8	42.1	3	15.8
White, Not of Hispanic Origin	235	29	86	36.6	84	35.7	65	27.7	235	29	73	31.1	76	32.3	86	36.6
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	153	27	59	38.6	55	35.9	39	25.5	153	29	45	29.4	55	35.9	53	34.6
Economically Disadvantaged: No	218	28	82	37.6	84	38.5	52	23.9	217	28	73	33.6	66	30.4	78	35.9
English Language Learners: Yes	12	19	7	58.3	4	33.3	1	8.3	12	24	3	25.0	6	50.0	3	25.0
English Language Learners: No	359	28	134	37.3	135	37.6	90	25.1	358	28	115	32.1	115	32.1	128	35.8
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed
† Results for these students are invalid and not reported.
() These students are not included in "All Students."

Note: See reverse for additional information

MICHIGAN Department of Education

STATE DEMOGRAPHIC REPORT
Supported Independence
Grade 8
Fall 2008

MI-Access Michigan's Alternate Assessment Program

	English Language Arts								Mathematics							
	Students Assessed	Mean Earned Points	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %	Students Assessed	Mean Earned Points	Emerging #	Emerging %	Attained #	Attained %	Surpassed #	Surpassed %
State																
All Students	521	41	103	19.8	213	40.9	205	39.3	520	39	57	11.0	196	37.7	267	51.3
Gender																
Male	347	41	70	20.2	143	41.2	134	38.6	347	39	38	11.0	133	38.3	176	50.7
Female	174	42	33	19.0	70	40.2	71	40.8	173	39	19	11.0	63	36.4	91	52.6
Ethnicity																
American Indian/Alaskan Native	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Asian/Pacific Islander	10	43	2	20.0	4	40.0	4	40.0	10	42	1	10.0	4	40.0	5	50.0
Black, Not of Hispanic Origin	143	41	28	19.6	56	39.2	59	41.3	142	38	22	15.5	50	35.2	70	49.3
Hispanic	21	43	3	14.3	11	52.4	7	33.3	20	37	2	10.0	9	45.0	9	45.0
White, Not of Hispanic Origin	333	41	65	19.5	136	40.8	132	39.6	334	39	32	9.6	124	37.1	178	53.3
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	224	42	37	16.5	98	43.8	89	39.7	225	40	25	11.1	72	32.0	128	56.9
Economically Disadvantaged: No	297	40	66	22.2	115	38.7	116	39.1	295	38	32	10.8	124	42.0	139	47.1
English Language Learners: Yes	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language Learners: No	513	41	101	19.7	209	40.7	203	39.6	512	39	56	10.9	192	37.5	264	51.6
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed
† Results for these students are invalid and not reported.
() These students are not included in "All Students."

Note: See reverse for additional information

Appendix A.8

STATE DEMOGRAPHIC REPORT
Supported Independence
Grade 3
Fall 2008

	English Language Arts								Mathematics							
	Students Assessed	Mean Earned Points	Emerging		Attained		Surpassed		Students Assessed	Mean Earned Points	Emerging		Attained		Surpassed	
			#	%	#	%	#	%			#	%	#	%	#	%
State																
All Students	486	38	81	16.7	208	42.8	197	40.5	480	35	71	14.8	229	47.7	180	37.5
Gender																
Male	346	37	59	17.1	148	42.8	139	40.2	340	35	48	14.1	162	47.6	130	38.2
Female	140	38	22	15.7	60	42.9	58	41.4	140	33	23	16.4	67	47.9	50	35.7
Ethnicity																
American Indian/Alaskan Native	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Asian/Pacific Islander	12	34	3	25.0	6	50.0	3	25.0	12	31	3	25.0	5	41.7	4	33.3
Black, Not of Hispanic Origin	125	37	22	17.6	49	39.2	54	43.2	123	36	22	17.9	46	37.4	55	44.7
Hispanic	20	37	4	20.0	8	40.0	8	40.0	20	35	2	10.0	10	50.0	8	40.0
White, Not of Hispanic Origin	323	38	51	15.8	143	44.3	129	39.9	319	34	44	13.8	165	51.7	110	34.5
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	234	40	30	12.8	89	38.0	115	49.1	230	37	28	12.2	101	43.9	101	43.9
Economically Disadvantaged: No	252	35	51	20.2	119	47.2	82	32.5	250	33	43	17.2	128	51.2	79	31.6
English Language Learners: Yes	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
English Language Learners: No	479	37	80	16.7	205	42.8	194	40.5	473	35	71	15.0	225	47.6	177	37.4
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* < 10 students assessed
† Results for these students are invalid and not reported.
() These students are not included in "All Students."

Note: See reverse for additional information

STATE DEMOGRAPHIC REPORT

Functional Independence
Grade 11
Spring 2008

	English Language Arts								Mathematics							
	Students Assessed	Mean Scale Score	Emerging		Attained		Surpassed		Students Assessed	Mean Scale Score	Emerging		Attained		Surpassed	
			#	%	#	%	#	%			#	%	#	%	#	%
State																
All Students	1897	3130	233	12.3	701	37.0	963	50.8	1897	3113	564	29.7	979	51.6	354	18.7
Gender																
Male	1153	3129	144	12.5	431	37.4	578	50.1	1155	3116	296	25.6	590	51.1	269	23.3
Female	744	3131	89	12.0	270	36.3	385	51.7	742	3108	268	36.1	389	52.4	85	11.5
Ethnicity																
American Indian/Alaskan Native	19	3138	0	0.0	6	31.6	13	68.4	19	3122	3	15.8	12	63.2	4	21.1
Asian/Pacific Islander	13	3130	1	7.7	6	46.2	6	46.2	13	3118	1	7.7	10	76.9	2	15.4
Black, Not of Hispanic Origin	548	3121	108	19.7	235	42.9	205	37.4	552	3103	255	46.2	257	46.6	40	7.2
Hispanic	66	3128	10	15.2	22	33.3	34	51.5	65	3115	11	16.9	46	70.8	8	12.3
White, Not of Hispanic Origin	1239	3134	111	9.0	428	34.5	700	56.5	1236	3117	288	23.3	649	52.5	299	24.2
Multiracial	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Other or Not Reported	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Additional Reporting Groups																
Economically Disadvantaged: Yes	1067	3127	151	14.2	403	37.8	513	48.1	1069	3112	332	31.1	561	52.5	176	16.5
Economically Disadvantaged: No	830	3133	82	9.9	298	35.9	450	54.2	828	3114	232	28.0	418	50.5	178	21.5
English Language Learners: Yes	42	3121	10	23.8	16	38.1	16	38.1	42	3113	10	23.8	27	64.3	5	11.9
English Language Learners: No	1855	3130	223	12.0	685	36.9	947	51.1	1855	3113	554	29.9	952	51.3	349	18.8
Formerly Limited English Proficient	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Migrant	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Homeless	18	3129	2	11.1	7	38.9	9	50.0	18	3110	6	33.3	10	55.6	2	11.1
Accommodations																
Standard - All	789	3125	111	14.1	344	43.6	334	42.3	960	3112	282	29.4	522	54.4	156	16.3
Nonstandard - All †	(*)								(*)							
Standard ELL Only	19	3111	6	31.6	8	42.1	5	26.3	20	3118	3	15.0	13	65.0	4	20.0
Nonstandard ELL Only †	(*)								(*)							

* < 10 students assessed
† Results for these students are invalid and not reported.
() These students are not included in "All Students."

Note: See reverse for additional information

NAEP Reading Grade 4 Overall Results

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for reading, grade 4, by year, jurisdiction, and All students [TOTAL]: 2003, 2005, and 2007

		All students	
Year	**Jurisdiction**	Average scale score	Standard error
2007	Michigan	220	(1.4)
2005	Michigan	218	(1.5)
2003	Michigan	219	(1.2)

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

NAEP Reading Grade 8 Overall Results 2003-2007

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for reading, grade 8, by year, jurisdiction, and All students [TOTAL]: 2003, 2005, and 2007

		All students	
Year	**Jurisdiction**	Average scale score	Standard error
2007	Michigan	260	(1.2)
2005	Michigan	261	(1.2)
2003	Michigan	264	(1.8)

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

NAEP Mathematics Grade 4 Overall Results

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores and percentile scores for mathematics, grade 4, by year, jurisdiction, and All students [TOTAL]: 2003, 2005, 2007, and 2009

Year	Jurisdiction	All students											
		Average scale score	Standard error	10th percentile	Standard error	25th percentile	Standard error	50th percentile	Standard error	75th percentile	Standard error	90th percentile	Standard error
2009	Michigan	236	(1.0)	196	(2.1)	217	(1.1)	238	(1.0)	257	(1.4)	273	(1.2)
2007	Michigan	238	(1.3)	198	(3.4)	219	(1.8)	240	(1.2)	258	(1.8)	273	(1.0)
2005	Michigan	238	(1.2)	198	(2.0)	219	(1.6)	240	(1.4)	258	(1.0)	274	(1.8)
2003	Michigan	236	(0.9)	197	(2.1)	216	(1.2)	237	(1.0)	256	(1.0)	272	(1.2)

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

NAEP Mathematics Grade 8 Overall Results

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for mathematics, grade 8, by year, jurisdiction, and All students [TOTAL]: 2003, 2005, 2007, and 2009

Year	Jurisdiction	All students	
		Average scale score	Standard error
2009	Michigan	278	(1.6)
2007	Michigan	277	(1.4)
2005	Michigan	277	(1.5)
2003	Michigan	276	(2.0)

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Results by Subgroups on NAEP Reading Grade 4 2003-2007

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for reading, grade 4, by year, jurisdiction, and Disability status of student, including 504 [IEP]: 2003, 2005, and 2007

Year	Jurisdiction	SD		Not SD	
		Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	191	(3.1)	223	(1.3)
2005	Michigan	194	(4.4)	220	(1.4)
2003	Michigan	186	(4.4)	221	(1.2)

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Report 2: Table

Average scale scores for reading, grade 4, by year, jurisdiction, and Gender [GENDER]: 2003, 2005, and 2007

Year	Jurisdiction	Male		Female	
		Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	216	(1.6)	224	(1.5)
2005	Michigan	216	(1.8)	221	(1.6)
2003	Michigan	216	(1.4)	222	(1.3)

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Report 3: Table

Average scale scores for reading, grade 4, by year, jurisdiction, and Natl School Lunch Prog eligibility (3 categories) [SLUNCH3]: 2003, 2005, and 2007

Year	Jurisdiction	Eligible		Not eligible		Info not available	
		Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	204	(1.7)	229	(1.2)	‡	(†)
2005	Michigan	201	(2.2)	227	(1.3)	‡	(†)
2003	Michigan	201	(1.8)	229	(0.9)	212	(7.0)

‡ Reporting standards not met.
† Not applicable.
NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Report 4: Table

Average scale scores for reading, grade 4, by year, jurisdiction, and Race/ethnicity (from school records) [SDRACE]: 2003, 2005, and 2007

Year	Jurisdiction	White		Black		Hispanic		Asian/Pacific Island		American Indian		Unclassified	
		Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	227	(1.2)	197	(2.7)	210	(4.2)	233	(4.6)	‡	(†)	‡	(†)
2005	Michigan	226	(1.4)	190	(2.7)	208	(4.3)	224	(5.0)	‡	(†)	‡	(†)
2003	Michigan	228	(0.9)	189	(2.0)	205	(3.4)	232	(8.4)	‡	(†)	‡	(†)

‡ Reporting standards not met.
† Not applicable.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Results by Subgroups on NAEP Reading Grade 8 2003-2007

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for reading, grade 8, by year, jurisdiction, and Disability status of student, including 504 [IEP]: 2003, 2005, and 2007

		SD		Not SD	
Year	**Jurisdiction**	Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	224	(3.2)	265	(1.1)
2005	Michigan	230	(3.5)	264	(1.1)
2003	Michigan	228	(4.8)	267	(1.7)

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Report 2: Table

Average scale scores for reading, grade 8, by year, jurisdiction, and Gender [GENDER]: 2003, 2005, and 2007

		Male		Female	
Year	**Jurisdiction**	Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	255	(1.5)	266	(1.4)
2005	Michigan	256	(1.5)	266	(1.3)
2003	Michigan	259	(2.1)	270	(2.0)

NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Report 3: Table

Average scale scores for reading, grade 8, by year, jurisdiction, and Natl School Lunch Prog eligibility (3 categories) [SLUNCH3]: 2003, 2005, and 2007

		Eligible		Not eligible		Info not available	
Year	**Jurisdiction**	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	244	(1.9)	268	(1.2)	‡	(†)
2005	Michigan	246	(1.9)	267	(1.4)	‡	(†)
2003	Michigan	247	(3.2)	272	(1.1)	261	(5.9)

‡ Reporting standards not met.
† Not applicable.
NOTE: The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Report 4: Table

Average scale scores for reading, grade 8, by year, jurisdiction, and Race/ethnicity (from school records) [SDRACE]: 2003, 2005, and 2007

		White		Black		Hispanic		Asian/Pacific Island		American Indian		Unclassified	
Year	**Jurisdiction**	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2007	Michigan	267	(1.0)	236	(2.5)	241	(4.7)	‡	(†)	‡	(†)	‡	(†)
2005	Michigan	268	(1.2)	239	(2.1)	250	(4.1)	‡	(†)	‡	(†)	‡	(†)
2003	Michigan	272	(1.1)	242	(4.5)	257	(3.4)	‡	(†)	‡	(†)	‡	(†)

‡ Reporting standards not met.
† Not applicable.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Reading scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005 and 2007 Reading Assessments.

Results by Subgroups on NAEP Mathematics Grade 4 2003-2009

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for mathematics, grade 4, by year, jurisdiction, and Disability status of student, excluding 504 [IEP2009]: 2003, 2005, 2007, and 2009

		SD		Not SD (including 504)	
Year	Jurisdiction	Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	220	(2.2)	238	(1.0)
2007	Michigan	—	(†)	—	(†)
2005	Michigan	—	(†)	—	(†)
2003	Michigan	—	(†)	—	(†)

‡ Reporting standards not met.
— Not available.
† Not applicable.
NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Report 2: Table

Average scale scores for mathematics, grade 4, by year, jurisdiction, and Gender [GENDER]: 2003, 2005, 2007, and 2009

		Male		Female	
Year	Jurisdiction	Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	238	(1.3)	235	(1.0)
2007	Michigan	238	(1.4)	237	(1.3)
2005	Michigan	240	(1.3)	236	(1.4)
2003	Michigan	238	(1.1)	233	(1.0)

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Report 3: Table

Average scale scores for mathematics, grade 4, by year, jurisdiction, and Natl School Lunch Prog eligibility (3 categories) [SLUNCH3]: 2003, 2005, 2007, and 2009

		Eligible		Not eligible		Info not available	
Year	Jurisdiction	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	222	(1.3)	247	(1.1)	‡	(†)
2007	Michigan	224	(1.8)	246	(1.2)	‡	(†)
2005	Michigan	223	(1.4)	246	(1.2)	‡	(†)
2003	Michigan	220	(1.1)	245	(0.9)	225	(5.9)

‡ Reporting standards not met.
† Not applicable.
NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Report 4: Table

Average scale scores for mathematics, grade 4, by year, jurisdiction, and Race/ethnicity (from school records) [SDRACE]: 2003, 2005, 2007, and 2009

		White		Black		Hispanic		Asian/Pacific Island		American Indian		Unclassified	
Year	Jurisdiction	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	243	(1.0)	212	(1.8)	227	(2.7)	252	(4.1)	‡	(†)	‡	(†)
2007	Michigan	244	(1.2)	216	(2.6)	230	(4.0)	261	(3.5)	‡	(†)	‡	(†)
2005	Michigan	245	(1.0)	211	(1.8)	224	(4.0)	250	(4.2)	‡	(†)	‡	(†)
2003	Michigan	244	(0.9)	209	(1.3)	223	(3.4)	248	(3.6)	‡	(†)	‡	(†)

‡ Reporting standards not met.
† Not applicable.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Results by Subgroups on NAEP Mathematics Grade 8 2003-2009

National Center for Education Statistics (NCES)
Institute of Education Sciences (IES)
National Assessment of Educational Progress (NAEP)
This report was generated using the NAEP Data Explorer. http://nces.ed.gov/nationsreportcard/naepdata/

Report 1: Table

Average scale scores for mathematics, grade 8, by year, jurisdiction, and Disability status of student, including 504 [IEP]: 2003, 2005, 2007, and 2009

Year	Jurisdiction	SD	Not SD

		Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	239	(2.2)	283	(1.6)
2007	Michigan	238	(2.9)	281	(1.4)
2005	Michigan	243	(2.9)	281	(1.5)
2003	Michigan	240	(3.9)	280	(1.9)

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Report 2: Table

Average scale scores for mathematics, grade 8, by year, jurisdiction, and Gender [GENDER]: 2003, 2005, 2007, and 2009

Year	Jurisdiction	Male		Female	
		Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	280	(1.9)	277	(1.6)
2007	Michigan	278	(1.5)	275	(1.6)
2005	Michigan	279	(1.7)	275	(1.8)
2003	Michigan	277	(2.3)	276	(2.0)

NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Report 3: Table

Average scale scores for mathematics, grade 8, by year, jurisdiction, and Natl School Lunch Prog eligibility (3 categories) [SLUNCH3]: 2003, 2005, 2007, and 2009

Year	Jurisdiction	Eligible		Not eligible		Info not available	
		Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	260	(2.0)	289	(1.4)	‡	(†)
2007	Michigan	259	(2.2)	285	(1.3)	‡	(†)
2005	Michigan	258	(2.0)	285	(1.6)	‡	(†)
2003	Michigan	257	(3.2)	285	(1.8)	272	(7.0)

‡ Reporting standards not met.
† Not applicable.
NOTE: The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Report 4: Table

Average scale scores for mathematics, grade 8, by year, jurisdiction, and Race/ethnicity (from school records) [SDRACE]: 2003, 2005, 2007, and 2009

Year	Jurisdiction	White		Black		Hispanic		Asian/Pacific Island		American Indian		Unclassified	
		Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error	Average scale score	Standard error
2009	Michigan	286	(1.3)	246	(2.1)	269	(4.1)	309	(6.5)	‡	(†)	‡	(†)
2007	Michigan	285	(1.1)	244	(2.2)	259	(3.8)	‡	(†)	‡	(†)	‡	(†)
2005	Michigan	285	(1.6)	247	(2.0)	265	(3.8)	‡	(†)	‡	(†)	‡	(†)
2003	Michigan	286	(1.3)	245	(3.5)	267	(4.2)	‡	(†)	‡	(†)	‡	(†)

‡ Reporting standards not met.
† Not applicable.
NOTE: Black includes African American, Hispanic includes Latino, Pacific Islander includes Native Hawaiian, and American Indian includes Alaska Native. Race categories exclude Hispanic origin unless specified. The NAEP Mathematics scale ranges from 0 to 500. Some apparent differences between estimates may not be statistically significant.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003, 2005, 2007, and 2009 Mathematics Assessments.

Appendix A.9

Michigan Cohort Graduation Rates

The graduation rates for the "class of" 2007, 2008 and 2009 are based on the four-year cohort methodology. Prior to 2007 the graduation rate was based on yearly estimates. The difference in methodologies and variance in rates is described below.

Cohort Graduation Rates										
2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
75.2	75.5	75.5	87.7	88.7	84.8	86.3	86.2	80.9	79.6	81.4

Prior to the 2007 cohort, which was the first time Michigan moved to the cohort methodology, graduation rates were determined by using an "estimated" rate derived by multiplying the four graduating class retention rates together in a single year. Class retention rates were determined by taking one graduation class (grade) at a time and dividing the fall enrollment by the previous fall enrollment. This average rate was then multiplied by 100 to get the graduation rate percentage. Basically, this formula utilized one year of data to derive a four-year estimated rate.

The since 2007 the cohort four-year graduation rate has been calculated by tracking individual students who first enrolled in ninth grade during the freshman school year (when they are assigned to the cohort) and graduated four years later with a regular diploma. It accounts for students who transfer in and out of the district, who leave school permanently, who leave school during one school year and return in another, or who are retained in a grade but stay in school and graduate later than their original classmates.

The cohort four-year formula provides a more accurate rate to assist schools and districts in targeting education policies to assist greater numbers of students to succeed in school and earn a diploma. In addition, this calculation aligns with the guidelines provided by the National Governors Association (NGA) Graduation Counts Compact, the United States Department of Education (USED) regulations, and complies with the requirements of the No Child Left Behind Act of 2001.

REACH FOR THE TOP
MOVING STUDENTS UP NOT OUT

SUPERINTENDENT'S DROPOUT CHALLENGE

MICHIGAN'S 2009-2010 CHALLENGE TO SCHOOLS

In every elementary, middle and high school, identify 10-15 students who are nearing or in a transition year with multiple dropout risk factors and provide research-based supports and interventions

POSSIBLE IMPACT 37,000—55,500 STUDENTS

☆ Reduce Dropouts ☆ Increase Grades and Test Scores ☆ Meet AYP
☆ Attract and Retain Students ☆ Engage Parents and Community

TURNING THE TIDE

Research shows most students send distress signals years before they drop out of school. In fact, key early warning signs displayed by students nearing or entering transitional school years, such as 5th, 6th, 7th, 8th and 9th grades, have been proven to be strong dropout predictors.

Because schools and districts now can predict early-on which students are most likely to drop out, they also can intervene to prevent dropout.

Early Warning Signs

- Poor grades in core subjects
  - ◊ Sixth graders who fail math have a one-in-five chance of making it to the 12th grade on time and often repeat the 9th grade. Those failing English have a one-in-eight chance.
  - ◊ 33% of 8th grade students scoring in the lowest mathematics achievement quartile fail to graduate.
- Grade retention
  - ◊ 64% of students who had repeated a grade in elementary school and 63% of those who had been held back in middle school left school without a diploma.
- Low attendance
  - ◊ In one study of the eighth graders in Philadelphia who attended school less than 80 % of the time, 78% eventually dropped out.
- Disengagement in the classroom, including behavioral problems
  - ◊ Sixth graders who receive a poor behavior mark have a one-in-four chance of making it to the 12th grade on time.

IMPLEMENTING THE CHALLENGE

Step 1: Commit to the Superintendent's Challenge by registering online at www.mi.gov/dropoutchallenge.

Step 2: Review previous year's attendance, grades, disciplinary actions, credit accumulation, grade promotion, and test scores of students nearing or entering transition years.

Step 3: Identify 10-15 students with multiple early warning signs by October 28 2009. A free dropout data calculation tool for schools is available National High School Center.

Step 4: Provide identified students with research-based supports and interventions.

Step 5: Engage the community in identifying an adult advocate, mentor or transition coach for each student.

Step 6: Involve students and families in the discussion and solutions.

Step 7: Monitor student academic, social and emotional progress.

To support educators, the Michigan Department of Education (MDE) will partner with school districts and education associations across the state to provide a variety of professional development opportunities to administrators and teachers on how to use existing data, resources and supports to reduce dropouts.

RECOGNIZING PROGRESS

To recognize the substantial effort by schools who commit and register for this challenge, school and district names will appear on a special Dropout Challenge web page within the Michigan Department of Education website at www.mi.gov/dropoutchallenge.

This web page also will include the latest research and resources on Early Warning and Dropout Prevention.

All dropout challenge schools will be invited to submit information to MDE on their efforts and student progress in spring 2010. Buildings demonstrating the most student progress will be part of a special recognition and awards program.

Establishing an Early Warning System is a highly recommended dropout prevention strategy that can be funded with Title II-D funds. Supplementing services to support students at-risk of dropping out of school can be funded through Title I-Part A.

MICHIGAN Department of Education

"This Challenge, coupled with our dedicated teacher's efforts statewide, will allow us to lead together and embrace the one true purpose of education, which is putting our children first." Mike Flanagan, State Superintendent of Public Instruction

Achieve, Inc. Announces 13-State Coalition To Improve High Schools

States Will Move Aggressively To Raise Graduation Requirements, Measure Progress & Hold Schools and Colleges Accountable

Contact: Matt Maurer (202) 955-9450 ext. 322, mmaurer@commworksllc.com

February 27, 2005

WASHINGTON – February 27, 2005 – At the close of the 2005 National Education Summit on High Schools, Achieve, Inc. announced that a group of 13 states – which together educate more than a third of all U.S. students – have agreed to form a new coalition to improve high schools.

"For the first time, a group of states will reshape an American institution that has far outlasted its effectiveness. More than 5 million American students each year – 35 percent of public school students nationwide – will be expected to meet higher requirements under this landmark initiative," says Ohio Gov. Bob Taft, co-chair of the Washington, D.C.-based Achieve, Inc., which will coordinate the effort. "This is the biggest step states can take to restore the value of the high school diploma."

"Improving high schools one school or one state at a time is not moving fast enough," says Arthur F. Ryan, chairman and CEO of Prudential Financial and co-chair of Achieve, Inc. "We need states working together and collaborating with many partners like the business community to help graduates leave school fully prepared for the jobs we have to offer."

In joining the American Diploma Project (ADP) Network, the states – Arkansas, Georgia, Indiana, Kentucky, Louisiana, Massachusetts**, Michigan**, New Jersey, Ohio, Oregon, Pennsylvania, Rhode Island, and Texas – are committing to significantly raise the rigor of their high school standards, assessments, and curriculum to better align them with the demands of postsecondary education and work. The states will also hold high schools and postsecondary institutions accountable for improved performance. Specifically, the states have committed to taking four actions:

- Raise high school standards to the level of what is actually required to succeed in college or in the workforce.
- Require all students to take rigorous college and work-ready curriculum.
- Develop tests of college and work readiness that all students will take in high school.
- Hold high schools accountable for graduating all students ready for college and work, and hold colleges accountable for the success of the students they admit.
- By joining the network and committing to implementing these changes quickly, these states will be changing a traditional American institution – the high school – forever," says Mike Cohen, president of Achieve, Inc. "These states recognize that the world their graduates enter today is dramatically different than in the past, and that we need a new kind of high school to prepare students for the higher demands of work and postsecondary education."

The efforts of each ADP state will be led by the governor, the state superintendent of education, the state higher education director, business leaders, and other key individuals to ensure broad support that goes beyond politics and partisanship. Over the few months, each state will develop a specific plan and timetable for addressing ADP Network objectives, and Achieve will report regularly on state progress.

The ADP Network, managed by Achieve, Inc., carries forward the agenda of the American Diploma Project (ADP), which last year identified the skills that students realistically need to master in order to succeed after high school.

Created by the nation's governors and business leaders, Achieve, Inc., is a bipartisan, non-profit organization that helps states raise academic standards, improve assessments and strengthen accountability to prepare all young people for postsecondary education, work and citizenship.

Achieve

Areas for Potential State Partnership with Achieve

Adopting and Implementing the Common Core Standards

- Access strategic advice and counsel on Common Core Standards adoption implications from top content experts and experienced policy advisors
- Explore implementation recommendations on critical issues states must consider as part of the downstream implications of Common Core Standards
- Use the Gap Analysis Tool to understand how your current state standards compare to the Common Core Standards
- Understand how the Common Core Standards relate to NAEP, International Benchmarks, and leading states
- Develop state specific messaging that will resonate most with your stakeholders

Sustaining the College- and Career-Ready Agenda and Planning for Transition

- Generate state specific advocacy and communication tools
- Develop a state specific transition strategy and help you engage candidates in the college- and career -ready conversation
- Develop an onboarding process to work with cross-section of new leaders to set and/or sustain agenda

Graduation Requirements

- Join a cohort of states in identifying and deploying messages that will counter pushback to college- and career-ready graduation requirements
- Work to develop reinforcing state strategies and incentives around graduation requirements
- Explore equally rigorous pathways that accelerate student learning

Accountability Systems that Measure and Incentivize College and Career Readiness

- Build select college- and career-ready indicators into your state's accountability determinations
- Develop school and district-level incentives to reward progress improving student readiness
- Set statewide goals for progress on college- and career-ready indicators
- Create meaningful public reporting opportunities, including a school-level report card that measures college and readiness

American Diploma Network (ADP)
Michigan Action Plan

The Challenge

Today, more than ever, Michigan appreciates the powerful and important role education at all levels plays in the success of its citizens and its economy. Governor Jennifer M. Granholm has set a goal to double the number of people in Michigan who receive postsecondary degrees or credentials of value over the next ten years. Governor Granholm commissioned her Lt. Governor, John Cherry, to find ways to reach that goal. The Lt. Governor's Commission for Higher Education and Economic Growth, (Cherry Commission) published a report with 19 recommendations in December 2004. Michigan is now among leading states in embracing a commitment to enhance the rigor and relevance of our 4,003 schools and 1,688,432 students K–12, while aggressively connecting 482,979 high school students in 962 high schools with next steps in postsecondary education.

Today's postsecondary institutions and workforce have changed across the country. Michigan, as one of the 22 states that have signed on to the American Diploma Project, agrees it is increasingly important that today's youth receive the education and skills necessary to enter a postsecondary institution with the ability to learn and to later enter the workforce with the confidence to excel. Michigan is working with the National Governor's Association and the American Diploma Project to strengthen and improve America's high schools so students are better equipped and prepared to handle the challenges they will meet in the 21st century.

In the pages that follow, Michigan will address how they are implementing the four policy objectives of the American Diploma Project.

1. *Through consensus between subject experts, educators, leaders, and members of the business community, ADP is working to align high school curriculum and standards with the knowledge necessary for postsecondary education and employment.*
2. *Increasing the requirements and providing more challenging courses to high schoolers will better prepare them for the challenges they will face once they graduate from high school.*
3. *By aligning high school exams and college entrance exams, ADP is providing students with an early indicator of college and work readiness, incentives to work hard in high school, preventing participation in remedial college courses, and reducing the overall number of exams high school students must take, while increasing the efficiency of those exams.*
4. *High schools and postsecondary institutions will be held more accountable with such measures in place.*

SUMMARY OF MICHIGAN ADP ACTION PLAN

To address the American Diploma Project objectives, Michigan will use grant dollars obtained through the NGA Honor State Grant program to focus on two goals – creating high school content standards that are aligned to postsecondary education and training, and increasing early college-level learning opportunities in high school.

Academic Content Standards:

Within the next two years, MDE will revise high school content standards, create a variety of ways to use these standards (by course, integrated sequentially, and as end-of-high-school expectations), publish and disseminate the standards, and provide professional development to ensure effective implementation.

All high schools will offer a rigorous standards-based curriculum to all students. Michigan is currently developing a high school assessment that will double as a college-entrance exam. The Michigan Merit Exam, embedded with the ACT, will measure student mastery of the rigorous curriculum and instruction. It aligns with both the NGA and ADP recommendations of administering a college and work readiness assessment in high school and with the Action Agenda's recommendation to create tests of college and work readiness.

The thorough introduction, public comment, review, and revision will allow school administrators and teachers to become familiar with the new high school content standards. As schools report they are offering the recommended courses of the newly proposed graduation curriculum requirements, Michigan will need to ensure - through the use of new content standards and new assessments - that all high schools are teaching to the new standards. The implementation phase includes extensive professional development to ensure thorough understanding and outreach to all high schools and CTE programs so that use of the standards will be rapid and uniform. The assessment system, Michigan Merit Exam, will demonstrate gains in teaching and learning.

Measurements for Success:

There will be several measures of success, although not all of them will show results immediately.

- ✧ Increase in graduation rates. Data elements will be reported annually on the Michigan School Report Card and through the National Education Data Partnership. These elements include percent proficient on statewide assessments, graduation, and dropout rates.
- ✧ The newly proposed high school curriculum graduation requirements and an increase in the number of students participating in the Michigan Scholars program.
- ✧ Decrease remediation at the college level. The Cherry Commission recommended postsecondary institutions to provide local and statewide data on

the number of students who require remediation beginning in the 2005-2006 school year.

- ✧ Increase the number of students enrolling in postsecondary institutions.
- ✧ Increase the number of students completing degrees and certificates. The Cherry Commission also recommended postsecondary institutions to provide degree completion data starting with the 2005-2006 school year.

Dual Enrollment/College Credit-earning Courses:

Recommendation 7 in Governor Mark R. Warner's "Ten Steps to a State Action Agenda" refers to expanding college-level learning opportunities in high school. Michigan data show only weak participation in dual enrollment, Advanced Placement, and International Baccalaureate programs. Michigan plans to use the NGA grant to develop policy in order to remove barriers to participation of minority and disadvantaged students in college-level learning opportunities with focus on high-priority schools. A subcommittee will meet January 25 to begin this process.

Michigan's objective is to ensure access to dual enrollment and college credit-earning courses for all high school students by developing policy. This will allow students to achieve their education goals more quickly, reduce the cost of postsecondary degrees, and give many students a better understanding of their own potential to succeed at college-level work. We propose to design complementary policies that organize existing funding for K–12, vocational Career and Technical Education (CTE), and higher education to support shared credit, accelerated learning, and college credit-earning course-taking for a much greater share of students. This will include developing policy that could tie dual enrollment funding to career pathways and postsecondary occupational programs. Link dual enrollment and college credit learning courses with useful career guidance and decision information, being developed through an enhanced economic/occupational data function, so young people are moving on paths that promise economic opportunity in the years ahead.

Measurements for Success:

Once policy has been approved measuring the increase in dual enrollment/college credit-earning courses participation is a straightforward process. The data will be published in annual reports and on the SchoolMatters website.

The direct measures of progress toward the goal are:

- ✧ Increase the number and percentage of students taking college credit-earning courses
- ✧ Increase the number of students taking tests for college credit-earning courses, the number passing, and the number participating in dual enrollment
- ✧ Increase in minority students taking college credit-earning courses. The current statistics for participation in AP classes: 81.3% white students, 7.1% Asian students, 3.6% African American students, and 8% Mexican American, Native American, and Puerto Rican students.

- Begin annual report of the number of students attending postsecondary institutions of education.
- Begin annual report of the number of students who complete postsecondary education or training with a degree or other significant credential.

Another measure of progress will be data that link early college experience with career guidance information so that students are prepared for successful employment in areas of economic growth in Michigan.

MICHIGAN'S PLAN FOR IMPLEMENTING ADP IMPERATIVES BY 2008

Academic Content Standards

English Language Arts and Mathematics
April 2005 – June 2007

Month	Strategy/Activity	Responsible	Product
April 2005	Establish work group structure/roles, proposed products, project representatives, budgeting detail, work plan.	MDE – Director of OSI	Overall work plan
May 2005	Identify project staff – coordinator, work group chairs. Convene first meeting of core members. Contact potential work group members requesting their commitment. Identify copies of reading materials to accompany letter of invitation. Identify work group members and submit names to project coordinator. Letter of invitation from MDE/OSI to work group members – sent by chairs.	OSI OSI Chairs and Project Coordinator Project Coordinator Chairs OSI (letter) Chairs Project Coordinator	Staff list List of work group members Letter & readings Formal list of work group Matrix

	Develop cross-walk between K – 8 GLCE, MCF, ADP, SAT/ACT, CTE 16 Career Cluster Academic Foundations, other.		
June 2005	Convene first meeting of work group members. Work groups begin to identify content expectations for Mathematics and English (9 – 12).	OSI, Chairs, Project Coordinator, work group members	Agenda Draft document
July 2005	Draft documents are submitted to project coordinator for internal MDE review. Initial graphics design. Internal review, formatting, presentation to State Board of Education for preliminary review.	OSI, Project Coordinator Project Coordinator OSI, Project Coordinator	Draft documents
August 2005	Draft documents return to work group chairs for edits. Draft documents are returned to project coordinator for web review.	Project Coordinator	
November 2005 – Mid-January 2006	Content Expectations Web/Field Review	Chairs, Project Coordinator, Work Groups	Web posting
November 2005 – February 2006	ELA and Math Course Content Expectations (CCE) – Initial development of CCE based on Content Expectations	Chairs, Project Coordinator, Work Groups	Course Content Expectations in ELA/Math first draft
January 2006	Content Expectations - National Review	Project Coordinator, OSI	Draft with edits from national reviewer
January 2006– March 2006	Development of curriculum guides and activities to increase academic rigor in CTE courses and increase career/contextual learning in academic courses using the 16 Career Clusters.	Contracted CTE Consultant	Set of curriculum guides and activities
February	Revise Content Expectations	Chairs, Project	Produce Final

	based on national review	Coordinator, Work Groups	Drafts
March 2006	High School Content Expectations Presentation to State Board of Education for approval.	OSI, Project Coordinator	Final draft documents
April 2006	Rollout and Dissemination of High School Content Expectations in ELA and Math	OSI Staff	Final Documents
April 2006	Share drafts of Course Content Expectations in ELA and Math with Board of Education	OSI, Project Coordinator	Draft documents
April 2006—June 2006	Web/Field review of Course Content Expectations in ELA and Math	Chairs, Project Coordinator, Work Groups	Web posting
April 2006 -	Dissemination activities begin. • Develop dissemination workshop content and format. • Identify key presenters. • Convene 2 large statewide conferences. • Convene 3 regional ISD meetings for initial roll-out. • Convene 10 regional roll-out sessions for LEA staff. • 16 Workshops around the state (one for each of the 16 Career Clusters) for academic and CTE Teachers on academic rigor and career/contextual learning.	OSI, Project Coordinator Office of Career and Technical Preparation	Formatted content expectations documents Dissemination packet Power point CD with info
May 2006-November 2006	Development of professional learning support and companion documents to support the HSCEs	Chairs, Project Coordinator, Work Groups	Set of curriculum guides and activities
April – July 2006	Identify companion documents • Parent's Guide • Instructional Support • Literature guides • Update of 16 Career Clusters with revised Academic Foundations	OSI, Project Coordinator CTE Consultants	Set of parent-friendly companion documents
August/September	Board approval of Course Content Standards in ELA and Math	OSI, Project Coordinator	Final Draft of Courses in the ELA, Math

			content areas
Fall 2006	Dissemination of Course Content Expectations	Chairs, Project Coordinator, Work Groups	Published document
Fall 2006-Spring 2007 and beyond	Develop professional learning support and companion documents to support the CCEs	Chairs, Project Coordinator, Work Groups	Set of curriculum guides and activities

Science Content Expectations Timeline *work groups responsible will be content chairs, project directors MDE staff as listed above.

Date	Timeline and Products
November 2005	Create Timeline and Scholar Team
December 2005	Assemble Scholar Team
January 2006	Course Standards Developed
February 2006	Course Standards Developed
March 2006	Small Group Review Edits
April 2006	MDE Internal Review Formatting
May 2006	State Board of Education Review Web/Public Review
June 2006	Web/Public Review
July 2006	Group Edit
August 2006	National Review
September 2006	National Review
October 2006	Group Edit with Rationale State Board of Education Approval
November 2006	
December 2006	State-wide Dissemination

Social Studies Course Content Expectations *work groups responsible will be content chairs, project directors MDE staff as listed above.

Date	Timeline and Products
May 2006	Create Timeline and Scholar Team Incorporate Comments from National Review
June 2006	Assemble Scholar Team

June—August 2006	Course Standards Developed
September 2006	Small Group Review Edits MDE Internal Review Formatting
October 2006-- November 2006	State Board of Education Review Web/Public Review
	Web/Public Review
December 2006 –February 2007	Group Edit Resubmit for National Review
March 2007	Group Edit with Rationale State Board of Education Approval
October 2007	State-wide Dissemination

Dual Enrollment/College Credit-earning Courses:

I. Expanding College Credit-Earning Opportunities

Month	Strategy/Activity	Responsible	Product/Process
December 2005— March 2006	Provide research-based information on dual enrollment programs and policies. Assist in development of priorities for Michigan. Determine features that should be supported by Michigan state policy. Provide rationales for policies developed by Leadership team and MDE staff. Produce a final report for use in drafting model college credit policies for Michigan.	Community College Research Center (CCRC) consultants NGA College Credit Subcommittee Michigan High School Initiative Postsecondary/ Secondary Transitions Action Team NGA Leadership Group MDE Staff	Contract with a National Consulting Firm. (CCRC) (December, 2005) Form a work team subcommittee from the NGA Leadership Team. (December, 2005) Work with state interagency team to develop state policies removing barriers to student participation in college equivalency courses, particularly for underrepresented students. Design complementary policies that organize existing funding for K-12, vocational, and higher education to best support shared credit, accelerated learning, AP course taking and test taking.

Month	Strategy/Activity	Responsible	Product/Process
March--July 2006	Partner with Career and Technical Education in the Michigan Department of Labor and Economic Growth (DLEG) to enhance articulated program	NGA Leadership Team College Credit Subcommittee Michigan High School	Participate with the Center for Education Performance Information planning efforts (November

II. Creating Recommendations and Model Policies for College Credits

Month	Strategy/Activity	Responsible	Product/Process
March—July 2006	Create report with recommendations for state model policies and legislation needed to increase student access to college credit opportunities.	CCRC NGA Leadership Team NGA College Credit Subcommittee MHSI Postsecondary/ Secondary Transitions Action Team	Review current Michigan policies; provide research from other states; collect current data. (January 2005) Present initial report to NGA College Credit subcommittee Gather feedback and ideas. (January 25, 2005) Revise and present final report to Leadership Team. (March 15) Present recommendations to the State Board of Education for policy revisions/complimentary legislation. (April 2005) Create legislation for introduction that will replace the current funding formula for dual enrollment that acts as a disincentive, with legislation that encourages college credit programs and provides incentives for collaboration

			between postsecondary and secondary institutions.

III. Increase student awareness and access to college credit courses

Month	Strategy/Activity	Responsible	Product/Process
July 2006—June 2007	Identify target high priority schools. Create informational and companion documents to inform students and parents of college credit opportunities. Inform key school personnel about new state policies. Disseminate revised practices, policy information, and companion documents through MDE/DLEG and higher education groups. Develop an Advanced Placement Summer Training Institute for staff in targeted high schools. Provide technical assistance for schools interested in creating college credit opportunities such as dual enrollment, early/middle college, tech prep programs	NGA Communications subcommittee NGA Leadership Team MDE Staff MHSI Action Team CCRC Middle College Consortium	Brochures for parents and students; documents for school administrators and high school counselors. Dissemination: • Video Conference session: 10 sites • PD sessions for ISD and LEA staff materials, presentations, supplies, consultant travel • Dissemination Materials: brochures, web-site guidance • Conference Presentations Michigan Association of School Administrators, Michigan Association of School Boards, Michigan Association of Secondary School Principals, Michigan Counselors

			Association, etc. Certified Advanced Placement courses available for high school students. Networks, collaborative opportunities for college credit programs.

Michigan's Leadership Team

Name	Title	Agency or Organization
Diane J. McMillan, Team Leader	High School Redesign Consultant	Michigan Department of Education
Sue Carnell	Education Advisor	Office of the Governor
Michael P. Flanagan	Superintendent of Public Instruction (7/5/05)	Michigan Department of Education
Dr. Jeremy M. Hughes	Chief Academic Officer/Deputy Superintendent	Michigan Department of Education
Dr. Michael A. Boulus	Executive Director	Presidents Council, State Universities of Michigan
Jim Sandy	Director, Education Excellence Program	Michigan Chamber of Commerce
Rep. Herb Kehrl (deceased) Replacement pending	Representative	Michigan House of Representatives Legislator
Jim Ballard	Executive Director	Michigan Association of Secondary School Principals
Patty Cantu	Director, Office of Career and Technical Preparation	Michigan Department of Labor and Economic Growth
Kathleen Straus	President	State Board of Education
Dr. Ed Roeber	Director, Office of Assessment and Accountability	Michigan Department of Education

Dr. Yvonne Caamal Canul	Director, Office of School Improvement	Michigan Department of Education
Lois Doniver	Secretary – Treasurer	AFT (American Federation of Teachers) of Michigan (Formerly Michigan Federation of Teachers)
Lu Battaglieri	Executive Director	MEA (Michigan Education Association)

Other Michigan Activity

1. Michigan has set objectives for increasing the high school graduation rate to 85% in school year 2006–2007 and to 90% in 2008–2009. Graduation rates for individual high schools are reported in the Michigan School Report Card, and statewide graduation rates are reported through the State Report Card. Our data collection system is not currently capable of disaggregating the graduation information. Our goal is to produce disaggregated and more reliable data for graduation by 2007–2008.
2. Michigan is working on a plan to produce 4-year cohort high school graduation data. The Single Record Student Database contains single-year files of student data using a unique identifier for each student, but the Center for Education Performance and Information (CEPI), which houses our data, does not have a data warehouse. CEPI was awarded a federal grant to acquire the warehouse that will enable us to do longitudinal reporting. The goal is to have access to longitudinal data by school year 2007–2008. A work group is currently refining the definitions for graduate, transfer, drop out, etc. When the NGA publishes the issue brief with recommendations in July 2005, we plan to incorporate its work.
3. Michigan is committed to participating actively in the National Education Data Partnership initiative. SchoolMatters is the current incarnation of the Standard & Poor's School Evaluation Services. Michigan and Pennsylvania were the first two states to participate in the original School Evaluation Services website and continue to do so. Michigan publishes school information on the Michigan Department of Education website and the CEPI website, and contributes to the NCES data collection annually. All of these data sources, along with a newly developed longitudinal database system, will be shared with the NGA Honor States Grant Program as required by the grant.

   The Cherry Commission also recommended the development of a lifelong education tracking system to allow data sharing among all educational agencies by 2007. One of the benefits of such a system is that individual student data can be accessed by teachers to provide personalized education planning. While individual plans are not widely used now, this will be a step toward making an individual planning process more practical.

4. Aligned governance structure for P–16: Michigan has no legislatively mandated governance structure for P–16, but has used a network of education organizations to provide the opportunity for P–16 issues to be raised and collaboratively discussed. Among those networks are the Education Alliance and Michigan Business Leaders for Education Excellence. Another critical network is the 40 members of the Cherry Commission which includes university and college presidents, lawmakers, state department directors, and other individuals representing business, labor, recent college graduates, skilled trades, and K–12 education.

5. In order to build awareness and public will for high school redesign efforts, Michigan will develop a detailed communication plan containing the following activities:
   - ✧ Collaborate with outside stakeholders to reach school administrators, school boards, business leaders, teachers, and parents.
   - ✧ Produce speaking points about the latest news in high school redesign to provide local school boards with information updates at their regular meetings.
   - ✧ Work with stakeholders to solicit examples of local high school success stories that can be used with the media to highlight successes.
   - ✧ Partner with local superintendents to get out the message about promising practices that can be replicated in high schools.
   - ✧ Provide quick tips for parents and school board members about what to look for in a successful high school.
   - ✧ The Governor's 11th Annual Education Summit on March 27, 2006 will focus on High School Reform.

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.

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Signatures
Governor:
Chief State School Officer: [signature]

CCSSO
THE COUNCIL OF CHIEF STATE SCHOOL OFFICERS

NGA Center for BEST PRACTICES

Dear Governors and Chief State School Officers,

Since 1983 when *A Nation at Risk* was released, states have made tremendous strides in increasing the academic rigor of education provided to the nation's students. Yet despite 26 years of standards-based education, America's children still remain behind other nations in terms of academic achievement and preparedness to succeed in the global economy. The time has come for the nation's states to join together to collectively develop a set of standards that increase academic rigor and relevance; prepare all students for postsecondary education and workforce training; and are internationally benchmarked.

As you are aware, the Council of Chief State School Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center) have been working together and with partners to galvanize support, build the relationships, and create the conditions necessary to embark on a common core standards initiative that will be the beginning of positive change in American education.

Attached you will find a Memorandum of Agreement (MOA), which outlines the process and conditions by which the common core standards will be developed as well as the roles and responsibilities of states in this effort. This document is now ready for your consideration and potential signatures. For a state to be considered a full participant in this initiative, both the governor and chief state school officer must sign the agreement. Please sign and fax (202.408.8076) or send electronically with signatures to Dane Linn at NGA Center (dlinn@nga.org) or Scott Montgomery at CCSSO (scottm@ccsso.org) by Friday, May 8, 2009. Please also submit a point(s) of contact to include name, title, email, and phone number.

While we have been clear along the way that signing the MOA is an indication that a state will engage in the process, the MOA does not bind states to adopting the final product. Signing the MOA engages a state to review and comment on the development of the initial common core standards. If, at the conclusion of the process, a state determines it wishes to adopt the common core standards, CCSSO and NGA will assist in every way possible during the adoption phase.

We are eager to begin this initiative and look forward to the challenging work ahead to complete the common core standards by the end of the year. We thank you for your leadership and desire to embark on this journey with us. With your support we believe we can transform the educational process for our nation's children and give them the

The Council of Chief State School Officers and
The National Governors Association Center for Best Practices

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Chief State School Officer:	

Evidence and International Benchmarking that Informed Decisions in Drafting the Standards
College and Career Ready Standards

Mathematics

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.[1]

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[1] *College and Career Ready Standards for Mathematics*, pp.5-6, National Governors Association and Council of Chief State School Officers, September 21, 2009.

Evidence and International Benchmarking that Informed Decisions in Drafting the Standards
K-12 Standards for Mathematics

Toward Greater Focus and Coherence

The composite standards (of Hong Kong, Korea, and Singapore) have a number of features that can inform an international benchmarking process for the development of K-6 mathematics standards in the U.S. First, the composite standards concentrate the early learning of mathematics on the number, measurement, and geometry strands with less emphasis on data analysis and little exposure to algebra. The Hong Kong standards for grades 1-3 devote approximately half the targeted time to numbers and almost all the time remaining to geometry and measurement.

--Ginsburg, Leinwand and Decker (2009)

Mathematics experiences in early childhood settings should concentrate on (1) number (which includes whole number, operations, and relations) and (2) geometry, spatial relations, and measurement, with more mathematics learning time devoted to number than to other topics. The mathematical process goals should be integrated in these content areas. Children should understand the concepts and learn the skills exemplified in the teaching learning paths described in this report.

--National Research Council (2009)

In general, the U.S. textbooks do a much worse job than the Singapore textbooks in clarifying the mathematical concepts that students must learn. Because the mathematics concepts in these textbooks are often weak, the presentation becomes more mechanical than is ideal. We looked at both traditional and non-traditional textbooks used in the U.S. and found this conceptual weakness in both.

--Ginsberg, *et.al*. (2005)

Notable in the research base for these standards are conclusions from TIMSS and other studies of high-performing countries that the traditional U.S. mathematics curriculum must become substantially more coherent and more focused in order to improve student achievement in mathematics. To deliver on the promise of common standards, the standards must address the problem of a curriculum that is 'a mile wide and an inch deep.' The draft Common Core State Standards for Mathematics are a substantial answer to this challenge. It is important to recognize that "fewer standards" are no substitute for *focused* standards. Achieving "fewer standards" would be easy to do by simply resorting to broad, general statements. Instead, the draft *Common Core State Standards for Mathematics* aim for clarity and specificity. Assessing the coherence of a set of standards is more difficult than assessing their focus.

William Schmidt and Richard Houang (2002) have said that content standards and curricula are coherent if they are: *articulated over time as a sequence of topics and* *performances that are logical and reflect, where appropriate, the sequential or hierarchical nature of the disciplinary content from which the subject matter derives. That is, what and how students are taught should reflect* not only the topics *that fall within a certain academic discipline,* but also the key ideas *that determine how knowledge is organized and generated within that discipline. This implies that "to be coherent," a set of content standards must evolve from particulars (e.g., the meaning and operations of whole numbers, including simple math facts and routine computational procedures associated with whole numbers and fractions) to deeper structures inherent in the discipline. This deeper structure then serves as a means for connecting the particulars (such as an understanding of the rational number system and its properties).* (Emphasis added.)

The draft *Common Core State Standards for Mathematics* endeavor to follow such a design, not only by stressing conceptual understanding of the key ideas, but also by continually returning to organizing principles such as place value or the laws of arithmetic to structure those ideas. The standards in this draft document define what students should understand and be able to do. Asking a student to understand something means asking a teacher to assess whether the student has understood it. But what does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student's mathematical maturity, *why* a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between the student who can summon a mnemonic device such as "FOIL" to expand a product such as $(a + b)(x + y)$ and a student who can explain where that mnemonic comes from. Teachers often observe this difference firsthand, even if large-scale assessments in the year 2010 often do not. The student who can explain the rule understands the mathematics, and may have a better chance to succeed at a less familiar task such as expanding $(a + b + c)(x + y)$. Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

The draft *Common Core State Standards for Mathematics* begin on the next page with eight *Standards for Mathematical Practice*. These are not a list of individual math topics, but rather a list of ways in which developing student-practitioners of mathematics increasingly ought to engage with those topics as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.[2]

[2] *Common Core State Standards for Mathematics,* Introduction, pp. 2-3, National Governors Association and Council of Chief State School Officers, September 21, 2009.

Introductory Evidence Statement for Reading, Writing, Speaking, and Listening Standards
College and Career Ready Standards

To develop college- career-ready standards for Reading, Writing, 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 21st 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 students 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 website: http://www.corestandards.org, which contains a list of standards linked to relevant sources of evidence.[3]

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[3] *College and Career Ready Standards for Reading, Writing, Speaking, and Listening,* pp. v-vi, National Governors Association and Council of Chief State School Officers, September 21, 2009.

Introductory Evidence Statement for Reading, Writing, Speaking, and Listening Standards
K-12 Standards for English Language Arts

The *Common Core State Standards for English Language Arts and Literacy in History/Social Studies and Science* are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of K–12 standards that help ensure that all students are college and career ready in literacy by no later than the end of high school. The *Standards* set requirements for English language arts (ELA) but also for reading, writing, speaking, listening, and language in the social and natural sciences. Just as students must learn to communicate effectively in a variety of content areas, so too must the *Standards* specify the literacy skills and understandings required for eventual college and career readiness in history, social studies, and science as well as ELA. By their structure, the *Standards* encourage curriculum makers to take a comprehensive approach that coordinates ELA courses with courses in other subject areas in order to help students acquire a wide range of ever more sophisticated knowledge and skills through reading, writing, speaking, and listening.

The present work, led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA), builds on the foundation laid by states in their decades-long work on crafting high-quality education standards, including their work on the American Diploma Project with Achieve. The *Standards* also draw on the most important international models as well as research and input from numerous sources, including scholars, assessment developers, professional organizations, and educators from kindergarten through college. In their design and content, the *Standards* represent a synthesis of the best elements of standards-related work to date and an important advance over that previous work.

As specified by CCSSO and NGA, the *Standards* are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard was included in the document only when the best available evidence indicated that its mastery was essential for students to be college and career ready in a twenty-first-century, globally competitive society. As new and better evidence emerges, the *Standards* will be revised accordingly.

The *Standards* are an extension of a prior initiative led by CCSSO and NGA to develop College and Career Readiness (CCR) standards in reading, writing, speaking, listening, and language as well as in mathematics. The CCR Reading, Writing, and Speaking and Listening Standards, released in draft form in September 2009, serve, in revised form, as the backbone of the present document. Consistent across grades and disciplines, the CCR Standards create an essential unity within the document and a consistent point of reference for educators. Whether guiding third graders through a science unit or high school sophomores through a classic work of literature, teachers can look to the same CCR Standards—included in each section of this document—to help judge whether students are on course for being college and career ready. Grade-specific K–12 standards in reading, writing, speaking, listening, and language translate the broad (and, for the earliest grades, seemingly distant) aims of the CCR Standards into age- and attainment-appropriate terms.

While college and career readiness is the end point of the *Standards*—an ambitious goal in its own right—some students will reach that point before the end of high school. For those students who do complete the *Standards'* requirements before graduation, advanced work in such areas as literature, composition, language, and journalism should be available. It is beyond the scope of the *Standards* to describe what such advanced work should consist of, but it should provide the next logical step up from the college and career readiness baseline established here.

As a natural outgrowth of meeting the charge to define college and career readiness, the *Standards* also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the *Standards* readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and online. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who master the *Standards* develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.[4]

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[4] *Common Core State Standards for English Language Arts and Literacy in History/Social Studies and Science,* Introduction, March 2010.

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News Release

09/01/2009

Fifty-One States And Territories Join Common Core State Standards Initiative

NGA Center, CCSSO Convene State-led Process to Develop Common English-language arts and Mathematics Standards

Contact: Jodi Omear, 202-624-5346 Office of Communications

WASHINGTON—The National Governors Association Center for Best Practices (NGA Center) and the Council of Chief State School Officers (CCSSO) today released the names of the states and territories that have joined the Common Core State Standards Initiative: **Alabama; Arizona; Arkansas; California; Colorado; Connecticut; Delaware; District of Columbia; Florida; Georgia; Hawaii; Idaho; Illinois; Indiana; Iowa; Kansas; Kentucky; Louisiana; Maine; Maryland; Massachusetts; Michigan; Minnesota; Mississippi; Missouri; Montana; Nebraska; Nevada; New Hampshire; New Jersey; New Mexico; New York; North Carolina; North Dakota; Ohio; Oklahoma; Oregon; Pennsylvania; Puerto Rico; Rhode Island; South Carolina; South Dakota; Tennessee; Utah; Vermont; Virgin Islands; Virginia; Washington; West Virginia; Wisconsin; Wyoming**.

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

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

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

"As state school chiefs, we have been discussing and building momentum for state-led, voluntary common standards that are both rigorous and internationally benchmarked for the past two years," stated **CCSSO President and Arkansas Commissioner of Education Ken James**. "The broad level of commitment we have received from states across the nation for this unprecedented

effort is both gratifying and exciting. It also clearly illustrates that this is an idea whose time has arrived."

The Common Core State Standards Initiative is being jointly led by the NGA Center and CCSSO in partnership with Achieve, Inc; ACT and the College Board. It builds directly on recent efforts of leading organizations and states that have focused on developing college- and career-ready standards and ensures that these standards can be internationally benchmarked to top-performing countries around the world. The goal is to have a common core of state standards that states can voluntarily adopt. States may choose to include additional standards beyond the common core as long as the common core represents at least 85 percent of the state's standards in English language arts and mathematics.

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

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

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

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

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

Please note that this printable version may not contain the full text of any PDF files or other attachments.

Printed from the NGA web site.

THE SMARTER BALANCED ASSESSMENT CONSORTIUM

The "Smarter Balanced Assessment Consortium" was formed from a merger of three Consortia that emerged in January 2010 in response to the Race to the Top competition: the Balanced Assessment, MOSAIC, and SMARTER Consortiums, comprising a total of 45 states.

The Consortium's priorities for a new generation assessment system are rooted in a concern for the valid, reliable, and fair assessment of the deep disciplinary understanding and higher-order thinking skills that are increasingly demanded by a knowledge-based economy. These priorities are also rooted in a belief that assessment must support ongoing improvements in instruction and learning, and must be useful for all members of the educational enterprise: students, parents, teachers, school administrators, members of the public, and policymakers.

The Consortium recognizes the need for a system of formative and summative assessments, organized around Common Core standards, that support high-quality learning and the demands of accountability, and that balance concerns for innovative assessment with the need for a fiscally sustainable system that is feasible to implement. The efforts of the Consortium will be organized to accomplish these goals.

Priorities for Assessment

As described below, the Consortium members have agreed to a set of principles that are consistent with those used by educational systems of high-achieving nations and states. These include the following:

1) **Assessments are grounded in a thoughtfully integrated learning system** of standards, curriculum, assessment, instruction, and teacher development. Teachers and other instructional experts are involved in the process of developing formative and summative assessments grounded in the learning standards. These guide professional learning about curriculum, teaching, and assessment. Instructional supports are provided to enable thoughtful teaching. Thus, assessments are provided to schools as part of a well-aligned system that guides and supports a coherent approach to students' and teachers' learning.

2) **Assessments include evidence of actual student performance** on challenging tasks that evaluate standards of 21st Century learning. The assessments will be strategically used to evaluate a broad array of skills and competencies and inform progress toward and acquisition of readiness for higher education and multiple work domains. They emphasize deep knowledge of core concepts within and across the disciplines, problem solving, analysis, synthesis, and critical thinking.

3) **Teachers are integrally involved in the design, development and scoring of assessment items and tasks.** Teachers will participate in the alignment and unpacking of the Common Core Standards and the identification of the standards in the local curriculum. The Consortium will involve teachers in formative and summative assessment development and support moderation of scoring processes to ensure consistency and to enable teachers to deeply understand the standards and to develop stronger curriculum, instruction, and classroom assessment. Assessment literate teachers 1) who have gotten "inside" the Common Core standards, 2) who have taught to the standards, 3) who have learned how to appropriately measure the standards, and 4) who have learned strategies to intervene if students have not measured the standards, will be teachers whose students are learning. Teachers' roles include the construction and review of items/tasks, the definition of scoring guides, selection of student work exemplars, and scoring.

4) **Technology is designed to support assessment and learning systems.** Technology is used to enhance these assessments in a number of ways, by: delivering the assessments; enabling adaptive technologies to better measure student abilities across the full spectrum of student performance and evaluate growth in learning; supporting on-line simulation tasks that test higher-order abilities, allowing

students to search for information or manipulate variables and tracking information about the students' problem-solving processes; and, in some cases, scoring the results or delivering the responses to trained scorers / teachers to access from an electronic platform. Such a platform can support training and calibration of scorers and moderation of scores, as well as the efficient aggregation of results in ways that support reporting and research about the responses.

5) Assessments are structured to continuously **improve teaching and learning**.
Assessment *as*, *of*, and *for* learning is designed to develop understanding of what learning standards are, what high-quality work looks like, and what is needed for student learning. It is also designed to foster instruction that supports transferable knowledge and skills. These outcomes are enabled by several features of the assessment system:

- 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 are sources of ongoing professional development that improve teaching.

- Developing both on-demand and curriculum-embedded assessments around learning progressions allows teachers to see where students are on multiple dimensions of learning and to strategically support their progress.

Goals for the Assessment System

The *SMARTER BALANCED* Consortium intends to build a system of assessment upon the Common Core Standards in English language arts and mathematics with the intent that all students across this consortium of states will know their progress toward college and career readiness. These states believe that the connection between the student, the teacher, and the curriculum, instruction and assessment is the foundation for success for the Common Core Standards, and that working together collaboratively to accomplish these tasks is critical.

The consortium is committed to the development of a system that is state led and will provide:

- **Common summative tests in English language arts and Mathematics** that assess student progress and mastery of core concepts and critical transferable skills using a range of formats: selected-response and constructed-response items, and performance tasks, designed together to assess the full range of standards.

- **Formative assessment tools and supports**, that are shaped around curriculum guidance which includes learning progressions, and that link evidence of student competencies to the summative system.

- Focused **professional development** around curriculum and lesson development as well as scoring and examination of student work

- **Reporting systems** that provide first-hand evidence of student performances, as well as aggregated scores by dimensions of learning, student characteristics, classrooms, schools, and districts.

- A governance structure that ensures a strong voice for state administrators, policy makers, school practitioners, and technical advisors to ensure an optimum balance of assessment quality, efficiency, costs, and time.

Principles

This system and its development will incorporate:

- A variety of item types to measure the full range of Common Core Standards, including those that address higher-order cognitive skills and abilities;
- A plan to scale up over time to incorporate curriculum-embedded performance and complex computer based simulations;
- Online adaptive solutions for summative and interim assessments to provide assessments that meet the needs of all students;
- Support for structured transitions from paper/pencil to online adaptive assessments, with a backup paper version available for those states who need it when the assessment initially scales up;
- A systematic solution to informed decision-making by including formative strategies, benchmark/interim assessments, and summative assessments;
- High quality curriculum and instructional supports for teachers;
- Inclusion of teachers in design, development and implementation of the system;
- Adherence to professional standards for assessment;
- Principles of universal design in the design and development process for **all** students; and
- Optional components that states can use based on their needs.

Design Agreements

The Consortium will develop a common summative assessment that will provide comparable results across all of the participating states. This comparability will be achieved by applying psychometrically sound scaling and equating procedures to items and a modest number of performance tasks of limited scope (e.g. no more than a few days to complete) that will be used in common across consortium states. Consortium states will use commonly determined performance standards that are internationally benchmarked.

In addition, some states will work on pushing the edge of the envelope with respect to more ambitious performance assessments – which may be used in common by one or more sub-consortia of states – and, in the same way, others will undertake more ambitious work with respect to computer adaptive testing and simulations. This design allows the Consortium to create at one time, a new summative assessment used by a large number of states within the five-year horizon of the federal grant, and to create even more leading-edge assessment components used by sub-consortia of states who decide to offer augmented assessments. Common use of these augmented assessments across subsets of states would result in comparable results for those components across those states, without disrupting the existence of a leaner, common summative assessment across all the states in the Consortium.

Current understandings about the nature of the assessment items, tasks, and strategies are noted below:

Objective machine-scored items

- Movement toward more analytic types of selected-response and constructed-response items that are easily scored, including computer simulations.

Open-Ended Constructed response

Artificial intelligence (AI) scored items.

- Work to establish efficient means of developing items and reliable scoring processes for complex responses scored by computer.
- Build and maintain the confidence teachers have in the system by incorporating a systematic read-behind by teachers.

Human scored constructed response

- Develop training and moderated scoring processes for teacher scoring of items that cannot be scored by AI and for additional scoring of AI items.
- A strategic mix of teacher and machine scoring should be created to take advantage of efficiencies and reduce burden, while also ensuring teacher participation and learning.

Curriculum-embedded performance assessments

- The common summative assessment would incorporate performance events of modest scope (1-5 days) to evaluate the standards more fully.
- Some states will form a workgroup to go further with rich performance tasks that can make advances in performance assessments on behalf of the consortium
- These more ambitious performance assessments could be included for individual state accountability systems (and for comparisons across a subset of states, if desired) until a greater proportion of states has capacity for implementation.

Advanced Computer based simulations

- Some states will form a workgroup to make advances in computer based simulations on behalf of the consortium
- These simulations could be included in individual state accountability systems until a greater proportion of states have capacity for implementation.

Smarter Balance Assessment Consortium
Document of Commitment

Please sign and return by April 15, 2010 to
Tony Alpert, Director of Assessment, Oregon Department of Education

Email as PDF attachment to: Tony.Alpert@ode.state.or.us , or
Fax: 503-378-5156

The Document of Commitment may be returned after April 15, allowing a state to begin to participate as a voting Member State from the date of commitment. Signature on this document indicates support of decisions made prior to Consortia receipt of this document.

Complete descriptions of the responsibilities and time commitments of various levels of consortium governance are provided in the Governance Structure document. This initial governance structure refers to the *proposal process only.* Governance structure will be revised after proposal acceptance to reflect long-term needs during the grant implementation period.

State Name: Michigan

Please indicate which governance levels are of interest to your state at this time.

- ☐ **Member State –** May also sign as member state for other consortia, may participate in setting general direction, may vote on selected issues.
- ☒ **Governing State –** May only sign with one consortia per competition category; has an active role in policy decisions, is committed to using the assessment system or program developed.

- ☒ Please consider my state for representation on the **steering committee**. (10 hr/wk)
- ☒ Please consider my state for representation on the **proposal design team** (20 hr/wk)
- ☐ We are interested in participating in the following **work groups** (variable hr/wk)
  - ☒ Item Specs/Quality Control, Writing/Constructed Response Scoring/Validity
  - ☒ Psychometrics, Reliability, Standard Setting, Reporting
  - ☒ Universal Design, Test Administration, Accommodations, Special Populations
  - ☐ Technical Specifications/Requirements
  - ☐ Communications and Documentation
  - ☒ External Validation, Research and Innovations
  - ☐ Professional Development and Capacity Building (IT and Human)
  - ☒ Formative and Benchmark Assessment
  - ☐ Performance-Based, Curriculum-Embedded Assessments
  - ☐ High School and Higher Education

[signature] 4.15.10

Chief State School Officer Signature — Date

States Participating in the SMARTER Consortium
(as of 4/29/10)

State	Date	Member/Governing State
Connecticut	April 13	Member
Delaware	April 14	Member
Georgia	April 28	Member
Hawaii	April 15	Member
Idaho	April 15	Governing
Illinois	April 15	Member
Iowa	April 14	Member
Kansas	April 15	Governing
Kentucky	April 15	Member
Maine	April 14	Governing
Michigan	April 16	Governing
Minnesota	April 27	Governing
Missouri	April 14	Governing
Montana	April 14	Member
Nebraska	April 13	Member
Nevada	April 19	Member
New Hampshire	April 19	Member
New Jersey	April 15	Member
New Mexico	April 13	Member
North Carolina	April 15	Governing
North Dakota	April 15	Member
Ohio	April 20	Member
Oregon	April 15	Governing
Pennsylvania	April 27	Member
South Carolina	April 20	Member
South Dakota	April 15	Member
Utah	April 14	Governing
Vermont	April 15	Governing
Washington	April 14	Governing
West Virginia	April 13	Governing
Wisconsin	April 14	Governing
Wyoming	April 14	Member
Total		**Member 32 Governing 13**

Appendix B.7

Michigan Merit Curriculum Content Expectation and Guideline Completion Schedule

Total Number of Credits	Required For High School Graduation Class 2011 (Students entering 8th grade in 2006)	Content Expectation Completion Date
4 Credits	**ENGLISH LANGUAGE ARTS - Content Expectations**	**April 2006**
	English 9, 10	**August 2006**
	English 11,12	**January 2007**
4 Credits	**MATHEMATICS - Content Expectations**	**April 2006**
	Algebra I, Algebra II, Geometry + 1 additional math or math-related credit in final year	**August 2006**
	Optional - Precalculus, Statistics & Probability	**August 2006**
	Integrated Math	**September 2006**
3 Credits	**SCIENCE - Content Expectations**	**October 2006**
	Biology, Chemistry or Physics + 1 additional science credit	**October 2006**
	Optional - Earth Science	**October 2006**
3 Credits	**SOCIAL STUDIES - Content Expectations**	**October 2007**
	Civics, Economics, U.S. History & Geography, World History & Geography	**October 2007**
1 Credit	**VISUAL, PERFORMING AND APPLIED ARTS - Guidelines**	**August 2007**
1 Credit	**PHYSICAL AND HEALTH EDUCATION - Guidelines & Expectations**	**October 2007 Draft February 2008 State Board**
Non-Credit or Credit	**ONLINE EXPERIENCE - Guidelines**	**October 2006**
2 Credits in Grades 9-12 or Equivalent K-12 Experience	**LANGUAGES OTHER THAN ENGLISH (LOTE) - Guidelines** **Effective beginning with Class of 2016**	**July 2007**

Updated 10.07

MICHIGAN Department of Education

MICHIGAN MERIT CURRICULUM (MMC)
High School Graduation Requirements

Effective for Students Entering 8th Grade in 2006 (Class of 2011)

To prepare Michigan's students with the knowledge and skills needed for the jobs in the 21st Century, the State of Michigan has enacted a rigorous new set of statewide graduation requirements that are among the best in the nation. With these new graduation requirements, students will be well-prepared for future success in college and the workplace.

The Michigan Merit Curriculum requires students entering 8th grade in 2006, to obtain a minimum of 16 credits for graduation, which could be met using alternative instructional delivery methods such as alternative course work, humanities course sequences, career and technology courses, industrial technology or vocational education courses, or through a combination of these programs. In addition, students entering the 3rd grade in 2006 (Class of 2016) will need to complete two credits of a language other than English in grades 9-12; OR an equivalent learning experience in grades K-12 prior to graduation.

Michigan Merit Curriculum High School Graduation Requirements	
MATHEMATICS - 4 Credits	
Algebra I Algebra II	Geometry One math course in final year of high school
ENGLISH LANGUAGE ARTS - 4 Credits	
English Language Arts 9 English Language Arts 10	English Language Arts 11 English Language Arts 12
SCIENCE - 3 Credits	
Biology Physics or Chemistry	One additional science credit
SOCIAL STUDIES - 3 Credits	
.5 credit in Civics U.S. History and Geography	.5 credit in Economics World History and Geography
PHYSICAL EDUCATION & HEALTH - 1 Credit	
VISUAL, PERFORMING AND APPLIED ARTS - 1 Credit	
ONLINE LEARNING EXPERIENCE **Course, Learning or Integrated Learning Experience**	
LANGUAGE OTHER THAN ENGLISH - 2 Credits **In grades 9-12; OR an equivalent learning experience in grades K-12 effective for students entering third grade in 2006 (Class 2016)**	

All required courses/credits must be aligned with Course/Credit Content Expectations and Guidelines developed by Michigan Department of Education, may be acquired through Career and Technical Education programs, and integrated courses.

Michigan Merit High School Graduation Requirement Overview

Goal: To ensure that Michigan's high school graduates have the necessary skills to succeed either in postsecondary education or in the workplace.

Components:

- Sixteen mandatory credits, which are aligned with recommended college- and work-ready curriculum:
  - Four credits in English language arts.
  - Four credits in math, including Geometry and Algebra I and II. At least one math course must be taken during the student's senior year.
  - Three credits in science, with use of labs, including biology and chemistry or physics.
  - Three credits in social sciences including U.S. History & Geography, World History & Geography, .5 Civics, .5 Economics.
  - One credit in Visual, Performing and Applied Arts.
  - One credit in Physical Education and Health.
  - All high school students must also participate in an online course or learning experience.
  - Effective for the class of 2016, the credit requirement will increase to 18 credits, to include two credits in world languages. Students may receive credit if they have had a similar learning experience in grades K-12.
- Awarding credit is based on proficiency in expectations, not seat time and can be earned prior to a student entering high school or by testing-out.
- Credit may be earned through one or more of the following: alternative course work, humanities course sequences, career and technical education, industrial technology courses, or vocational education.
- Credit can be earned through advanced studies such as accelerated course placement, advanced placement, dual enrollment, or international baccalaureate program or an early college/middle college program.
- Requirement that the department of education develops subject area content expectations and subject area assessments to evaluate whether students have met those expectations.
- Option for a student's parent to request a personal curriculum for the student which is developed with the high school counselor or other designee selected by the high school principal. The personal curriculum is for that *small percentage* of students who seek to exceed the requirements of the MMC or for students with disabilities who need special accommodation and modifications.
- Beginning with students entering 8th grade in 2006 (Class of 2011), schools must give 7th grade students the opportunity to create an educational development plan based on a career pathways program or similar career exploration program. All students must create a plan before entering high school.
- The superintendent of public instruction may designate up to 15 specialty high schools that are exempt from certain requirements of the Michigan Merit High School Graduation Requirements. These specialty schools are eligible for exemptions if the school:
- Incorporates a significant reading and writing component throughout its curriculum.
- Uses a specialized, innovative and rigorous curriculum in areas such as performing arts, world language, and extensive use of internships or other learning innovations.
- Demonstrates the following: mean scores from ACT math and science exams that exceed by 10% the district average; an 85% graduation rate; and enrollment of 75% of graduates into a postsecondary institution.

Appendix B.9

COMMON CORE STATE STANDARDS FOR

English Language Arts and Literacy in History/Social Studies & Science

Table of Contents

Introduction

The *Common Core State Standards for English Language Arts and Literacy in History/Social Studies and Science* are the culmination of an extended, broad-based effort to fulfill the charge issued by the states to create the next generation of K–12 standards that help ensure that all students are college and career ready in literacy by no later than the end of high school. The *Standards* set requirements for English language arts (ELA) but also for reading, writing, speaking, listening, and language in the social and natural sciences. Just as students must learn to communicate effectively in a variety of content areas, so too must the *Standards* specify the literacy skills and understandings required for eventual college and career readiness in history, social studies, and science as well as ELA. By their structure, the *Standards* encourage curriculum makers to take a comprehensive approach that coordinates ELA courses with courses in other subject areas in order to help students acquire a wide range of ever more sophisticated knowledge and skills through reading, writing, speaking, and listening.

The present work, led by the Council of Chief State School Officers (CCSSO) and the National Governors Association (NGA), builds on the foundation laid by states in their decades-long work on crafting high-quality education standards, including their work on the American Diploma Project with Achieve. The *Standards* also draw on the most important international models as well as research and input from numerous sources, including scholars, assessment developers, professional organizations, and educators from kindergarten through college. In their design and content, the *Standards* represent a synthesis of the best elements of standards-related work to date and an important advance over that previous work.

As specified by CCSSO and NGA, the *Standards* are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. A particular standard was included in the document only when the best available evidence indicated that its mastery was essential for students to be college and career ready in a twenty-first-century, globally competitive society. As new and better evidence emerges, the *Standards* will be revised accordingly.

The *Standards* are an extension of a prior initiative led by CCSSO and NGA to develop College and Career Readiness (CCR) standards in reading, writing, speaking, listening, and language as well as in mathematics. The CCR Reading, Writing, and Speaking and Listening Standards, released in draft form in September 2009, serve, in revised form, as the backbone of the present document. Consistent across grades and disciplines, the CCR Standards create an essential unity within the document and a consistent point of reference for educators. Whether guiding third graders through a science unit or high school sophomores through a classic work of literature, teachers can look to the same CCR Standards—included in each section of this document—to help judge whether students are on course for being college and career ready. Grade-specific K–12 standards in reading, writing, speaking, listening, and language translate the broad (and, for the earliest grades, seemingly distant) aims of the CCR Standards into age- and attainment-appropriate terms.

While college and career readiness is the end point of the *Standards*—an ambitious goal in its own right—some students will reach that point before the end of high school. For those students who do complete the *Standards'* requirements before graduation, advanced work in such areas as literature, composition, language, and journalism should be available. It is beyond the scope of the *Standards* to describe what such advanced work should consist of, but it should provide the next logical step up from the college and career readiness baseline established here.

As a natural outgrowth of meeting the charge to define college and career readiness, the *Standards* also lay out a vision of what it means to be a literate person in the twenty-first century. Indeed, the skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace. Students who meet the *Standards* readily undertake the close, attentive reading that is at the heart of understanding and enjoying complex works of literature. They habitually perform the critical reading necessary to pick carefully through the staggering amount of information available today in print and online. They actively seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that builds knowledge, enlarges experience, and broadens worldviews. They reflexively demonstrate the cogent reasoning and use of evidence that is essential to both private deliberation and responsible citizenship in a democratic republic. In short, students who master the *Standards* develop the skills in reading, writing, speaking, and listening that are the foundation for any creative and purposeful expression in language.

March 2010

Key Design Considerations

A focus on results rather than means

By focusing on required achievements, the *Standards* leave room for teachers, curriculum developers, and states to determine how those goals should be reached and what additional topics should be addressed. Thus, the *Standards* do not mandate such things as a particular writing process or specify the full range of metacognitive strategies that students may need to use to monitor and direct their thinking and learning. Teachers are thus free to provide students with whatever tools and knowledge their professional judgment and experience identify as most helpful for meeting the goals set out in the *Standards*.

An integrated model of literacy

Although the *Standards* are divided into Reading, Writing, Speaking and Listening, and Language strands for conceptual clarity, the processes of communication are closely connected, as reflected throughout this document. For example, Writing Standard #9 requires that students be able to write about what they read. Likewise, Speaking and Listening Standard #4 sets the expectation that students will share findings from their research.

Language conventions and vocabulary are treated in detail in a separate strand not because those skills should be taught in isolation from other communication activities but because their importance extends beyond writing and reading, where standards documents often place such skills. Many of the conventions must be observed in standard spoken as well as written English, and students, particularly the youngest ones, encounter and acquire new words through conversations as well as through texts. To signal the link between the Language skills and the rest of the standards even more strongly, some skills associated with language use are also found in other strands when appropriate. Reading Standard #4, for example, concerns determining word meanings, and Writing Standard #5 includes editing among the skills students must be able to use to strengthen writing.

Research and media skills integrated into the Standards *as a whole*

To be ready for college, workforce training, and life in a technological society, students need the ability to gather, comprehend, evaluate, synthesize, report on, and create a high volume and extensive range of print and nonprint texts in media forms old and new. The need to research and to consume and produce media is embedded into every element of today's curriculum; in like fashion, the associated skills and understandings are embedded throughout the *Standards* rather than treated in a separate section.

Shared responsibility for students' literacy development

The *Standards* establish that instruction in reading, writing, speaking, listening, and language is a shared responsibility. The *Standards* present reading instruction in K–5 as fully integrative, including a rich blend of stories, drama, and poetry as well as informational texts from a range of content areas. ELA-specific standards for grade 6 and above include fiction, poetry, and drama but also literary nonfiction (e.g., speeches, essays, and historical documents with significant cultural importance and literary merit). Literacy standards specific to history/social studies and science for grade 6 and above are predicated on teachers in these areas using their unique disciplinary expertise to help students meet the particular challenges of reading, writing, speaking, listening, and language in their respective fields.

Part of the motivation behind the interdisciplinary approach to literacy promulgated by the *Standards* is extensive research establishing the need for college- and career-ready students to be proficient in reading complex informational text independently in a variety of content areas. Most of the required reading in college and workforce training programs is informational in structure and challenging in content; postsecondary education programs typically provide students with both a higher volume of such reading than is generally required in K–12 schools and comparatively little scaffolding.

The *Standards* are not alone in calling for a special emphasis on informational text. The 2009 reading framework of the National Assessment of Educational Progress (NAEP) requires a high and increasing proportion of informational text on its assessment as students advance through the grades.

Distribution of Literary and Informational Passages by Grade in the 2009 NAEP Reading Framework

Grade	Literary	Informational
4	50%	50%
8	45%	55%
12	30%	70%

The *Standards* aim to align instruction with this framework so that many more students can meet the demands of college and career readiness. In K–5, the *Standards* balance the teaching of literature with informational text, including texts in history/social studies and science. Fulfilling the standards for 6–12 ELA requires much greater attention to literary nonfiction than has been traditional. The NAEP framework also makes clear that significant reading of informational texts should take place outside of the ELA classroom in order for students to be ready for college and careers. The NAEP framework applies the sum of all the reading students do in a grade, not just their reading in the ELA context. The percentages do not imply, for example, that high school ELA teachers must teach 70 percent informational text; they demand instead that a great deal of reading should occur in other disciplines. To measure students' growth toward college and career readiness, assessments aligned with the *Standards* should adhere to the distribution of texts across grades cited in the NAEP framework.

A progression of writing toward college and career readiness

NAEP likewise outlines a distribution across the grades of the core purposes and types of student writing. Similar to the *Standards,* the NAEP framework cultivates the development of three mutually reinforcing writing capacities: writing to persuade, to explain, and to convey real or imagined experience. Evidence concerning the demands of college and career readiness gathered during development of the *Standards* concurs with NAEP's shifting emphases: in grades 9–12 in the *Standards*, students continue writing in all three forms but focus overwhelmingly on writing to argue and to inform or explain.

Distribution of Communicative Purposes by Grade in the 2011 NAEP Writing Framework

Grade	To Persuade	To Explain	To Convey Experience
4	30%	35%	35%
8	35%	35%	30%
12	40%	40%	20%

It follows that writing assessments aligned with the *Standards* should adhere to the distribution of writing purposes across grades outlined by NAEP.

Grade levels for K–8; grade bands for 9–10 and 11–12

The *Standards* use individual grade levels in kindergarten through grade 8 to provide useful specificity; the *Standards* use two-year bands in grades 9–12 to allow schools, districts, and states flexibility in high school course design.

What is not *covered by the* Standards

The *Standards* should be recognized for what they are *not* as well as what they are. Three of the most important intentional design limitations are as follows:

1) The *Standards* define what all students are expected to know and be able to do but not *how* teachers should teach. The *Standards* must be complemented by a well-developed, content-rich curriculum consistent with the expectations laid out in this document.

2) While the *Standards* do attempt to focus on what is most essential, they do not describe all that *can* or *should* be taught. A great deal is left to the discretion of teachers and curriculum developers. The aim of the *Standards* is to articulate the fundamentals, not to set out an exhaustive list nor a set of restrictions that limits what can be taught beyond what is specified herein.

3) The *Standards* set grade-level standards but do not define the intervention methods or materials necessary to support students who are well below or well above grade-level expectations. No set of grade-level standards can fully reflect the great variety in achievement levels of students in any given classroom. However, the *Standards* do provide clear signposts along the way to the goal of college and career readiness for all students.

The Student Who is College and Career Ready in Reading, Writing, Speaking, Listening, and Language

The descriptions that follow are not standards themselves, but instead offer a portrait of students who meet the standards set out in this document. As students advance through the grades and master the standards in reading, writing, speaking, listening, and language, they are able to exhibit with increasing fullness and regularity these capacities of the literate individual.

- **They demonstrate independence.**

Students can, without significant scaffolding or support, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and clearly convey intricate or multifaceted information. Likewise, students are independently able to discern a speaker's key points and request clarification if something is not understood. They ask relevant questions, build on others' ideas, articulate their own ideas, and ask for confirmation that they have been understood. Without prompting, they observe language conventions, determine word meanings, attend to the connotations of words, and acquire new vocabulary.

- **They build strong content knowledge.**

Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

- **They respond to the varying demands of audience, task, purpose, and discipline.**

Students consider their communication in relation to audience, task, purpose, and discipline. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in the sciences).

- **They comprehend as well as critique.**

Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author's or speaker's assumptions and assess the veracity of claims.

- **They value evidence.**

Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

- **They use technology and digital media strategically and capably.**

Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals.

- **They come to understand other perspectives and cultures.**

Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

How to Read This Document

Overall Document Organization and Main Features

The *Standards* comprise three main sections: a comprehensive K–5 section and two content area–specific sections for grades 6–12, one in English language arts and one in history/social studies and science.

Each section is divided into Reading, Writing, Speaking and Listening, and Language *strands*. Each strand is headed by a set of *College and Career Readiness (CCR) Standards* that is identical across all grades and content areas. The uniformity of the CCR Standards provides a consistent point of reference for educators, facilitating schoolwide goal setting and professional development.

CCR Standards: The basis for the K–12 Standards

Standards for each grade within K–8 and for grades 9–10 and 11–12 follow the College and Career Readiness (CCR) Standards in each strand. Each *grade-specific standard* (as these standards will be collectively referred to) corresponds to a particular CCR Standard. Put another way, each CCR Standard has an accompanying grade-specific standard translating the broader CCR statement into grade-appropriate terms.

Who is responsible for which portion of the Standards

A single K–5 section sets CCR and grade-specific standards for reading, writing, speaking, listening, and language across the curriculum, reflecting the fact that most or all of the instruction students receive in these grades comes from one elementary school teacher. Grades 6–12 are covered in two content area–specific sections, the first for the English language arts teacher and the second for the history/social studies and the science teacher. Each of these sections uses the same CCR Standards but also includes discipline-specific standards tuned to the literacy requirements of these disciplines. It is important to note that the literacy standards in history/social studies and science are meant to complement rather than supplant content standards in those disciplines.

Key Features of the Strands

Reading: Text complexity and the growth of comprehension

To foster students' ability to comprehend literary and informational texts of steadily increasing complexity, the *Standards* (starting formally in grade 2) define what proportion of the texts students read each year should come from a particular text complexity grade band (2–3, 4–5, 6–8, 9–10, or 11–12). Whatever they are reading, students must also show a steadily increasing ability to discern more from and make fuller use of text, including making an increasing number of connections among ideas and between texts, considering a wider range of textual evidence, and becoming more sensitive to inconsistencies, ambiguities, and poor reasoning in texts.

Writing: Text types, responding to sources, and research

The *Standards* acknowledge the fact that whereas some writing skills, such as the ability to reflect purpose, task, and audience, are important for many types of writing, others are more properly part of writing narratives, informative and explanatory texts, or arguments. Beginning at grade 4, the *Standards* specify the sorts of writing over extended and shorter time frames that students in each grade are to produce in response to sources. Because of the centrality of writing to most forms of inquiry, research standards are primarily included in this strand.

Speaking and Listening: Flexible communication and interpersonal skills

Including but not limited to skills necessary for formal presentations, the Speaking and Listening standards require students to develop a range of broadly useful oral communication and interpersonal skills. Students must learn to sift through and evaluate multiple points of view, listen thoughtfully in order to build on and constructively question the ideas of others while contributing their own ideas, and, where appropriate, reach agreement and common goals through teamwork.

Language: Conventions and vocabulary

The Conventions standards in the Language strand include the essential "rules" of formal written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. The Vocabulary standards focus on both understanding words and their nuances and acquiring new words through conversation, reading, and being taught them directly.

Appendices

Appendix A contains supplementary material on reading text complexity, writing, speaking and listening, language conventions, and vocabulary. Appendix B consists of text exemplars illustrating the complexity, quality, and range of reading appropriate for various grade levels. Appendix C includes annotated writing samples demonstrating at least adequate performance at various grade levels.

Standards for English Language Arts and Literacy in History/Social Studies & Science

K–5

Appendix B.9

College and Career Readiness Standards for Reading

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze in detail where, when, why, and how events, ideas, and characters develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section or chapter) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Synthesize and apply information presented in diverse ways (e.g., through words, images, graphs, and video) in print and digital sources in order to answer questions, solve problems, or compare modes of presentation.[1]
8. Delineate and evaluate the reasoning and rhetoric within a text, including assessing whether the evidence provided is relevant and sufficient to support the text's claims.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range and Level of Text Complexity

10. Read complex texts independently, proficiently, and fluently, sustaining concentration, monitoring comprehension, and, when useful, rereading.[2]

[1]Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.
[2]Proficiency in this standard is measured by students' ability to read a range of appropriately complex texts in each grade as defined on page 14.

Note on range and content of student reading

To build a foundation for college and career readiness, students must read widely and deeply from among a broad range of high-quality, increasingly challenging literary and informational texts. Through extensive reading of stories, dramas, poems, and myths from diverse cultures and different time periods, students gain literary and cultural knowledge as well as familiarity with various text structures and elements. By reading texts in history/social studies, science, and other disciplines, students build a foundation of knowledge in these fields that will also give them the background to be better readers in all content areas. Students can only gain this foundation when the curriculum is intentionally and coherently structured to develop rich content knowledge within and across grades. Students also acquire the habits of reading independently and closely, which are essential to their future success.

Appendix B.9

Reading Standards for Literature K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades.

Kindergartners:	Grade 1 students:	Grade 2 students:
Key Ideas and Details		
1. With prompting and support, ask and answer questions about details and events in a text.	**1.** Ask and answer questions about key details and events in a text.	**1.** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details and events in a text.
2. Retell familiar stories.	**2.** Retell stories, demonstrating understanding of the central message or lesson.	**2.** Paraphrase stories, fables, folktales, or myths from diverse cultures and determine their lessons or morals.
3. Identify characters, settings, and key events in a story.	**3.** Describe characters, settings, and key events in a story.	**3.** Describe how characters in a story respond to key events and conflicts.
Craft and Structure		
4. Ask questions about unknown words in a text.	**4.** Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.	**4.** Identify words and phrases (e.g., regular beats, rhymes, and repeated lines) that supply rhythm and meaning in a story, poem, or song.
5. Recognize common types of texts (e.g., storybooks, poems).	**5.** Distinguish major categories of writing from each other (e.g., stories and poems), drawing on a wide reading of a range of text types.	**5.** Refer to core elements of stories, plays, and myths, including characters, settings, and plots, when writing or speaking about a specific text.
6. Name the author and illustrator of a text and define the role of each.	**6.** Identify who is speaking at various points in a story, myth, fable, or narrative poem.	**6.** Distinguish between characters by speaking in a different voice for each character when reading aloud.
Integration of Knowledge and Ideas		
7. Relate pictures and illustrations to the overall story in which they appear.	**7.** Use pictures, illustrations, and details in a story to describe characters, events, or settings.	**7.** Explain how images and illustrations contribute to and clarify a story.
8. (Not applicable to literature)	**8.** (Not applicable to literature)	**8.** (Not applicable to literature)
9. Compare and contrast the adventures of characters in familiar stories.	**9.** Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.	**9.** Compare and contrast characters or events from different stories addressing similar themes.
Range and Level of Text Complexity		
10. Read emergent-reader literature texts with purpose and understanding.	**10.** Read independently, proficiently, and fluently literature texts appropriately complex for grade 1.	**10.** Read literature independently, proficiently, and fluently within the grades 2–3 text complexity band; read texts at the high end of the range with scaffolding as needed.

Reading Standards for Literature K–5

Grade 3 students:	Grade 4 students:	Grade 5 students:
Key Ideas and Details		
1. Ask and answer questions to demonstrate understanding of a text, explicitly using the text as the basis for the answers.	**1.** Draw on details and examples from a text to support statements about the text.	**1.** Quote from a text to support statements about the text.
2. Use key supporting details in stories, fables, folktales, or myths from diverse cultures to determine the lessons or morals.	**2.** Summarize a text and derive a theme of a story, drama, or poem from details in the text.	**2.** Determine a theme of a text, drawing on how characters in a story respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.
3. Describe the main characters in a story (e.g., their traits, motivations, or feelings) and explain how they contribute to the sequence of events.	**3.** Describe in detail a character, event, or setting, drawing on specific details in the text (e.g., from a character's thoughts, words, deeds, or interactions with others).	**3.** Compare and contrast two or more characters, events, or settings in a text, drawing on specific details.
Craft and Structure		
4. Interpret key words and phrases in a text, distinguishing literal from figurative language.	**4.** Understand words and phrases in a text that allude to significant characters found in mythology (e.g., *Herculean*), drawing on a wide reading of classic myths from a variety of cultures and periods.	**4.** Identify how metaphors and similes as well as rhymes and other repetitions of sounds (e.g., alliteration) supply meaning and rhythm in a specific verse or stanza of a poem.
5. Demonstrate understanding of common features of legends, myths, and folk- and fairytales (e.g., heroes and villains; quests or challenges) when writing or speaking about classic stories from around the world.	**5.** Explain major differences between poems and prose, and refer to the structural elements of poems (e.g., stanza, verse, rhythm, meter) when writing or speaking about specific poems.	**5.** Explain major differences between drama and prose stories, and refer to the structural elements of drama (e.g., casts of characters, setting descriptions, dialogue, stage directions, acts, scenes) when writing or speaking about specific works of dramatic literature.
6. Distinguish their own point of view from those of characters in a story.	**6.** Compare the point of view from which different stories are narrated, including the difference between first- and third-person narrations.	**6.** Identify how a narrator's perspective or point of view influences how events are described.
Integration of Knowledge and Ideas		
7. Use information from illustrations and other visual elements in a text with the words to develop an understanding of the setting, characters, and plot.	**7.** Integrate information from several illustrations and other visual elements in a text with the words to develop an understanding of how the setting and characters change and the plot develops.	7. Explain how images, sounds, and movements contribute to an animated or live-action adaptation of a story, comparing that version to what they "see" or "hear" from reading the text.
8. (Not applicable to literature)	**8.** (Not applicable to literature)	**8.** (Not applicable to literature)
9. Compare and contrast the plots, settings, and themes of stories written by the same author about the same or similar characters (e.g., in books from a series).	**9.** Compare and contrast thematically similar tales, myths, and accounts of events from various cultures.	**9.** Compare the treatment of similar ideas and themes (e.g., opposition of good and evil) as well as character types and patterns of events in myths and other traditional literature from different cultures.
Range and Level of Text Complexity		
10. Read literature independently, proficiently, and fluently within the grades 2–3 text complexity band; read "stretch" texts in the grades 4–5 text complexity band with scaffolding as needed.	**10.** Read literature independently, proficiently, and fluently in the grades 4–5 text complexity band; read texts at the high end of the range with scaffolding as needed.	**10.** Read literature independently, proficiently, and fluently within the grades 4–5 text complexity band; read "stretch" texts in the grades 6–8 text complexity band with scaffolding as needed.

Reading Standards for Informational Text K–5

Kindergartners:	Grade 1 students:	Grade 2 students:
Key Ideas and Details		
1. With prompting and support, ask and answer questions about information and events a text.	**1.** Ask and answer questions about key information and events in a text.	**1.** Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key information and events in a text.
2. Identify the main topic and main ideas of a text.	**2.** Identify the main topic, main ideas, and key details of a text.	**2.** Identify the main focus of a multiparagraph text as well as that of specific paragraphs within the text.
3. With prompting and support, describe the connection between two events or ideas in a text.	**3.** Describe the connection between two key events or ideas in a text.	**3.** Describe the connection between two or more historical events or scientific concepts in a text.
Craft and Structure		
4. Ask questions about unknown words in a text.	**4.** Learn and determine the meanings of words and phrases encountered in text relevant to a *grade 1 topic or subject area*.	**4.** Learn and determine the meanings of words and phrases encountered in text relevant to a *grade 2 topic or subject area*.
5. Locate basic information in a text.	**5.** Describe how a text groups information into general categories (e.g., cows, pigs, and horses are *farm animals*).	**5.** Know and use various text features (e.g., captions, headings, tables of contents, glossaries, indexes, electronic menus, icons) to locate key facts or information.
6. Name the author and illustrator of a text and define the role of each.	**6.** Distinguish between information provided by pictures or illustrations and that provided by the words in a text.	**6.** Identify the main purpose of a text, including what question the author aims to answer or what the author aims to explain or describe.
Integration of Knowledge and Ideas		
7. Relate pictures or illustrations to the overall text in which they appear.	**7.** Use pictures, illustrations, and details in a text to describe the key ideas.	**7.** Explain how images and illustrations contribute to and clarify a text.
8. With prompting and support, recognize cause-and-effect relationships in a text.	**8.** Identify cause-and-effect relationships in a text.	**8.** Describe how specific causes link key events or ideas together in a text.
9. With prompting and support, recognize basic similarities in and differences between two texts on the same topic (e.g., in illustrations or descriptions).	**9.** Identify similarities in and differences between two texts on the same topic (e.g., in illustrations or descriptions).	**9.** Describe similarities in and differences between two texts on the same topic.
Range and Level of Text Complexity		
10. Read emergent-reader informational texts with purpose and understanding.	**10.** Read independently, proficiently, and fluently informational texts appropriately complex for grade 1.	**10.** Read informational texts independently, proficiently, and fluently within the grades 2–3 text complexity band; read texts at the high end of the range with scaffolding as needed.

Reading Standards for Informational Text K–5

Grade 3 students:	Grade 4 students:	Grade 5 students:
Key Ideas and Details		
1. Ask and answer questions to demonstrate understanding of a text, explicitly using the text as the basis for the answers.	**1.** Draw on details and examples from a text to support statements about the text.	**1.** Quote from a text to support statements about the text.
2. Determine the main idea of a text and explain how it is supported by the key details.	**2.** Determine the main idea and supporting details of a text; summarize the text.	**2.** Determine two or more main ideas and how they are supported by details; summarize the text.
3. Describe the relationship between historical or scientific events or ideas in a text, using knowledge of connective devices that pertain to time, sequence, and cause and effect.	**3.** Describe the sequence of events in an historical or scientific account, including what happened and why, based on specific information in a text.	**3.** Explain the relationships between two or more historical events or scientific concepts by drawing on specific information from one or more texts.
Craft and Structure		
4. Learn and determine the meanings of general academic language and domain-specific words and phrases encountered in a text relevant to a *grade 3 topic or subject area*.	**4.** Learn and determine the meanings of general academic language and domain-specific words or phrases encountered in a text relevant to a *grade 4 topic or subject area*.	**4.** Learn and determine the meanings of general academic language and domain-specific words and phrases encountered in a text relevant to a *grade 5 topic or subject area*.
5. Use text features (e.g., bold print, key words, topic sentences, hyperlinks, electronic menus, icons) to locate information quickly and efficiently.	**5.** Use text features and search tools to locate and process information relevant to a given topic.	**5.** Describe how events, ideas, or information are organized (e.g., chronology, comparison, cause and effect) in a whole text or in part of a text.
6. Compare what is presented in a text with relevant prior knowledge and beliefs, making explicit what is new or surprising.	**6.** Compare an eyewitness account to a secondhand account of the same event or topic.	**6.** Analyze two accounts of the same event or topic and describe important similarities and differences in the details they provide.
Integration of Knowledge and Ideas		
7. Integrate information from illustrations and other visual elements (e.g., maps, photographs) in print and digital texts as an aid to understanding where, when, why, and how key events occur.	**7.** Interpret factual information presented graphically or visually (e.g., in charts, diagrams, time lines, animations, and interactive elements) and explain how the information contributes to understanding a print or digital text.	**7.** Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
8. Describe the logical connection between paragraphs and between sentences in a text (e.g., comparison, sequence, example).	**8.** Explain how an author uses evidence to support his or her claims in a text.	**8.** Explain how an author uses evidence to support his or her claims in a text, identifying what evidence supports which claim(s).
9. Compare and contrast information drawn from two texts on the same subject.	**9.** Describe how two or more texts on the same subject build on one another; provide a coherent picture of the information they convey.	**9.** Integrate information from several texts on the same subject in order to write or speak about the subject knowledgeably.
Range and Level of Text Complexity		
10. Read informational texts independently, proficiently, and fluently within the grades 2–3 text complexity band; read "stretch" texts in the grades 4–5 text complexity band with scaffolding as needed.	**10.** Read informational texts independently, proficiently, and fluently within the grades 4–5 text complexity band; read texts at the high end of the range with scaffolding as needed.	**10.** Read informational texts independently, proficiently, and fluently within the grades 4–5 text complexity band; read "stretch" texts in the grades 6–8 text complexity band with scaffolding as needed.

Reading Standards: Foundational Skills (K–3)

These standards are directed toward fostering students' understanding and working knowledge of concepts of print, the alphabetic principle, and other basic conventions of the English writing system. These Foundational Skills are not an end in and of themselves; rather, they are necessary and important components of an effective, comprehensive reading program designed to develop proficient readers with the capacity to comprehend texts across a range of types and disciplines.

Kindergartners:	Grade 1 students:
Print Concepts	
1. Demonstrate understanding of the organization and basic features of print. a. Identify the front cover, back cover, and title page of a book. b. Follow words from 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.	**1.** (Not applicable)
Phonological Awareness	
2. Demonstrate understanding of spoken words, syllables, and phonemes. a. Recite and produce rhyming words. b. Count, pronounce, blend, and segment syllables in spoken words. c. Count individual words in spoken phrases or simple sentences. d. Blend and segment consonants and rimes of spoken words (*/g/ - /oat/*, */bl/ - /ack/*). e. Demonstrate phonemic awareness by isolating and pronouncing the initial, medial vowel, and final phonemes (sounds) in three-phoneme (CVC) words (e.g., */save/*, */ham/*).[1] (This does not include CVCs ending with */l/*, */r/*, or */x/*.) f. Add or substitute individual phonemes in simple, one-syllable words to make new words (e.g., */at/* → */sat/*→ */mat/* → */map/*).	**2.** Demonstrate understanding of spoken words, syllables, and phonemes. a. Aurally distinguish long from short vowel sounds in spoken single-syllable words (e.g., */tap/* vs. */tape/*, */sock/* vs. */soak/*, */sit/* vs. */sight/*). b. Orally produce single-syllable words by blending phonemes, including consonant blends (e.g., */cats/*, */black/*, */blast/*). c. Isolate and pronounce initial, medial vowel, and final phonemes (sounds) in spoken single-syllable words (e.g., ***f**ast*, *f**a**st*, *fas**t***). d. Segment spoken single-syllable words into their complete sequence of individual phonemes (e.g., lap: /l/-/a/-/p/→ /f/-/l/-/a/-/p/).

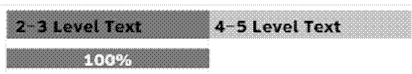
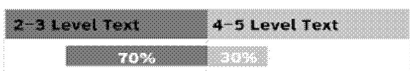
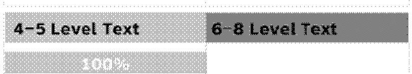
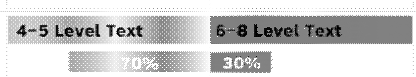
[1]Words, syllables, or phonemes written in /slashes/refer to their pronunciation or phonology. Thus, /CVC/ is a word with three phonemes regardless of the number of letters in the spelling of the word.

Reading Standards: Foundational Skills (K–3)

Kindergartners:	Grade 1 students:	Grade 2 students:	Grade 3 students:
Phonics and Word Recognition			
3. Know and apply grade-level phonics and word analysis skills in decoding words. a. Demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant. b. Associate the long and short sounds with the graphemes for the five major vowels. c. Read at least twenty-five very-high-frequency words by sight (e.g., *the*, *of*, *to*, *you*, *she*, *my*, *is*, *are*, *do*, *does*). d. Distinguish between similarly spelled words by identifying the sounds of the letters that differ (e.g., ***b**at* vs. *sat*, *ca**t*** vs. *ca**n***, *h**i**t* vs. *h**o**t*).	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Know the spelling-sound correspondences for common consonant digraphs (e.g., *-ll*, *-ck*, *wr-*, *sh*). b. Decode regularly spelled one-syllable words (e.g., *lock*, *much*, *see*, *rain*, *slide*, *bake*, *bring*). c. Know final *-e* (e.g., *take*, *side*) and common vowel team conventions (e.g., *rain*, *day*, *week*, *seat*, *road*, *show*) for representing long vowel sounds. d. Use knowledge that every syllable must have a vowel sound to determine the number of syllables in a printed word. e. Decode two-syllable words following basic patterns (e.g., *rabbit*) by breaking the words into syllables. f. Read words with inflectional endings (e.g., *-s*, *-es*, *-ed*, *-ing*, *-er*, *-est*). g. Recognize and read grade-appropriate irregularly spelled words (e.g., *said*, *were*, *could*, *would*, *their*, *there*, *through*, *none*, *both*).	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Distinguish long and short vowels when reading regularly spelled one-syllable words (e.g., *hop* vs. *hope*, *men* vs. *mean*, *fell* vs. *feel*, *bend* vs. *bead*). b. Know spelling-sound correspondences for additional common vowel teams (e.g., *loud*, *cow*, *look*, *loop*, *boy*, *boil*). c. Decode regularly spelled two-syllable words with long vowels (e.g., *surprise*, *remain*, *needle*, *baby*, *paper*). d. Decode words with common prefixes and suffixes (e.g., *unhappy*, *carefully*, *goodness*, *unbutton*). e. Identify words with inconsistent but common spelling-sound correspondences (e.g., *heat* vs. *head*, *roll* vs. *doll*, *hint* vs. *hind*). f. Recognize and read grade-appropriate irregularly spelled words (e.g., *through*, *eyes*, *busy*, *ocean*, *island*, *people*).	**3.** Know and apply grade-level phonics and word analysis skills in decoding words. a. Identify and know the meaning of the most common prefixes and derivational suffixes (e.g., *un-*, *re-*, *mis-*, *-ful*, *-less*, *-able*). b. Decode words with common Latin suffixes (e.g., *-tion/-sion*, *-ture*, *-tive/-sive*, *-ify*, *-ity*, *-ment*). c. Decode multisyllable words (e.g., *supper*, *chimpanzee*, *refrigerator*, *terrible*, *frightening*). d. Read grade-appropriate irregularly spelled words (e.g., *although*, *science*, *stomach*, *machine*).
Fluency			
4. Read with sufficient accuracy and fluency to support comprehension. a. Read emergent-reader texts with purpose and understanding.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings. c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	**4.** Read with sufficient accuracy and fluency to support comprehension. a. Read on-level text with purpose and understanding. b. Read on-level text orally with accuracy, appropriate rate, and expression on successive readings c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

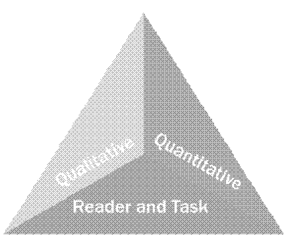
Range and Level of Text Complexity for Student Reading by Grade (Standard 10)

Students demonstrate proficiency in reading texts at the following ranges of text complexity to progress on a path to college and career readiness.

K 1	(See specific exemplars.)	
2		**In grade 2**, students focus on reading texts independently in the grades 2–3 text complexity band, with scaffolding likely required for texts at the high end of the range.
3		**In grade 3**, students focus on reading texts independently in the grades 2–3 text complexity band (70 percent) and are introduced to texts in the grades 4–5 text complexity band as "stretch" texts (30 percent), which will likely require scaffolding.
4		**In grade 4**, students focus on reading texts independently in the grades 4–5 text complexity band, with scaffolding likely required for texts at the high end of the range.
5		**In grade 5**, students focus on reading independently in the grades 4–5 text complexity band (70 percent) and are introduced to texts in the grades 6–8 text complexity band as "stretch" texts (30 percent), which will likely require scaffolding.

Note: In any given classroom, the actual range of students' reading ability could be greater than the proposed range. Some students will require extra time and intense support and scaffolding to enable them to read grade-level material, whereas other students will be ready for—and should be encouraged to read—more advanced texts.

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader knowledge, motivation, and interests as well as the complexity generated by the tasks to be assigned and the questions to be posed

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.

Range of Text Types for K–5

Students in K–5 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

Literature			Informational Text
Stories	**Drama**	**Poetry**	**Literary Nonfiction, History/Social Studies, and Science and Technical Texts**
Includes children's adventure stories, folktales, legends, fables, fantasy, realistic fiction, and myth	Includes staged dialogue and brief familiar scenes	Includes nursery rhymes and the subgenres of the narrative poem, limerick, and free verse poem	Includes biographies and autobiographies; books about history, social studies, science, and the arts; and digital media sources on a range of topics

Appendix B.9

College and Career Readiness Standards for Writing

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

Text Types and Purposes[1]

1. Write arguments to support a substantive claim with clear reasons and relevant and sufficient evidence.
2. Write informative/explanatory texts to convey complex information clearly and accurately through purposeful selection and organization of content.
3. Write narratives to convey real or imagined experiences, individuals, or events and how they develop over time.

Production and Distribution of Writing

4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce, publish, and interact with others about writing.

Research to Build Knowledge

7. Perform short, focused research projects as well as more sustained research in response to a focused research question, demonstrating understanding of the material under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate and cite the information while avoiding plagiarism.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.[3]

[1]These broad categories of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]See "Conventions" in Language, pages 22–26, for specific editing expectations.
[3]This standard is measured by the proficiency of student writing products.

Note on range and content of student writing

To build a foundation for college and career readiness, students need to learn to use writing as a way of offering and supporting opinions, demonstrating understanding of the subjects they are studying, and conveying thoughts, feelings, and real and imaginary experiences. They learn to appreciate that a key purpose of writing is to communicate clearly to an external, sometimes unfamiliar audience, and they begin to adapt the form, content, and style of their writing to accomplish a particular purpose and task. They develop the capacity to build knowledge on a subject through research projects and to respond analytically to literary and informational sources. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

Writing Standards K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications. Growth in writing ability is characterized by an increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas. At the same time, the content and sources that students address in their writing grow in demand every year.

Kindergartners:	Grade 1 students:	Grade 2 students:
Text Types and Purposes		
1. Use a combination of drawing, dictating, and writing to compose opinions in which they tell a reader the name of a book or the topic they are "writing" about and give an opinion about the topic (e.g., *My favorite book is . . .*).	**1.** Write opinions in which they introduce the topic or the name of the book they are writing about, state an opinion, and provide a reason for their opinion.	**1.** Write opinions in which they introduce the topic or book(s) directly, state an opinion, provide reasons and details to support opinions, use words to link opinions and reason(s) (e.g., *because*, *and*, *also*), and provide a sense of closure.
2. Use a combination of drawing, dictating, and writing to compose informative and explanatory texts in which they name what they are "writing" about and share some information about it.	**2.** Write informative and explanatory texts in which they name a topic, supply some facts relevant to the topic, and provide some sense of closure.	**2.** Write informative and explanatory texts in which they introduce a topic, use facts and definitions to develop points, present similar information together using headers to signal groupings when appropriate, and provide a concluding sentence or section.
3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order that they occurred, and provide a reaction to what happened.	**3.** Write narratives in which they include at least two or more appropriately sequenced events, use time cue words to signal event order, and provide some details and a sense of closure.	**3.** Write narratives in which they recount a well-elaborated event or series of events, use temporal words and phrases to signal event order, include details to tell what the narrator did, thought, and felt, and provide closure.
Production and Distribution of Writing		
4. (Begins in grade 3)	**4.** (Begins in grade 3)	**4.** (Begins in grade 3)
5. With guidance and support from adults, add details to strengthen writing as needed through revision.	**5.** With guidance and support from adults, add details to strengthen writing as needed through revision.	**5.** With guidance from adults, strengthen writing as needed by revising and editing.
6. (Begins in grade 2)	**6.** (Begins in grade 2)	**6.** With guidance from adults, use technology to produce writing.
Research to Build Knowledge		
7. (Begins in grade 1)	**7.** Participate in shared research and writing projects (e.g., exploring a number of books on a given topic).	**7.** Participate in shared research and writing projects (e.g., exploring a number of books on a given topic).
8. Gather information from experiences or provided text sources to answer a specific question.	**8.** Gather information from experiences or provided text sources to answer a specific question.	**8.** Gather information from experiences or provided text sources to answer a specific question.
9. (Begins in grade 4)	**9.** (Begins in grade 4)	**9.** (Begins in grade 4)
Range of Writing		
10. (Begins in grade 4)	**10.** (Begins in grade 4)	**10.** (Begins in grade 4)

Writing Standards K–5

Grade 3 students:	Grade 4 students:	Grade 5 students:
Text Types and Purposes		
1. Write opinions in which they: a. Introduce the topic or book(s) directly, state an opinion relative to the topic, and create an organizing structure that lists reasons. b. Provide reasons that support the opinion. c. Use appropriate words to link opinions and reason(s) (e.g., *because*, *therefore*, *in order to*, *since*, *for example*). d. Provide a sense of closure.	**1.** Write opinions in which they: a. Introduce an opinion about a concrete issue or topic and create an organizing structure where related ideas are grouped to support the writer's purpose. b. Provide reasons that are supported by facts and details. c. Link reasons and details together using words and phrases (e.g., *so*, *then*, *for instance*, *in addition*). d. Adopt an appropriate style for sharing and defending an opinion. e. Provide a concluding statement or section.	**1.** Write opinions in which they: a. Introduce an opinion about a concrete issue or topic and create an organizing structure where ideas are logically grouped to support the writer's purpose. b. Provide logically ordered reasons that are supported by facts and details. c. Link reasons and details together using words, phrases, and clauses (e.g., *consequently*, *generally*, *specifically*). d. Adopt an appropriate style for sharing and defending an opinion. e. Provide a concluding statement or section.
2. Write informative/explanatory pieces in which they: a. Introduce a topic and create an organizational structure that presents similar information together. b. Provide some details to develop points. c. Use linking words (e.g., *also*, *another*, *and*, *more*) to connect ideas within categories of information. d. Include a concluding sentence or section.	**2.** Write informative/explanatory pieces in which they: a. State the topic clearly and group related information in paragraphs and sections. b. Develop the topic using facts, concrete details, quotations, or other information and examples. c. Use appropriate links to join ideas within categories of information. d. Employ domain-specific vocabulary when appropriate. e. Provide a conclusion related to the information or explanation offered.	**2.** Write informative/explanatory pieces in which they: a. State the topic clearly, provide a general observation and focus, and group related information logically. b. Develop the topic using relevant facts, concrete details, quotations, or other information and examples. c. Use appropriate links to join ideas within and across categories of information. d. Employ domain-specific vocabulary and some technical terms when appropriate. e. Provide a conclusion related to the information or explanation offered.
3. Write narratives in which they: a. Establish a situation, introduce a narrator and/or characters, and organize an event sequence that unfolds naturally. b. Employ dialogue and descriptions of characters' actions, thoughts, and feelings. c. Use temporal words and phrases to signal event sequence. d. Provide a sense of closure.	**3.** Write narratives in which they: a. Orient the reader by establishing a situation, introduce a narrator and/or characters, and organize an event sequence that unfolds naturally. b. Use narrative techniques such as dialogue and description to develop events and show the characters' external behaviors and internal responses to events. c. Use a variety of temporal words and phrases to manage the sequence of events. d. Use concrete and sensory words and phrases to convey events and experiences precisely. e. Provide a satisfying conclusion that follows from the narrative's events.	**3.** Write narratives in which they: a. Engage and orient the reader by establishing a situation, introduce a narrator and/or characters, and create an organization that sequences events naturally and logically. b. Use narrative techniques such as dialogue, pacing, and description to develop events and show characters' external behaviors and internal responses. c. Use a variety of temporal words, phrases, and clauses to manage the sequence of events. d. Use well-chosen words and phrases to convey events and experiences precisely. e. Provide a satisfying conclusion that follows from the narrative's events.

Writing Standards K–5

Grade 3 students:	Grade 4 students:	Grade 5 students:
Production and Distribution of Writing		
4. (Begins in grade 4).	**4.** Produce coherent and clear writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)	**4.** Produce coherent and clear writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)
5. With guidance and support from peers and adults, strengthen writing as needed by revising and editing.	**5.** With guidance and support from peers and adults, strengthen writing as needed by planning, revising, and editing.	**5.** With guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. With guidance and support from adults, use technology to produce and publish writing.	**6.** With guidance and support from adults, use technology to produce, publish, and interact with others about writing.	**6.** With guidance and support from adults, use technology, including the Internet, to produce, publish, and interact with others about writing.
Research to Build Knowledge		
7. Perform short, focused research tasks that build knowledge about a topic.	**7.** Perform short, focused research tasks that build knowledge through investigation of different aspects of a single topic.	**7.** Perform short, focused research tasks that build knowledge through investigation of different aspects of a topic using several sources.
8. Gather information from experience as well as print and digital resources, take simple notes on sources, and sort evidence into provided categories.	**8.** Gather relevant information from experience as well as print and digital sources, take notes and categorize evidence, restate information in written text, and provide basic bibliographic information.	**8.** Gather relevant information from experience as well as print and digital sources; summarize or paraphrase information in notes and finished work, and provide basic bibliographic information.
9. (Begins in grade 4)	**9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned: a. Apply *grade 4 reading standards* to informational texts (e.g., "Explain how an author uses evidence to support his or her claims in a text"). b. Apply *grade 4 reading standards* to literature (e.g., "Describe in detail a character, event, or setting, drawing on specific details in the text (e.g., from a character's thoughts, words, deeds, and interactions with others").	**9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned: a. Apply *grade 5 reading standards* to informational texts (e.g., "Explain how an author uses evidence to support his or her claims in a text, identifying what evidence supports which claim(s)"). b. Apply *grade 5 reading standards* to literature (e.g., "Compare and contrast two or more characters, events, or settings in a text, drawing on specific details").
Range of Writing		
10. (Begins in grade 4)	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Appendix B.9

College and Career Readiness Standards for Speaking and Listening

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

Comprehension and Collaboration

1. Participate effectively in a range of interactions (one-on-one and in groups), exchanging information to advance a discussion and to build on the input of others.
2. Integrate and evaluate information from multiple oral, visual, or multimodal sources in order to answer questions, solve problems, or build knowledge.
3. Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, evidence, and reasoning in a clear and well-structured way appropriate to purpose and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To build a foundation for college and career readiness, students must have ample opportunities to take part in a variety of rich, structured conversations—whole class, small group, and with a partner. Being productive members of these conversations requires that students contribute accurate, relevant information; respond to and develop what others have said; make comparisons and contrasts; and analyze and synthesize a multitude of ideas in various domains.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. Digital texts confront students with the potential for continually updated content and dynamically changing combinations of words, graphics, images, hyperlinks, and embedded video and audio.

Speaking and Listening Standards K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

Kindergartners:	Grade 1 students:	Grade 2 students:
Comprehension and Collaboration		
1. Participate in conversations with peers and adults about *kindergarten topics and texts* being studied in class. a. Listen to others and take turns speaking. b. Continue a conversation through several exchanges.	**1.** Initiate and participate in conversations with peers and adults about *grade 1 topics and texts* being studied in class. a. Follow agreed-upon rules for discussions, such as listening to others, speaking one at a time, and gaining the floor in respectful ways. b. Respond to the comments of others through multiple exchanges. c. Ask questions to clear up confusion about a topic.	**1.** Engage in group discussions on *grade 2 topics and texts* being studied in class. a. Follow agreed-upon rules for discussions, such as listening to others, speaking one at a time, and gaining the floor in respectful ways. b. Stay on topic by linking their own additions to the conversation to the previous remarks of others. c. Ask for clarification and further explanation as needed. d. Extend their ideas and understanding in light of the discussions.
2. Confirm understanding of information presented orally or through media by asking and answering questions about key details.	**2.** Confirm understanding of information presented orally or through media by restating key elements and asking and answering questions about key details.	**2.** Retell key details or ideas presented orally or through media.
3. Ask questions to get information, seek help, or clarify something that is not understood.	**3.** Ask questions to get information, clarify something that is not understood, or gather additional information.	**3.** Ask and answer questions about information presented orally or visually in order to deepen their understanding or clarify comprehension.
Presentation of Knowledge and Ideas		
4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.	**4.** Describe familiar people, places, things, and events with relevant details, expressing ideas and feelings clearly.	**4.** Recount stories or experiences with appropriate facts and descriptive details.
5. (Begins in grade 4)	**5.** (Begins in grade 4)	**5.** (Begins in grade 4)
6. (Begins in grade 1)	**6.** Produce complete sentences when appropriate to task and situation, using correct verb tenses to convey a sense of past, present, and future. (See "Conventions" in Language, pages 22–26, for specific demands.)	**6.** Produce complete sentences when appropriate to task and situation to provide requested detail or clarification, ensuring subject-verb agreement and correct use of irregular plural nouns. (See "Conventions" in Language, pages 22–26, for specific demands.)

Speaking and Listening Standards K–5

Grade 3 students:	Grade 4 students:	Grade 5 students:
Comprehension and Collaboration		
1. Initiate and engage in group discussions on *grade 3 topics and texts* being studied in class. a. Follow agreed-upon rules for discussions and carry out assigned roles in small-group discussions. b. Pose relevant questions and link their own additions to the conversation to the previous remarks of others. c. Extend their ideas and understanding in light of the discussions.	**1.** Initiate and engage in group discussions on *grade 4 topics and texts* being studied in class. a. Come to discussions prepared, having read required material; in discussions, explicitly draw on that material and other information known about the topic. b. Pose and respond to questions as well as build on the ideas of previous speakers. c. Acknowledge new information provided by others and incorporate it into their own thinking as appropriate.	**1.** Initiate and engage in group discussions on *grade 5 topics and texts* being studied in class. a. Come to discussions prepared, having read the required material; in discussions, explicitly draw on that material and other information known about the topic. b. Respond to questions with elaboration, make comments that contribute to the topic, and build on the ideas of previous speakers. c. Ask questions to clarify or follow up on ideas or information presented orally or through media. d. Draw conclusions based on the ideas of others and incorporate them into their own thinking as appropriate.
2. Identify the main ideas and supporting details of information presented graphically, visually, orally, or multimodally.	**2.** Paraphrase the key information or ideas presented graphically, visually, orally, or multimodally.	**2.** Summarize the key ideas and supporting details presented graphically, visually, orally, or multimodally.
3. Ask and answer questions about presentations, offering appropriate elaboration and detail.	**3.** Identify the claims and supporting evidence used by a speaker or a presenter.	**3.** Summarize the claims made by a speaker or presenter and explain how each claim is supported with evidence.
Presentation of Knowledge and Ideas		
4. Report on a topic or recount stories or experiences with appropriate facts and descriptive details.	**4.** Report on events, topics, or texts in an organized manner, using appropriate, specific facts and descriptive details to support main ideas.	**4.** Report on events, topics, or texts in a focused, organized manner, sequencing ideas logically and using appropriate, specific facts, details, examples, or other information to develop main ideas.
5. (Begins in grade 4)	**5.** Incorporate visual displays and digital media into presentations when appropriate.	**5.** Incorporate visual displays and digital media into presentations when appropriate.
6. Speak coherently, employing a variety of tenses and ensuring subject-verb and pronoun-antecedent agreement. (See "Conventions" in Language, pages 22–26, for specific demands.)	**6.** Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion); use formal English when appropriate to task and situation. (See "Conventions" in Language, pages 22–26, for specific demands.)	**6.** Adapt speech to a variety of contexts and communicative tasks, using formal English when appropriate to task and situation. (See "Conventions" in Language, pages 22–26, for specific demands.)

College and Career Readiness Standards for Language

The K–5 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

Conventions in Writing and Speaking

1. Demonstrate a command of the conventions of standard English grammar and usage.
2. Demonstrate a command of the conventions of capitalization, punctuation, and spelling.
3. Make effective choices about language, punctuation, and sentence structure for meaning and style.

Vocabulary Acquisition and Use

4. Determine the meaning of words and phrases encountered through conversations, reading, and media use.
5. Understand the nuances of and relationships among words.
6. Use grade-appropriate general academic vocabulary and domain-specific words and phrases purposefully acquired as well as gained through conversation and reading and responding to texts.

Note on range and content of student language use

To build a foundation for college and career readiness in language, students must gain control over many conventions of writing and speaking as well as acquire new words and understand those that they encounter through listening, reading, and media use. They must be able to determine the meaning of grade-appropriate words, come to appreciate that words have shadings of meaning and relationships to other words, and expand their vocabulary through conversation and (especially in later grades) through reading and by being taught words directly in the course of studying subject matter. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are

Language Standards K–5

Following are the standards for K–5, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

Kindergartners:	Grade 1 students:	Grade 2 students:
Conventions in Writing and Speaking		
1. Observe conventions of grammar and usage. a. Print most upper- and lowercase letters. b. Write a letter or letters for most consonant and short-vowel sounds (phonemes). c. Form regular plural nouns orally by adding /s/ or /es/ (e.g., *dog*, *dogs*; *wish*, *wishes*) when speaking. d. Understand and use the most frequently occurring prepositions in English (e.g., *to/from*, *in/out*, *on/off*, *for*, *of*, *by*, *with*) when speaking. e. Produce and expand complete sentences in shared language and writing activities. f. Understand and use question words (e.g., *who*, *what*, *where*, *when*, *why*, *how*) in discussions.	**1.** Observe conventions of grammar and usage. a. Print all upper- and lowercase letters. b. Use singular and plural nouns with matching verbs in simple sentences (e.g., *He hops*; *We hop*). c. Use subject, object, and possessive pronouns in speaking and writing (e.g., *I*, *me*, *my*; *they*, *them*, *their*). d. Use verbs to convey a sense of past, present, and future in writing and speaking (e.g., *Yesterday I walked home*; *Today I walk home*; *Tomorrow I will walk home*). e. Understand and use frequently occurring prepositions in English (e.g., *during*, *beyond*, *toward*). f. Produce and expand complete declarative, interrogative, imperative, and exclamatory sentences in response to questions and prompts. g. Understand that, minimally, every sentence must be about something (the subject) and tell something (the predicate) about its subject.	**1.** Observe conventions of grammar and usage. a. Form common irregular plural nouns (e.g., *feet*, *children*, *teeth*, *mice*, *fish*). b. Form the past tense of common irregular verbs (e.g., *sat*, *hid*, *told*). c. Produce and expand complete declarative, interrogative, imperative, and exclamatory sentences. d. Produce and expand complete sentences to provide requested detail or clarification.
2. Observe conventions of capitalization, punctuation, and spelling. a. Capitalize the first word in a sentence and the pronoun *I*. b. Name and identify end punctuation, including periods, question marks, and exclamation points. c. Spell simple words phonetically using knowledge of sound-letter relationships.	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Capitalize names, places, and dates. b. Use end punctuation for sentences, including periods, question marks, and exclamation points. c. Use commas in dates and to separate single words in a series. d. Use conventional spelling for words with common spelling patterns and for common irregular words. e. Use phonetic spellings for untaught words, drawing on phonemic awareness and spelling conventions. f. Form new words through addition, deletion, and substitution of sound and letters (e.g., *an* → *man* → *mat* → *mast* → *must* → *rust* → *crust*).	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Capitalize holidays, product names, geographic names, and important words in titles. b. Use commas in greetings and closings of letters. c. Use apostrophes to form contractions and common possessives. d. Generalize learned spelling patterns when writing words (e.g., *cage* → *badge*; *boy* → *boil*; *paper* → *copper*). e. Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.
3. (Begins in grade 3)	**3.** (Begins in grade 3)	**3.** (Begins in grade 3)

Language Standards K–5

Kindergartners:	Grade 1 students:	Grade 2 students:
Vocabulary Acquisition and Use		
4. Determine word meanings (*based on kindergarten reading*). a. Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent. b. Identify new meanings for familiar words and apply them accurately (e.g., knowing *duck* as a bird and learning the verb *to duck*). c. Use the most common affixes in English (e.g., *-ed*, *-s*, *re-*, *un-*, *pre-*, *-ful*, *-less*) as a clue to the meaning of an unknown word.	**4.** Determine word meanings (*based on grade 1 reading*). a. Sort words into categories (e.g., colors, clothing) to gain a sense of the concepts the categories represent. b. Use sentence-level context as a clue to the meaning of an unknown word. c. Use common affixes in English as a clue to the meaning of an unknown word. d. Define words by category and by one or more key attributes (e.g., a *duck* is a bird that swims; a *tiger* is a large cat with stripes). e. Demonstrate understanding of the concept of multiple-meaning words (e.g., *match*, *kind*, *play*) by identifying meanings of some grade-appropriate examples of such words.	**4.** Determine word meanings (*based on grade 2 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as understanding how the word is used in a sentence; analyzing the word's sounds, spelling, and meaningful parts; and consulting glossaries or beginning dictionaries, both print and digital. b. Explain the meaning of grade-appropriate compound words (e.g., *birdhouse*, *lighthouse*, *housefly*; *bookshelf*, *notebook*, *bookmark*). c. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *addition*, *additional*). d. Determine the meaning of the new word formed when a known prefix is added to a known word (e.g., *happy/unhappy*, *tell/retell*).
5. Understand word relationships. a. Build real-life connections between words and their use (e.g., note places at school that are *colorful*). b. Distinguish shades of meaning among verbs describing the same general action (e.g., *walk*, *march*, *strut*, *prance*) by acting out the meanings. c. Use common adjectives to distinguish objects (e.g., the *small blue* square; the *shy white* rabbit). d. Demonstrate understanding of common verbs and adjectives by relating them to their opposites (antonyms).	**5.** Understand word relationships. a. Build real-life connections between words and their use (e.g., note places at home that are *cozy*). b. Distinguish shades of meaning among verbs differing in manner (e.g., *look*, *peek*, *glance*, *stare*, *glare*, *scowl*) and adjectives differing in intensity (e.g., *large*, *gigantic*) by defining, choosing, or acting out the meanings.	**5.** Understand word relationships. a. Build real-life connections between words and their use (e.g., describe foods that are *spicy* or *juicy*). b. Distinguish shades of meaning among related verbs (e.g., *toss*, *throw*, *hurl*) and related adjectives (e.g., *thin*, *slender*, *skinny*, *scrawny*).
6. Use newly learned words acquired through conversations, reading, and responding to texts.	**6.** Use newly learned words acquired through conversations, reading, and responding to texts.	**6.** Use newly learned words acquired through conversations, reading, and responding to texts.

Language Standards K–5

Grade 3 students:	**Grade 4 students:**	**Grade 5 students:**
Conventions in Writing and Speaking		
1. Observe conventions of grammar and usage. a. Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in general and their functions in specific sentences. b. Form and use the simple (e.g., *I walked*, *I walk*, *I will walk*) verb tenses. c. Ensure subject-verb and pronoun-antecedent agreement.* d. Produce simple, compound, and complex sentences.	**1.** Observe conventions of grammar and usage. a. Form and use the progressive (e.g., *I was walking*, *I am walking*, *I will be walking*) verb aspects. b. Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences.* c. Produce complete sentences, avoiding rhetorically poor fragments and run-ons.* d. Correctly use frequently confused words (e.g., *to*, *too*, *two*; *there*, *their*).*	**1.** Observe conventions of grammar and usage. a. Form and use the perfect (e.g., *I had walked*, *I have walked*, *I will have walked*) verb aspects. b. Recognize and correct inappropriate shifts in verb tense and aspect.*
2. Observe conventions of capitalization, punctuation, and spelling. a. Use correct capitalization. b. Use quotation marks in dialogue. c. Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., *sitting*, *smiled*, *cries*, *happiness*). d. Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words. e. Consult reference materials, including dictionaries, as needed to check and correct spellings.	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Use quotation marks to mark direct speech and quotations from a text. b. Spell grade-appropriate words correctly, consulting references as needed.	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Use punctuation to separate items in a series.* b. Use a comma to separate an introductory element from the rest of the sentence. c. Use underlining, quotation marks, or italics to indicate titles of works. d. Spell grade-appropriate words correctly, consulting references as needed.
3. Make effective language choices. a. Use words for effect.*	**3.** Make effective language choices. a. Use punctuation for effect.* b. Maintain consistency in style and tone.* c. Choose words and phrases to convey ideas precisely.*	**3.** Make effective language choices. a. Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.*

* Conventions standards noted with an asterisk (*) need to be revisited by students in subsequent grades as their writing and speaking grows in sophistication. See chart on page 27 for a complete listing.

Language Standards K–5

Grade 3 students:	Grade 4 students:	Grade 5 students:
Vocabulary Acquisition and Use		
4. Determine word meanings (*based on grade 3 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as understanding how the word is used in a sentence; analyzing the word's sounds, spelling, and meaningful parts; and consulting glossaries or beginning dictionaries, both print and digital. b. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *company*, *companion*). c. Determine the meaning of the new word formed when a known affix is added to a known word (e.g., *agreeable/disagreeable*, *comfortable/uncomfortable*, *care/careless*, *heat/preheat*). d. Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., *take steps*).	**4.** Determine word meanings (*based on grade 4 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., definitions, examples, or restatements in text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital. b. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *telegraph*, *photograph*, *autograph*). c. Explain the meaning of simple similes and metaphors (e.g., *as pretty as a picture*). d. Paraphrase common idioms, adages, and proverbs.	**4.** Determine word meanings (*based on grade 5 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., definitions, examples, or restatements in text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital. b. Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., *photograph*, *photosynthesis*). c. Interpret figurative language, including similes and metaphors. d. Explain the meaning of common idioms, adages, and proverbs.
5. Understand word relationships. a. Build real-life connections between words and their use (e.g., describe people who are *friendly* or *helpful*). b. Distinguish among related words that describe states of mind or degrees of certainty (e.g., *knew*, *believed*, *suspected*, *heard*, *wondered*).	**5.** Understand word relationships. a. Build real-life connections between words and their various uses and meanings. b. Define relationships between words (e.g., how *ask* is like and unlike *demand*; what items are likely to be *enormous*). c. Distinguish a word from other words with similar but not identical meanings (synonyms).	**5.** Understand word relationships. a. Build real-life connections between words and their various uses and meanings. b. Define relationships between words (e.g., how *smirk* is like and unlike *smile*; what items are likely to be *vast*). c. Distinguish a word from other words with similar but not identical meanings (synonyms).
6. Use words that are in common, conversational vocabulary as well as grade-appropriate academic vocabulary and domain-specific words (in English language arts, history/social studies, and science) taught directly and acquired through reading and responding to texts.	**6.** Use grade-appropriate general academic vocabulary and domain-specific words and phrases (in English language arts, history/social studies, and science) taught directly and acquired through reading and responding to texts.	**6.** Use grade-appropriate general academic vocabulary and domain-specific words and phrases (in English language arts, history/social studies, and science) taught directly and acquired through reading and responding to texts.

English Language Arts Conventions Progressive Skills, By Standard

The following, marked with an asterisk (*) in the Conventions standards, are skills and understandings that require continued attention in higher grades (after their introduction in the grade listed below) as they are applied to increasingly sophisticated writing and speaking.

Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grades 9–10
1c. Ensure subject-verb and pronoun-antecedent agreement. **3a.** Choose words for effect.						
	1b. Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences. **1c.** Produce complete sentences, avoiding rhetorically poor fragments and run-ons. **1d.** Correctly use frequently confused words (e.g., *effect/affect*, *to/too/two*). **3a.** Use punctuation for effect. **3b.** Maintain consistency in style and tone. **3c.** Choose words and phrases to convey ideas precisely.					
		1b. Recognize and correct inappropriate shifts in verb tense and aspect. **2a.** Use punctuation to separate items in a series. **3a.** Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.				
			1b. Recognize and correct inappropriate shifts in pronoun number and person. **1c.** Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). **2a.** Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements. **3a.** Vary sentence patterns for meaning, reader/listener interest, and style.			
				1c. Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers. **3b.** Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy.		
					1c. Recognize and correct inappropriate shifts in verb voice and mood.	
						1a. Use parallel structure in writing.

* Read-aloud
** Read-along

Texts Illustrating the Complexity, Quality, and Range of Student Reading K–5

	Literature: Stories, Drama, Poetry	Informational Texts: Literary Nonfiction, History/Social Studies, Science/Technical Texts
K[1]	▪ *Over in the Meadow* by John Langstaff (traditional) (c1800)* ▪ *A Boy, a Dog, and a Frog* by Mercer Mayer (1967) ▪ *Pancakes for Breakfast* by Tomie DePaola (1978) ▪ *A Story A Story* by Gail E. Haley (1970)* ▪ *Kitten's First Full Moon* by Kevin Henkes (2004)*	▪ *My Five Senses* by Aliki (1962)* ▪ *Truck* by Donald Crews (1980) ▪ *I Read Signs* by Tana Hoban (1987) ▪ *What Do You Do With a Tail Like This?* by Steve Jenkins & Robin Page (2003)* ▪ *Amazing Whales!* by Sarah L. Thomson (2005)*
1[1]	▪ "Mix a Pancake" by Christina G. Rossetti (1893)** ▪ *Mr. Popper's Penguins* by Richard Atwater (1938)* ▪ *Little Bear* by Else Holmelund Minarik, illustrated by Maurice Sendak (1957)** ▪ *Frog and Toad Together* by Arnold Lobel (1971)** ▪ *Hi! Fly Guy* by Tedd Arnold (2006)	▪ *A Tree Is a Plant* by Clyde Robert Bulla, illustrated by Stacey Schuett (1960)** ▪ *My Five Senses* by Aliki (1962)** ▪ *Follow the Water from Brook to Ocean* by Arthur Dorros (1991)** ▪ *From Seed to Pumpkin* by Wendy Pfeffer, illustrated by James Graham Hale (2004)* ▪ *How People Learned to Fly* by Fran Hodgkins and True Kelley (2007)*
2–3	▪ "Who Has Seen the Wind?" by Christina G. Rossetti (1893) ▪ *Charlotte's Web* by E. B. White (1952)* ▪ *Sarah, Plain and Tall* by Patricia MacLachlan (1985) ▪ *Tops and Bottoms* by Janet Stevens (1995) ▪ *Poppleton in Winter* by Cynthia Rylant, illustrated by Mark Teague (2001)	▪ *A Medieval Feast* by Aliki (1983) ▪ *From Seed to Plant* by Gail Gibbons (1991) ▪ *The Story of Ruby Bridges* by Robert Coles (1995)* ▪ *A Drop of Water: A Book of Science and Wonder* by Walter Wick (1997) ▪ *Moonshot: The Flight of Apollo 11* by Brian Floca (2009)
4–5	▪ *Alice's Adventures in Wonderland* by Lewis Carroll (1865) ▪ "Casey at the Bat" by Ernest Lawrence Thayer (1888) ▪ *The Black Stallion* by Walter Farley (1941) ▪ "Zlateh the Goat" by Isaac Bashevis Singer (1984) ▪ *Bud, Not Buddy* by Christopher Paul Curtis (1999) ▪ *The Birchbark House* by Louise Erdrich (1999) ▪ *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) ▪ *A History of US* by Joy Hakim (2005) ▪ *Horses* by Seymour Simon (2006) ▪ *Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea* by Sy Montgomery (2006)

Note: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a wide range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of K 5 text complexity.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study that topic in depth. On the next page is an example of progressions of texts building knowledge across grade levels.

[1]Children at the kindergarten and grade 1 levels should be expected to read texts independently that have been specifically written to correlate to their reading level and their word knowledge. Many of the titles listed above are meant to supplement carefully structured independent reading with books to read along with a teacher or that are read aloud to students to build knowledge and cultivate a joy in reading.

Staying on Topic Within a Grade and Across Grades: How to Build Knowledge Systematically in English Language Arts K–5

Building knowledge systematically in English language arts is like giving children various pieces of a puzzle in each grade that, over time, will form one big picture. At a curricular or instructional level, texts—within and across grade levels—need to be selected around topics or themes that systematically develop the knowledge base of students. Within a grade level, there should be an adequate number of titles on a single topic that would allow children to study that topic for a sustained period. The knowledge children have learned about particular topics in early grade levels should then be expanded and developed in subsequent grade levels to ensure an increasingly deeper understanding of these topics. Children in the upper elementary grades will generally be expected to read these texts independently and reflect on them in writing. However, children in the early grades (particularly K–2) should participate in rich, structured conversations with an adult in response to the written texts that are read aloud, *orally* comparing and contrasting as well as analyzing and synthesizing, in the manner called for by the *Standards*.

Preparation for reading complex informational texts should begin at the very earliest elementary school grades. What follows is one example that uses domain-specific nonfiction titles across grade levels to illustrate how curriculum designers and classroom teachers can infuse the English language arts block with rich, age-appropriate content knowledge and vocabulary in history/social studies, science, and the arts. Having students listen to informational read-alouds in the early grades helps lay the necessary foundation for students' reading and understanding of increasingly complex texts on their own in subsequent grades.

Exemplar Texts on a Topic Across Grades	K	1	2–3	4–5
The Human Body Students can begin learning about the human body starting in kindergarten and then review and extend their learning during each subsequent grade.	The five senses and associated body parts ▪ *My Five Senses* by Aliki (1989) ▪ *Hearing* by Maria Rius (1985) ▪ *Sight* by Maria Rius (1985) ▪ *Smell* by Maria Rius (1985) ▪ *Taste* by Maria Rius (1985) ▪ *Touch* by Maria Rius (1985) Taking care of your body: Overview (hygiene, diet, exercise, rest) ▪ *My Amazing Body: A First Look at Health & Fitness* by Pat Thomas (2001) ▪ *Get Up and Go!* by Nancy Carlson (2008) ▪ *Go Wash Up* by Doering Tourville (2008) ▪ *Sleep* by Paul Showers (1997) ▪ *Fuel the Body* by Doering Tourville (2008)	Introduction to the systems of the human body and associated body parts ▪ *Under Your Skin: Your Amazing Body* by Mick Manning (2007) ▪ *Me and My Amazing Body* by Joan Sweeney (1999) ▪ *The Human Body* by Gallimard Jeunesse (2007) ▪ *The Busy Body Book* by Lizzy Rockwell (2008) ▪ *First Encyclopedia of the Human Body* by Fiona Chandler (2004) Taking care of your body: Germs, diseases, and preventing illness ▪ *Germs Make Me Sick* by Marilyn Berger (1995) ▪ *Tiny Life on Your Body* by Christine Taylor-Butler (2005) ▪ *Germ Stories* by Arthur Kornberg (2007) ▪ *All About Scabs* by GenichiroYagu (1998)	Digestive and excretory systems ▪ *What Happens to a Hamburger* by Paul Showers (1985) ▪ *The Digestive System* by Christine Taylor-Butler (2008) ▪ *The Digestive System* by Rebecca L. Johnson (2006) ▪ *The Digestive System* by Kristin Petrie (2007) Taking care of your body: healthy eating and nutrition ▪ *Good Enough to Eat* by Lizzy Rockwell (1999) ▪ *Showdown at the Food Pyramid* by Rex Barron (2004) Muscular, skeletal, and nervous systems ▪ *The Mighty Muscular and Skeletal Systems* Crabtree Publishing (2009) ▪ *Muscles* by Seymour Simon (1998) ▪ *Bones* by Seymour Simon (1998) ▪ *The Astounding Nervous System* Crabtree Publishing (2009) ▪ *The Nervous System* by Joelle Riley (2004)	Circulatory system ▪ *The Heart* by Seymour Simon (2006) ▪ *The Heart and Circulation* by Carol Ballard (2005) ▪ *The Circulatory System* by Kristin Petrie (2007) ▪ *The Amazing Circulatory System* by John Burstein (2009) Respiratory system ▪ *The Lungs* by Seymour Simon (2007) ▪ *The Respiratory System* by Susan Glass (2004) ▪ *The Respiratory System* by Kristin Petrie (2007) ▪ *The Remarkable Respiratory System* by John Burstein (2009) Endocrine system ▪ *The Endocrine System* by Rebecca Olien (2006) ▪ *The Exciting Endocrine System* by John Burstein (2009)

Appendix B.9

Standards for English Language Arts

6–12

College and Career Readiness Standards for Reading

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze in detail where, when, why, and how events, ideas, and characters develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section or chapter) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Synthesize and apply information presented in diverse ways (e.g., through words, images, graphs, and video) in print and digital sources in order to answer questions, solve problems, or compare modes of presentation.[1]
8. Delineate and evaluate the reasoning and rhetoric within a text, including assessing whether the evidence provided is relevant and sufficient to support the text's claims.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range and Level of Text Complexity

10. Read complex texts independently, proficiently, and fluently, sustaining concentration, monitoring comprehension, and, when useful, rereading.[2]

[1]Please see "Research to Build Knowledge" in Writing and "Comprehension and Collaboration" in Speaking and Listening for additional standards relevant to gathering, assessing, and applying information from print and digital sources.
[2]Proficiency in this standard is measured by students' ability to read a range of appropriately complex text in each grade as defined on page 36.

Note on range and content of student reading

To become college and career ready, students must grapple with works of exceptional craft and thought whose range extends across genres, cultures, and centuries. Such works offer profound insights into the human condition and serve as models for students' own thinking and writing. Along with high-quality contemporary works, these texts should be chosen from among the founding U.S. documents, the classics of American literature, and the timeless dramas of Shakespeare. Through wide and deep reading of literature and literary nonfiction of steadily increasing sophistication, students gain a reservoir of literary and cultural knowledge, references, and images; the ability to evaluate intricate arguments; and the capacity to surmount the challenges posed by complex texts.

Reading Standards for Literature 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction each year and help ensure that students gain adequate exposure to a range of texts and tasks. Rigor is also infused through the requirement that students read increasingly complex texts through the grades.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite several sources of textual evidence when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite a wide range of evidence throughout the text when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Analyze how a theme or central idea develops over the course of a text, drawing on key details.	**2.** Analyze how two or more themes or central ideas in a text relate to one another, drawing on key details.	**2.** Analyze how recurring images or events contribute to the development of a theme or central idea in a text.
3. Describe how a story's plot unfolds (in a series of episodes or as a problem to be solved) as well as how characters adapt or change as they move toward a resolution.	**3.** Analyze how particular lines of dialogue or specific incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.	**3.** Analyze how elements of a story or drama interact (e.g., how plot and setting are integral to one another; how the setting affects characters).
Craft and Structure		
4. Interpret the figurative and connotative meanings of words and phrases as they are used in a text.	**4.** Interpret the figurative and connotative meanings of words and phrases as they are used in a text and describe in detail a specific word choice and its impact on meaning and tone.	**4.** Explain the comparisons an author makes through metaphors, allusions, or analogies in a text and analyze how those comparisons contribute to meaning.
5. Explain the effect of such devices as flashbacks and foreshadowing on the development of the plot and meaning of a text.	**5.** Describe how any given sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the plot or themes.	**5.** Compare a poem with a conventional structure, such as a sonnet, to a poem without a proscribed structure, such as a free verse poem.
6. Describe how an author establishes the point of view of the speaker or a character in a poem, drama, or story.	**6.** Analyze how an author presents the points of view of different characters in a story or drama, including their different reactions to the same person or event(s).	**6.** Explain how a difference in the perspective or knowledge of characters and the audience (e.g., created through the device of dramatic irony) produces suspense or humor.
Integration of Knowledge and Ideas		
7. Analyze how illustrations, diagrams, multimedia elements, and words contribute to the meaning and tone of a print or digital text (e.g., graphic novel, multimedia presentation of fiction).	**7.** Compare and contrast a text to its filmed, staged, or multimedia version, including examining some techniques unique to each medium (e.g., lighting, sound, color, camera focus and angles).	**7.** Analyze to what degree a filmed or live production of a drama or story stays faithful to or departs from the script or text.
8. (Not applicable to literature)	**8.** (Not applicable to literature)	**8.** (Not applicable to literature)
9. Analyze stories in the same genre (e.g., mysteries, adventure stories), comparing and contrasting their approaches to similar themes and topics.	**9.** Analyze a specific case in which a modern work of fiction draws on patterns of events or character types found in traditional literature (e.g., the hero, the quest).	**9.** Compare a fictional portrayal of a time, place, or character to historical sources from the same period as a means of understanding how authors use or alter history.
Range and Level of Text Complexity		
10. Read literature independently, proficiently, and fluently in the grades 6–8 text complexity band; read texts at the high end of the range with scaffolding as needed.	**10.** Read literature independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed.	**10.** Read literature independently, proficiently, and fluently in the grades 6–8 text complexity band; engage in sustained practice with "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed.

Appendix B 9

Reading Standards for Literature 6–12

	Grades 9–10 students:		Grades 11–12 students:
Key Ideas and Details			
1.	Cite the evidence in the text that most strongly supports a specific analysis of what the text says explicitly as well as inferences drawn from the text.	**1.**	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves things uncertain.
2.	Analyze in detail the development and refinement of a theme or central idea in a text, including how it emerges and how it is shaped and refined by specific details.	**2.**	Analyze how multiple themes or central ideas in a text interact, build on, and, in some cases, conflict with one another.
3.	Analyze how complex characters, including those with conflicting motivations or divided loyalties, develop over the course of a text, interact with other characters, and advance the plot or develop the theme.	**3.**	Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).
Craft and Structure			
4.	Evaluate how an author's use of language, including formality of diction, shapes meaning and tone in a text (e.g., how the language evokes a sense of time and place, how it sets a formal or informal tone).	**4.**	Analyze in detail the condensed language of poems (or particularly rich language use in a narrative or drama), determining how specific word choices and multiple meanings shape the impact and tone.
5.	Analyze how an author structures a text, orders events within it (e.g., parallel plots), and manipulates time (e.g., pacing) to create mystery, tension, or surprise.	**5.**	Analyze how an author's choices concerning how to structure a text (e.g., electing at what point to begin or end a story) shape the meaning of the text.
6.	Analyze a case in which the author's work takes a position or stance on a social issue or other topic and describe how the author carries out that purpose.	**6.**	Analyze an author's use of satire, sarcasm, irony, understatement, or other means that requires a reader to understand various layers of meaning in a text.
Integration of Knowledge and Ideas			
7.	Compare and contrast the representation of a subject or a key scene in two different artistic mediums (e.g., Auden's "Musée de Beaux Arts" and Breughel's *Landscape with the Fall of Icarus*).	**7.**	Compare and contrast multiple interpretations of a drama or story (e.g., recorded or live productions), distinguishing how each version interprets the source text. (This includes at least one play by Shakespeare as well as one play by an American dramatist.)
8.	(Not applicable to literature)	**8.**	(Not applicable to literature)
9.	Analyze a wide range of nineteenth- and early-twentieth-century foundational works of American literature, comparing and contrasting approaches to similar ideas or themes in two or more texts from the same period.	**9.**	Analyze how an author draws on and transforms fictional source material in a specific work (e.g., how Shakespeare draws on a story from Ovid or how a later author draws on a play by Shakespeare).
Range and Level of Text Complexity			
10.	**In grade 9**, read literature independently, proficiently, and fluently in the grades 9–10 text complexity band; read texts at the high end of the range with scaffolding as needed. **In grade 10**, read literature independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts in the grades 11–CCR text complexity band with scaffolding as needed.	**10.**	**In grade 11**, read literature independently, proficiently, and fluently in the grades 11–CCR text complexity band; read texts at the high end of the range with scaffolding as needed. **In grade 12**, read literature independently, proficiently, and fluently in the grades 11–CCR text complexity band; read "stretch" texts in the Beyond CCR text complexity band with scaffolding as needed.

Reading Standards for Informational Text 6–12

Grade 6 students:	Grade 7 students:	Grade 8 students:
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite several sources of textual evidence when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite a wide range of evidence throughout the text when useful to support analysis of what the text says explicitly as well as inferences drawn from the text.
2. Analyze how a central idea develops over the course of a text, drawing on key details.	**2.** Analyze how two or more central ideas in a text relate to one another, drawing on key details.	**2.** Provide an objective summary of a text, accurately conveying an author's view and specific points.
3. Determine the causes or reasons that link different events, ideas, or information in a text, drawing on key details.	**3.** Describe in detail how an author introduces, illustrates, and elaborates a key idea in a text (e.g., through examples or anecdotes).	**3.** Analyze how an author introduces, illustrates, and elaborates two or more significant ideas in a text, including how the relationship between the ideas is expressed.
Craft and Structure		
4. Interpret words and phrases as they are used in a text, including technical, figurative, and connotative meanings, and analyze how an author's choice of specific words in a text contributes to understanding the ideas or concepts.	**4.** Interpret words and phrases as they are used in a text, including technical, figurative, and connotative meanings, and describe in detail how an author's choice of specific words affects meaning and tone.	**4.** Explain the comparisons an author makes through metaphors, allusions, and analogies in a text and analyze how those comparisons contribute to meaning.
5. Describe the structure an author uses to organize a specific text, including how the major sections contribute to the whole.	**5.** Describe how any given sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.	**5.** Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.
6. Compare and contrast one author's point of view on events with that of another (e.g., a memoir written by and a biography on the same person).	**6.** Describe an author's point of view or purpose in a text and analyze how the author distinguishes his or her point of view from that of others.	**6.** Compare and contrast the points of view and purposes of two authors writing about the same topic.
Integration of Knowledge and Ideas		
7. Compare and contrast the accounts of a subject in different mediums (e.g., a person's life story told in print, video, or multimedia), analyzing which details are emphasized and how the account unfolds in each version.	**7.** Compare and contrast the impression conveyed by a printed text to that conveyed when listening to or viewing a video or multimedia presentation of it (e.g., analyzing how the delivery of a speech affects its impact).	**7.** Evaluate the advantages and disadvantages of using different mediums (e.g., text, video, multimedia) to present a particular topic or idea.
8. Distinguish among fact, opinion, and reasoned judgment presented in a text.	**8.** Identify the stated and unstated premises of an argument and explain how they contribute to the conclusions reached.	**8.** Evaluate an argument's claims and reasoning as well as the degree to which evidence supports each claim.
9. Assess the similarities and differences between two or more texts on the same subject and apply the knowledge gained to inform reading of additional texts.	**9.** Analyze where two or more texts provide conflicting information on the same subject and determine whether the texts disagree on matters of fact or on matters of interpretation.	**9.** Compare and contrast how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.
Range and Level of Text Complexity		
10. Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read texts at the high end of the range with scaffolding as needed.	**10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed.	**10.** Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; engage in sustained practice with "stretch" texts in the grades 9–10 text complexity band with scaffolding as needed.

Reading Standards for Informational Text 6–12

Grades 9–10 students:	Grades 11–12 students:
Key Ideas and Details	
1. Cite evidence in the text that most strongly supports a specific analysis of what the text says explicitly as well as inferences drawn from the text.	**1.** Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves things uncertain.
2. Analyze in detail the development and refinement of a central idea in a text, including how it emerges and is shaped and refined by specific details.	**2.** Analyze how multiple ideas in a text interact, build on, and, in some cases, conflict with one another.
3. Analyze the interactions between and among ideas and events, including how ideas and events influence one another.	**3.** Analyze in detail an author's ideas by describing how the ideas are developed and refined by specific sentences, paragraphs, and larger portions of a text.
Craft and Structure	
4. Evaluate how an author's use of language, including formality and type of diction, shapes meaning and tone in a text (e.g., the formality of a court opinion or a newspaper).	**4.** Interpret how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines *faction* in Federalist No. 10 and No. 51).
5. Evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.	**5.** Analyze how an author's choices concerning how to structure a text (e.g., how reasons, evidence, and information are organized and emphasized) shape the meaning of the text.
6. Analyze documents of historical and literary significance, including foundational U.S. documents (e.g., the Declaration of Independence, the Preamble to the Constitution, the Bill of Rights) for their premises, purposes, and structure.	**6.** Analyze how various authors express different points of view on similar events or issues, assessing the authors' assumptions, use of evidence, and reasoning, including analyzing seminal U.S. documents (e.g., *The Federalist*, landmark U.S. Supreme Court majority opinions and dissents).
Integration of Knowledge and Ideas	
7. Synthesize information presented in different formats (e.g., text, video, mutimedia) to generate a coherent understanding of an issue.	**7.** Synthesize and apply multiple sources of information presented in different formats in order to address a question or solve a problem, including resolving conflicting information.
8. Assess the truth of an argument's explicit and implicit premises by determining whether the evidence presented in the text justifies the conclusions.	**8.** Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing the relevance and sufficiency of evidence and identifying false statements or fallacious reasoning.
9. Analyze how authors argue with or otherwise respond to one another's ideas or accounts of key events, evaluating the strength of each author's interpretation.	**9.** Synthesize explanations and arguments from diverse sources to provide a coherent account of events or ideas, including resolving conflicting information.
Range and Level of Text Complexity	
10. **In grade 9**, read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read texts at the high end of the range with scaffolding as needed. **In grade 10**, read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts in the grades 11–CCR text complexity band with scaffolding as needed.	**10.** **In grade 11**, read informational text independently, proficiently, and fluently in the grades 11–CCR text complexity band; read texts at the high end of the range with scaffolding as needed. **In grade 12**, read informational text independently, proficiently, and fluently in the grades 11–CCR text complexity band; read "stretch" texts in the Beyond CCR text complexity band with scaffolding as needed.

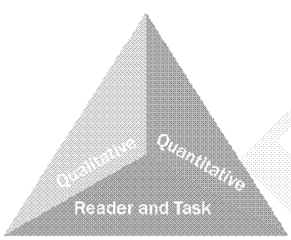
Range and Level of Text Complexity for Student Reading by Grade (Standard 10)

Students demonstrate proficiency in reading texts at the following ranges of text complexity to progress on a path to college and career readiness.

6	6–8 Level Text: 100%	**In grade 6**, students focus on reading texts independently in the grades 6–8 text complexity band, with scaffolding likely required for texts at the high end of the range.
7	6–8 Level Text: 90%; 9–10 Level Text: 10%	**In grade 7**, students focus on reading texts independently in the grades 6–8 text complexity band (90 percent) and are introduced to texts in the grades 9–10 text complexity band as “stretch” texts (10 percent), which will likely require scaffolding.
8	6–8 Level Text: 70%; 9–10 Level Text: 30%	**In grade 8**, students focus on reading texts independently in the grades 6–8 text complexity band (70 percent) as well as sustained practice with texts in the grades 9–10 text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.
9	9–10 Level Text: 100%	**In grade 9**, students focus on reading texts independently in the grades 9–10 text complexity band, with scaffolding likely required for texts at the high end of the range.
10	9–10 Level Text: 70%; 11–CCR Level Text: 30%	**In grade 10**, students focus on reading texts independently in the grades 9–10 text complexity band (70 percent) and are introduced to texts in the grades 11–CCR text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.
11	11–CCR Level Text: 100%	**In grade 11**, students focus on reading texts independently in the grades 11–CCR text complexity band, with scaffolding likely required for texts at the high end of the range.
12	11–CCR Level Text: 70%; Beyond CCR: 30%	**In grade 12**, students focus on reading texts independently in the grades 11–CCR text complexity band (70 percent) and are introduced to texts in the Beyond CCR text complexity band as “stretch” texts (30 percent), which will likely require scaffolding.

Note: In any given classroom, the actual range of students’ reading ability could be greater than the proposed range. Some students will require extra time and intense support and scaffolding to enable them to read grade-level material, whereas other students will be ready for—and should be encouraged to read—more advanced texts.

Measuring Text Complexity: Three Factors



Qualitative evaluation of the text: Levels of meaning, structure, language conventionality and clarity, and knowledge demands

Quantitative evaluation of the text: Readability measures and other scores of text complexity

Matching reader to text and task: Reader knowledge, motivation, and interests as well as the complexity generated by the tasks to be assigned and the questions to be posed

Note: More detailed information on text complexity and how it is measured is contained in Appendix A.

Appendix B.9

College and Career Readiness Standards for Writing

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the ten College and Career Readiness Standards.

Text Types and Purposes[1]

1. Write arguments to support a substantive claim with clear reasons and relevant and sufficient evidence.
2. Write informative/explanatory texts to convey complex information clearly and accurately through purposeful selection and organization of content.
3. Write narratives to convey real or imagined experiences, individuals, or events and how they develop over time.

Production and Distribution of Writing

4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.[2]
6. Use technology, including the Internet, to produce, publish, and interact with others about writing.

Research to Build Knowledge

7. Perform short, focused research projects as well as more sustained research in response to a focused research question, demonstrating understanding of the material under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate and cite the information while avoiding plagiarism.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.[3]

[1]These broad categories of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]See "Conventions" in Language, pages 47 50, for specific editing expectations.
[3]This standard is measured by the proficiency of student writing products.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline as well as the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

Writing Standards 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications. Growth in writing ability is characterized by an increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas. At the same time, the content and sources that students address in their writing grow in demand every year.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Text Types and Purposes		
1. Write arguments in which they: a. Introduce a claim about a topic or issue and organize the reasons and evidence to support the claim. b. Support the claim with clear reasons and relevant evidence. c. Use words, phrases, and clauses to convey the relationships among claims and reasons. d. Sustain an objective style and tone. e. Provide a concluding statement or section that follows from the argument.	**1.** Write arguments in which they: a. Introduce a claim about a topic or issue, acknowledge alternate or opposing claims, and organize the reasons and evidence logically to support the claim. b. Support the claim with logical reasoning and detailed, relevant evidence that demonstrate a comprehensive understanding of the topic. c. Use words, phrases, and clauses to convey the relationships among the claims, reasons, and evidence. d. Sustain an objective style and tone. e. Provide a concluding statement or section that follows logically from the argument.	**1.** Write arguments in which they: a. Introduce a claim about a topic or issue, distinguish it from alternate or opposing claims, and organize the reasons and evidence logically to support the claim. b. Support the claim with logical reasoning and detailed and relevant evidence from credible sources to demonstrate a comprehensive understanding of the topic. c. Use words, phrases, and clauses to make clear the relationships among claims, reasons, counterclaims, and evidence. d. Sustain an objective style and tone. e. Provide a concluding statement or section that follows logically from the argument.
2. Write informative/explanatory texts in which they: a. Introduce a topic and organize information appropriate to the purpose, using strategies such as definition, classification, comparison/contrast, and cause/effect. b. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate links and varied sentence structures to join and clarify ideas. d. Use straightforward language to create an objective style appropriate for a reader seeking information. e. Provide a conclusion that follows logically from the information or explanation presented.	**2.** Write informative/explanatory texts in which they: a. Introduce and establish a topic that provides a sense of what is to follow and organize information appropriate to the purpose, using strategies such as definition, classification, comparison/contrast, and cause/effect. b. Develop the topic with relevant and accurate facts, definitions, concrete details, quotations, or other information and examples. c. Use appropriate links and varied sentence structures to create cohesion and clarify ideas. d. Use precise language and sustain an objective style appropriate for a reader seeking information. e. Provide a conclusion that follows logically from the information or explanation presented.	**2.** Write informative/explanatory texts in which they: a. Introduce and establish a topic and organize information under broader concepts or categories. b. Develop the topic with well-chosen, relevant, and accurate facts, concrete details, quotations, or other information and examples. c. Use varied links and sentence structures to create cohesion and clarify information and ideas. d. Use precise language and domain-specific and technical wording (when appropriate) and sustain a formal, objective style appropriate for a reader seeking information. e. Provide a conclusion that follows logically from the information or explanation presented.

Writing Standards 6–12

Grade 6 students:	Grade 7 students:	Grade 8 students:
Text Types and Purposes (continued)		
3. Write narratives in which they: a. Engage and orient the reader by establishing a context and point of view, and organize a sequence of events or experiences. b. Develop narrative elements (e.g., setting, event sequence, characters) using relevant sensory details. c. Use a variety of transition words, phrases, and clauses to convey sequence, shift from one time frame or setting to another, and/or show the relationships among events and experiences. d. Choose words and phrases to develop the events, experiences, and ideas precisely. e. Provide a satisfying conclusion that follows from the events, experiences, or ideas.	**3.** Write narratives in which they: a. Engage and orient the reader by establishing a context and point of view, and purposefully organize a sequence of events or experiences. b. Develop narrative elements (e.g., setting, conflict, complex characters) with relevant and specific sensory details. c. Use a variety of techniques to convey sequence, shift from one time frame or setting to another, and/or show the relationships among events or experiences. d. Choose words and phrases to develop the events, experiences, and ideas precisely and to create mood. e. Provide a satisfying conclusion that follows from the events, experiences, or ideas.	**3.** Write narratives in which they: a. Engage and orient the reader by establishing a context and point of view, and purposefully organize a progression of events or experiences. b. Develop narrative elements (e.g., setting, plot, event sequence, complex characters) with well-chosen, relevant, and specific sensory details. c. Use a variety of techniques to convey sequence in multiple storylines, shift from one time frame or setting to another, and/or show the relationships among events or experiences. d. Choose words and phrases to effectively develop the events, experiences, and ideas precisely and to create mood. e. Provide a satisfying conclusion that follows from the events, experiences, or ideas.
Production and Distribution of Writing		
4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)	**4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)	**4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in Standards 1–3 above.)
5. With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.	**5.** With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach after rethinking how well questions of purpose have been addressed.	**5.** With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach after rethinking how well questions of purpose and context have been addressed.
6. Use technology, including the Internet, to produce, publish, and interact with others about writing, including linking to and citing online sources.	**6.** Use technology, including the Internet, to produce, publish, and interact with others about writing, including presenting and citing information in a digital format.	**6.** Use technology, including the Internet, to present and cite information effectively in a digital format, including when publishing and responding to writing.

Writing Standards 6–12

Grade 6 students:	Grade 7 students:	Grade 8 students:
Research to Build Knowledge		
7. Perform short, focused research projects in response to a question and refocus the inquiry in response to further research and investigation.	**7.** Perform short, focused research projects in response to a question and generate additional related and focused questions for further research and investigation.	**7.** Perform short, focused research projects in response to a question and generate additional related questions that allow for multiple avenues of exploration.
8. Gather relevant information from multiple print and digital sources, assess the credibility of each source, and quote or paraphrase the data and conclusions of others while avoiding plagiarism and documenting sources.	**8.** Gather relevant information from multiple print and digital sources using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others, avoiding plagiarism and following a standard format for citation.	**8.** Gather relevant information from multiple print and digital sources using advanced search features; assess the credibility and accuracy of each source; and quote or paraphrase the evidence, avoiding plagiarism and following a standard format for citation.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned. a. Apply *grade 6 reading standards* to literature (e.g., "Analyze stories in the same genre (e.g., mysteries, adventure stories), comparing and contrasting their approaches to similar themes and topics."). b. Apply *grade 6 reading standards* to literary nonfiction (e.g., "Distinguish among fact, opinion, and reasoned judgment presented in a text").	**9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned. a. Apply *grade 7 reading standards* to literature (e.g., "Analyze a specific case in which a modern work of fiction draws on patterns of events or character types found in traditional literature (e.g., the hero, the quest). b. Apply *grade 7 reading standards* to literary nonfiction (e.g., "Identify the stated and unstated premises of an argument and explain how they contribute to the conclusions reached").	**9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned: a. Apply *grade 8 reading standards* to literature (e.g., "Compare a fictional portrayal of a time, place, or character to historical sources from the same period as a means of understanding how authors use or alter history"). b. Apply *grade 8 reading standards* to literary nonfiction (e.g., "Evaluate an argument's claims and reasoning as well as the degree to which evidence supports each claim").
Range of Writing		
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Writing Standards 6–12

Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes	
1. Write arguments which they: a. Introduce a precise claim, distinguish it from alternate or opposing claims, and provide an organization that establishes clear relationships among the claim, reasons, and evidence. b. Develop a claim and counterclaim fairly, supplying evidence for each, while pointing out the strengths of their own claim and the weaknesses of the counterclaim. c. Use precise words, phrases, and clauses to make clear the relationships between claims and reasons, between reasons and evidence, and between claims and counterclaims. d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline as well as to the audience's knowledge of the issue. e. Provide a concluding statement or section that follows logically from the argument and offers a reflection or recommendation.	**1.** Write arguments in which they: a. Introduce a substantive claim, establish its significance, distinguish it from alternate or opposing claims, and create an organization so that claims, reasons, and evidence are purposefully and logically sequenced. b. Develop a claim and counterclaim thoroughly and fairly, supplying the most relevant evidence, while pointing out the strengths of their own claim and the weaknesses of the counterclaim. c. Use precise words, phrases, and complex syntax to make explicit the relationships between claims and reasons, between reasons and evidence, and between claims and counterclaims. d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline as well as to the audience's knowledge, values, and possible biases. e. Provide a concluding statement or section that follows logically from the argument and offers a reflection or recommendation.
2. Write informative/explanatory texts in which they: a. Introduce a topic and organize information under broader concepts and categories to make clear the connections and distinctions between key ideas appropriate to the purpose; include formatting (e.g., headings) and graphics (e.g., figures, tables) when useful to clarify ideas. b. Develop a complex topic through well-chosen, relevant, and sufficient facts, concrete details, quotations, extended definitions, or other information and examples. c. Use varied transitions and sentence structures to create cohesion, clarify information and ideas, and link major sections in the text. d. Use precise language and domain-specific and technical wording (when appropriate) to manage the complexity of the topic in a style that responds to the specific discipline and context as well as to the expertise of likely readers. e. Provide a conclusion that follows logically from the information or explanation provided and articulates the implications or significance of the topic.	**2.** Write informative/explanatory texts in which they: a. Introduce a complex topic and organize the information at multiple levels of the text so that each new piece of information builds on that which precedes it to create a unified whole; include formatting (e.g., headings) and graphics (e.g., figures, tables) when useful to clarify ideas. b. Thoroughly develop aspects of a complex topic through the purposeful selection of the most significant and relevant facts, concrete details, quotations, extended definitions, or other information and examples. c. Use varied transitional devices and sentence structures to create cohesion, clarify complex ideas, and link the major sections of the text. d. Use precise language, domain-specific and technical wording (when appropriate), and techniques such as metaphor, simile, and analogy to manage the complexity of the topic in a style that responds to the specific discipline and context as well as to the expertise of likely readers. e. Provide a well-developed conclusion that follows logically from the information or explanation provided and articulates the implications or significance of the topic.

Writing Standards 6–12

Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes (continued)	
3. Write narratives in which they: a. Engage the reader by establishing a problem, situation, or observation and purposefully organize a progression of events or experiences. b. Develop narrative elements (e.g., setting, event sequence, complex characters) with well-chosen, revealing details. c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole. d. Use precise language to develop a picture of how the events, experiences, and ideas emerge and unfold. e. Provide a satisfying conclusion that follows from what is experienced, observed, or resolved over the course of the narrative.	**3.** Write narratives in which they: a. Engage the reader by establishing the significance of a problem, situation, or observation and purposefully organize events or experiences. b. Develop narrative elements (e.g., setting, stance, event sequence, complex characters) with purposefully selected details that call readers' attention to what is most distinctive or worth noticing. c. Use a variety of techniques to build toward a particular impact (e.g., a sense of mystery, suspense, growth, or resolution). d. Use precise language to develop the events, experiences, and ideas clearly and to reinforce the style. e. Provide a satisfying conclusion that follows from what is experienced, observed, or resolved over the course of the narrative.
Production and Distribution of Writing	
4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for this standard are defined in Standards 1–3 above.)	**4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for this standard are defined in Standards 1–3 above.)
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific task and context.	**5.** Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
6. Use technology, including the Internet, to produce, publish, and collaborate on a shared writing product, incorporating diverse and sometimes conflicting feedback.	**6.** Demonstrate command of technology, including the Internet, to produce, publish, and update work in response to ongoing feedback, including fresh arguments or new information.
Research to Build Knowledge	
7. Perform short, focused research projects and more sustained research; synthesize multiple sources on a subject to answer a question or solve a problem.	**7.** Perform short, focused research projects and more sustained research; synthesize multiple authoritative sources on a subject to answer a question or solve a problem.
8. Assemble evidence gathered from authoritative print and digital sources; assess the credibility and accuracy of the information and its strengths and limitations in terms of answering the research question; and integrate selected information into the text, avoiding overreliance on any one source and following a standard format for citation.	**8.** Analyze evidence gathered from multiple authoritative print and digital sources; assess the credibility and accuracy of the information and its usefulness and relevance for the specific task, purpose, and audience; and integrate selected information into the text, following a standard format for citation.

Writing Standards 6–12

Grades 9–10 students:	Grades 11–12 students:
Research to Build Knowledge (continued)	
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned. a. Apply *grades 9–10 reading standards* to literature (e.g., "Analyze a wide range of nineteenth- and early-twentieth-century foundational works of American literature, comparing and contrasting approaches to similar ideas or themes in two or more texts from the same period."). b. Apply *grades 9–10 reading standards* to literary nonfiction (e.g., "Assess the truth of an argument's explicit and implicit premises by determining whether the evidence presented in the text justifies the conclusions").	**9.** Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned. a. Apply *grades 11–12 reading standards* to literature (e.g., "Analyze how an author draws on and transforms fictional source material, such as how Shakespeare draws on a story from Ovid, or a later author draws on Shakespeare"). b. Apply *grades 11–12 reading standards* to literary nonfiction (e.g., "Evaluate the reasoning and rhetoric that support an argument or explanation, including assessing the relevance and sufficiency of evidence and identifying false statements or fallacious reasoning").
Range of Writing	
10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

College and Career Readiness Standards for Speaking and Listening

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

Comprehension and Collaboration

1. Participate effectively in a range of interactions (one-on-one and in groups), exchanging information to advance a discussion and to build on the input of others.
2. Integrate and evaluate information from multiple oral, visual, or multimodal sources in order to answer questions, solve problems, or build knowledge.
3. Evaluate the speaker's point of view, reasoning, and use of evidence and rhetoric.

Presentation of Knowledge and Ideas

4. Present information, evidence, and reasoning in a clear and well-structured way appropriate to purpose and audience.
5. Make strategic use of digital media and visual displays of data to express information and enhance understanding.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate.

Note on range and content of student speaking and listening

To become college and career ready, students must have ample opportunities to take part in a variety of rich, structured conversations—whole class, small group, and with a partner—built around important content in various domains. They must be able to contribute appropriately to these conversations, to make comparisons and contrasts, and to analyze and synthesize a multitude of ideas in accordance with the standards of evidence appropriate to a particular discipline. Whatever their intended major or profession, high school graduates will depend heavily on their ability to listen attentively to others so that they are able to build on others' meritorious ideas while expressing their own clearly and persuasively.

New technologies have broadened and expanded the role that speaking and listening play in acquiring and sharing knowledge and have tightened their link to other forms of communication. The Internet has accelerated the speed at which connections between speaking, listening, reading, and writing can be made, requiring that students be ready to use these modalities nearly simultaneously. Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to change.

Speaking and Listening Standards 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Comprehension and Collaboration		
1. Initiate and engage actively in group discussions on *grade 6 topics, texts, and issues* being studied in class. a. Prepare for discussions by completing reading or conducting research and explicitly draw on that material in discussions. b. Cooperate with peers to set clear goals and deadlines. c. Build on the ideas of others by asking relevant questions and contributing appropriate and essential information. d. Review the key ideas expressed and extend their own thinking in light of new information learned.	**1.** Initiate and engage actively in group discussions on *grade 7 topics, texts, and issues* being studied in class. a. Prepare for discussions by completing reading or conducting research and explicitly draw on that material in discussions. b. Cooperate with peers to set clear goals and deadlines. c. Advance a discussion by asking questions, responding precisely, and sharing factual knowledge and observations. d. Ensure a hearing for the range of positions on an issue. e. Take the views of others into account and, when warranted, modify their own views in light of the evidence presented.	**1.** Initiate and engage actively in group discussions on *grade 8 topics, texts, and issues* being studied in class. a. Prepare for discussions by completing reading or conducting research and explicitly draw on that material in discussions. b. Cooperate with peers to set clear goals and deadlines. c. Advance a discussion by asking questions, responding precisely, and sharing factual knowledge and observations supported by credible evidence. d. Ensure a hearing for the range of positions on an issue. e. Qualify or justify, when warranted, their own thinking after listening to others' questions or accounts of the evidence.
2. Interpret information presented in visual or multimodal formats and explain how the information clarifies and contributes to a topic or issue under study.	**2.** Determine the main ideas and supporting elements presented in oral, visual, or multimodal formats and explain how the information clarifies and contributes to an understanding of a topic or issue under study.	**2.** Determine the purpose of and perspectives represented in oral, visual, or multimodal formats and evaluate whether the information is laden with social, commercial, or political motives.
3. Delineate the claims made by a speaker or presenter and detail what evidence supports which claims.	**3.** Evaluate a speaker's or presenter's reasoning and claims as well as the degree to which each claim is logically supported by the evidence provided.	**3.** Assess the truth of a speaker's or presenter's premises and the validity of his or her conclusions.
Presentation of Knowledge and Ideas		
4. Present information, emphasizing salient points with pertinent descriptions and details and using appropriate eye contact, adequate volume, and clear pronunciation.	**4.** Present claims and findings with relevant and specific descriptions, facts, and examples, and use appropriate eye contact, adequate volume, and clear pronunciation.	**4.** Present claims and findings with relevant evidence that is accessible and verifiable to listeners, and use appropriate eye contact, adequate volume, and clear pronunciation.
5. Incorporate digital media and visual displays of data when helpful and in a manner that strengthens the presentation.	**5.** Incorporate digital media and visual displays of data when helpful and in a manner that strengthens the presentation.	**5.** Incorporate digital media and visual displays of data when helpful and in a manner that strengthens the presentation.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, on pages 47–50, for specific demands.)	**6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.)	**6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.)

Speaking and Listening Standards 6–12

Grades 9–10 students:	Grades 11–12 students:
Comprehension and Collaboration	
1. Initiate and participate effectively in group discussions on *grades 9–10 topics, texts, and issues* being studied in class. a. Prepare for discussions by reading and researching material under study and explicitly draw on that preparation in discussions. b. Cooperate with peers to set clear goals and deadlines and to establish roles. c. Build on essential information from others' input by asking questions and sharing comments that enrich discussions. d. Acknowledge the ideas and contributions of others in the group, reach decisions about the information and ideas under discussion, and complete the task. e. Evaluate whether the team has met its goals.	**1.** Initiate and participate effectively in group discussions on *grades 11–12 topics, texts, and issues* being studied in class. a. Prepare for discussions by distilling the evidence or information about the material under study and explicitly draw on that preparation in discussions. b. Cooperate with peers to set clear goals and deadlines, establish roles, and determine ground rules for decision making (e.g., informal consensus, taking votes on key issues, presentation of alternate views). c. Propel conversations forward by asking questions that test the evidence and by sharing findings that clarify, verify, or challenge ideas and conclusions. d. Summarize accurately the comments and claims made on all sides of an issue and determine what additional information, research, and tasks are required for the team to complete the task. e. Evaluate whether the team has met its goals.
2. Synthesize information presented visually or multimodally with other information presented orally, noting any discrepancies between the data that emerge as a result.	**2.** Integrate multiple streams of data presented through various mediums, evaluating the reliability and credibility of each source of information in order to answer questions, solve problems, or build knowledge.
3. Determine a speaker's or presenter's position or point of view by assessing the evidence, word choice, points of emphasis, and tone used.	**3.** Evaluate the information conveyed and rhetoric used by a speaker or presenter, identifying logical errors in reasoning and exaggerated or distorted evidence.
Presentation of Knowledge and Ideas	
4. Plan and deliver relevant and sufficient evidence in support of findings and claims such that listeners can follow the reasoning, adjusting presentation to particular audiences and purposes.	**4.** Plan and deliver focused and coherent presentations that convey clear and distinct perspectives such that the line of reasoning and sources of support are clear and alternative perspectives are addressed, adjusting presentation to particular audiences and purposes.
5. Make strategic use of digital media elements and visual displays of data to enhance understanding.	**5.** Make strategic use of digital media elements and visual displays of data to enhance understanding.
6. Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.)	**6.** Adapt speech to a variety of contexts and communicative tasks, demonstrating a command of formal English when indicated or appropriate. (See "Conventions" in Language, pages 47–50, for specific demands.)

Appendix B.9

College and Career Readiness Standards for Language

The grades 6–12 standards on the following pages define what students should understand and be able to do in each grade and build toward the six College and Career Readiness Standards.

Conventions in Writing and Speaking

1. Demonstrate a command of the conventions of standard English grammar and usage.
2. Demonstrate a command of the conventions of capitalization, punctuation, and spelling.
3. Make effective choices about language, punctuation, and sentence structure for meaning and style.

Vocabulary Acquisition and Use

4. Determine the meaning of words and phrases encountered through conversations, reading, and media use.
5. Understand the nuances of and relationships among words.
6. Use grade-appropriate general academic vocabulary and domain-specific words and phrases purposefully acquired as well as gained through conversation and reading and responding to texts.

Note on range and content of student language use

To be college and career ready in language, students must have firm control over the conventions of writing and speaking and have extensive vocabularies built through reading and study. They must have a well-developed understanding of standard written and spoken English, demonstrating command of the conventions of grammar, usage, and mechanics. They also must come to appreciate that language is as much a matter of craft as of rules and be able to use punctuation, words, phrases, clauses, and sentences to achieve particular rhetorical effects and to convey ideas precisely and concisely. They need to become highly skilled in determining the meanings of words they encounter, choosing flexibly from an array of strategies to aid them. They must learn to see an individual word as part of a network of other words—words, for example, that have similar denotations but different connotations. The inclusion of Language standards in their own strand should not be taken as an indication that skills related to conventions and vocabulary are unimportant to reading, writing, speaking, and listening; indeed, they are inseparable from such contexts.

Language Standards 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. They offer a focus for instruction in each year to help ensure that students gain adequate exposure to a range of skills and applications.

Grade 6 students:	Grade 7 students:	Grade 8 students:
Conventions in Writing and Speaking		
1. Observe conventions of grammar and usage. a. Ensure that pronouns are in the proper case (subjective, objective, possessive). b. Recognize and correct inappropriate shifts in pronoun number and person.* c. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).*	**1.** Observe conventions of grammar and usage. a. Explain the function of phrases and clauses in general and their functions in specific sentences. b. Chose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas. c. Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers.*	**1.** Observe conventions of grammar and usage. a. Form and use verbs in the active and passive voice. b. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive moods. c. Recognize and correct inappropriate shifts in verb voice and mood.*
2. Observe conventions of capitalization, punctuation, and spelling. a. Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements.* b. Spell correctly.	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Use a comma before a coordinating conjunction in a compound sentence. b. Spell correctly.	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Use a comma to separate coordinate adjectives (e.g., *It was a fascinating, enjoyable movie* but not *He wore an old[,] green shirt*). b. Use a comma, ellipses, or dash to indicate a pause or break. c. Spell correctly.
3. Make effective language choices. a. Vary sentence patterns for meaning, reader/listener interest, and style.*	**3.** Make effective language choices. a. Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy.*	**3.** Make effective language choices. a. Use verbs in the active and passive voice and in the conditional and subjunctive moods to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).

* Conventions standards noted with an asterisk need to be revisited by students in subsequent grades. See page 51 for a complete listing.

Language Standards 6–12

Grade 6 students:	Grade 7 students:	Grade 8 students:
Vocabulary Acquisition and Use		
4. Determine word meanings (*based on grade 6 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence and paragraph context, the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital. b. Use a known root as a clue to the meaning of an unknown word (e.g., *audience*, *auditory*, *audible*). c. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary). d. Interpret various figures of speech (e.g., personification) relevant to particular texts.	**4.** Determine word meanings (*based on grade 7 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence and paragraph context, the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital. b. Use a known root as a clue to the meaning of an unknown word (e.g., *belligerent*, *bellicose*, *rebel*). c. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary). d. Interpret various figures of speech (e.g., allegory) relevant to particular texts.	**4.** Determine word meanings (*based on grade 8 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence and paragraph context, the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; and consulting reference materials, both print and digital. b. Use a known root as a clue to the meaning of an unknown word (e.g., *precede*, *recede*, *secede*). c. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary). d. Interpret various figures of speech (e.g. verbal irony, puns) relevant to particular texts.
5. Understand word relationships. a. Trace the network of uses and meanings that different words have and the interrelationships among those meanings and uses. b. Distinguish a word from other words with similar denotations but different connotations.	**5.** Understand word relationships. a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses. b. Distinguish a word from other words with similar denotations but different connotations.	**5.** Understand word relationships. a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses. b. Distinguish a word from other words with similar denotations but different connotations.
6. Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts.	**6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts.	**6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts.

Language Standards 6–12

Grades 9–10 students:	Grades 11–12 students:
Conventions in Writing and Speaking	
1. Observe conventions of grammar and usage. a. Use parallel structure in writing.* b. Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to add variety and interest to writing or presentations.	**1.** Observe conventions of grammar and usage. a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested. b. Resolve complex usage issues, particularly when the issue involves contested or changing usage; consult references (e.g., *Merriam-Webster's Dictionary of English Usage*) as needed for guidance.
2. Observe conventions of capitalization, punctuation, and spelling. a. Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses. b. Use a colon to introduce a list or quotation. c. Spell correctly.	**2.** Observe conventions of capitalization, punctuation, and spelling. a. Observe the conventions concerning using hyphens to join words. b. Spell correctly.
3. Make effective language choices. a. Write and edit work so that it conforms to the guidelines in a style manual.	**3.** Make effective language choices. a. Write and edit work so that it conforms to the guidelines in a style manual.
Vocabulary Acquisition and Use	
4. Determine word meanings (*based on grades 9–10 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence, paragraph, and whole-text context; the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; understanding the word's etymology; and consulting reference materials, both print and digital. b. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary). c. Interpret various figures of speech (e.g., hyperbole, paradox) and analyze their role in a text.	**4.** Determine word meanings (*based on grades 11–12 reading*). a. Determine or clarify the meaning of unknown or multiple-meaning words through the use of one or more strategies, such as using semantic clues (e.g., sentence, paragraph, and whole-text context; the organizational pattern of the text); using syntactic clues (e.g., the word's position or function in the sentence); analyzing the word's sounds, spelling, and meaningful parts; understanding the word's etymology; and consulting reference materials, both print and digital. b. Verify the preliminary determination of a word's meaning (e.g., by checking the inferred meaning in context or looking up the word in a dictionary). c. Interpret various figures of speech (e.g., satire, sarcasm) and analyze their role in a text.
5. Understand word relationships. a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses. b. Distinguish a word from other words with similar denotations but different connotations.	**5.** Understand word relationships. a. Trace the network of uses and meanings different words have and the interrelationships among those meanings and uses. b. Distinguish a word from other words with similar denotations but different connotations.
6. Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts.	**6.** Use grade-appropriate general academic vocabulary and English language arts–specific words and phrases taught directly and gained through reading and responding to texts.

* Conventions standards noted with an asterisk need to be revisited by students in subsequent grades as their writing and speak grow in sophistication. See page 51 for a complete listing.

English Language Arts Conventions Progressive Skills, By Standard

The following, marked with an asterisk (*) in the Conventions standards, are skills and understandings that require continued attention in higher grades (after their introduction in the grade listed below) as they are applied to increasingly sophisticated writing and speaking.

Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grades 9–10
1c. Ensure subject-verb and pronoun-antecedent agreement. **3a.** Choose words for effect.						
	1b. Form and use adjectives and adverbs (including comparative and superlative forms), placing them appropriately within sentences. **1c.** Produce complete sentences, avoiding rhetorically poor fragments and run-ons. **1d.** Correctly use frequently confused words (e.g., *effect/affect*, *to/too/two*). **3a.** Use punctuation for effect. **3b.** Maintain consistency in style and tone. **3c.** Choose words and phrases to convey ideas precisely.					
		1b. Recognize and correct inappropriate shifts in verb tense and aspect. **2a.** Use punctuation to separate items in a series. **3a.** Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.				
			1b. Recognize and correct inappropriate shifts in pronoun number and person. **1c.** Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents). **2a.** Use commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements. **3a.** Vary sentence patterns for meaning, reader/listener interest, and style.			
				1c. Place phrases and clauses within a sentence, avoiding misplaced and dangling modifiers. **3b.** Choose words and phrases that express ideas concisely, eliminating wordiness and redundancy.		
					1c. Recognize and correct inappropriate shifts in verb voice and mood.	
						1a. Use parallel structure in writing.

Range of Text Types for 6–12

Students in grades 6–12 apply the Reading standards to the following range of text types, with texts selected from a broad range of cultures and periods.

Literature			Informational Text
Stories	**Drama**	**Poetry**	**Literary Nonfiction**
Includes the subgenres of adventure stories, historical fiction, mysteries, myths, science fiction, realistic fiction, allegories, parodies, satire, and graphic novels	Includes one-act and multiact plays, both in written form and on film	Includes the subgenres of narrative poems, lyrical poems, free verse poems, sonnets, odes, ballads, and epics	Includes the subgenres of exposition and argument in the form of personal essays, speeches, opinion pieces, essays about art or literature, biographies, memoirs, journalism, and historical, scientific, or economic accounts (including digital media sources) written for a broad audience

Texts Illustrating the Complexity, Quality, and Range of Student Reading 6–12

	Literature: Stories, Drama, Poetry	Informational Texts: Literary Nonfiction
6–8	▪ *Little Women* by Louisa May Alcott (1869) ▪ *The Adventures of Tom Sawyer* by Mark Twain (1876) ▪ "The Road Not Taken" by Robert Frost (1915) ▪ *The Dark Is Rising* by Susan Cooper (1973) ▪ *Dragonwings* by Laurence Yep (1975) ▪ *Roll of Thunder, Hear My Cry* by Mildred Taylor (1976)	▪ "Letter on Thomas Jefferson" by John Adams (1776) ▪ *Narrative of the Life of Frederick Douglass, an American Slave* by Frederick Douglass (1845) ▪ *Harriet Tubman: Conductor on the Underground Railroad* by Ann Petry (1955) ▪ *Travels with Charley: In Search of America* by John Steinbeck (1962) ▪ *The Great Fire* by Jim Murphy (1995) ▪ *This Land Was Made for You and Me: The Life and Songs of Woody Guthrie* by Elizabeth Partridge (2002)
9–10	▪ *The Tragedy of Romeo and Juliet* by William Shakespeare (1592) ▪ "Ozymandias" by Percy Bysshe Shelley (1817) ▪ "The Raven" by Edgar Allen Poe (1845) ▪ "The Gift of the Magi" by O. Henry (1906) ▪ *The Grapes of Wrath* by John Steinbeck (1939) ▪ *Fahrenheit 451* by Ray Bradbury (1953) ▪ *The Killer Angels* by Michael Shaara (1975)	▪ "Speech to the Second Virginia Convention" by Patrick Henry (1775) ▪ The Declaration of Independence by Thomas Jefferson (1776) ▪ "Second Inaugural Address" by Abraham Lincoln (1865) ▪ "State of the Union Address" by Franklin Delano Roosevelt (1941) ▪ *Cod: A Biography of the Fish That Changed the World* by Mark Kurlansky (1997) ▪ *The Race to Save Lord God Bird* by Phillip Hoose (2004)
11–CCR	▪ "Ode on a Grecian Urn" by John Keats (1820) ▪ *Jane Eyre* by Charlotte Brontë (1848) ▪ "Because I Could Not Stop for Death" by Emily Dickinson (1890) ▪ *The Great Gatsby* by F. Scott Fitzgerald (1925) ▪ *Their Eyes Were Watching God* by Zora Neale Hurston (1937) ▪ *A Raisin in the Sun* by Lorraine Hansberry (1959) ▪ *The Namesake* by Jhumpa Lahiri (2003)	▪ *The Crisis* by Thomas Paine (1776) ▪ *Walden* by Henry David Thoreau (1854) ▪ "Society and Solitude" by Ralph Waldo Emerson (1857) ▪ "Gettysburg Address" by Abraham Lincoln (1863) ▪ "Letter from Birmingham Jail" by Martin Luther King, Jr. (1964) ▪ *Google Hacks: Tips & Tools for Smarter Searching* by Tara Calishain and Rael Dornfest (2004) ▪ *America's Constitution: A Biography* by Akhil Reed Amar (2005)

Note: Given space limitations, the illustrative texts listed above are meant only to show individual titles that are representative of a range of topics and genres. (See Appendix B for excerpts of these and other texts illustrative of grades 6–12 text complexity.) At a curricular or instructional level, within and across grade levels, texts need to be selected around topics or themes that generate knowledge and allow students to study topics in depth.

Appendix B.9

Standards for Literacy In History/Social Studies & Science

6–12

College and Career Readiness Standards for Reading

The grades 6–12 standards on the following pages define what students need to know and be able to do and build toward the ten College and Career Readiness Standards.

Key Ideas and Details

1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
3. Analyze in detail where, when, why, and how events, ideas, and characters develop and interact over the course of a text.

Craft and Structure

4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and explain how specific word choices shape meaning or tone.
5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section or chapter) relate to each other and the whole.
6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

7. Synthesize and apply information presented in diverse ways (e.g., through words, images, graphs, and video) in print and digital sources in order to answer questions, solve problems, or compare modes of presentation.[1]
8. Delineate and evaluate the reasoning and rhetoric within a text, including assessing whether the evidence provided is relevant and sufficient to support the text's claims.
9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range and Level of Text Complexity

10. Read complex texts independently, proficiently, and fluently, sustaining concentration, monitoring comprehension, and, when useful, rereading.[2]

[1]Please see "Research to Build Knowledge" in Writing for additional standards relevant to gathering, assessing, and applying information from print and digital sources.
[2]Proficiency in this standard is measured by students' ability to read a range of appropriately complex text in each grade as defined in Appendix A.

Note on range and content of student reading

Reading is critical to building knowledge in history/social studies as well as in science and other technical fields. College- and career-ready reading in these fields requires an appreciation of the norms and conventions of each discipline, such as the kinds of evidence used in history and science; an understanding of domain-specific words and phrases; an attention to precise details; and the capacity to evaluate intricate arguments, synthesize complex information, and follow detailed descriptions of events and concepts. In history/social studies, for example, students need to be able to analyze, evaluate, and differentiate primary and secondary sources. When reading scientific and technical texts, students need to be able to gain knowledge from challenging texts that often make extensive use of elaborate diagrams and data to convey information and illustrate concepts. Students must be able to read complex informational text in these fields with independence and confidence because the vast majority of reading in college and workforce training programs will be sophisticated nonfiction. It is important to note that these Reading standards are meant to complement the specific content demands of the disciplines, not replace them.

Reading Standards for History/Social Studies 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. The standards below begin at grade 6; standards for K–5 reading in history/social studies are integrated into the K–5 standards for reading informational text.

Grades 6–8 students:	**Grades 9–10 students:**	**Grades 11–12 students:**
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of primary and secondary sources. **2.** Determine the main ideas or information of a primary or secondary source; summarize the source, basing the summary on information in the text rather than on prior knowledge or opinions. **3.** Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered).	**1.** Cite specific textual evidence to support analysis of primary and secondary sources, attending to such features as the date and origin of the information. **2.** Determine the main ideas or information of a primary or secondary source; summarize how key events or ideas develop over the course of the text. **3.** Analyze in detail a series of events described in a text and the causes that link the events; distinguish whether earlier events caused later ones or simply preceded them.	**1.** Cite specific textual evidence to support analysis of primary and secondary sources, connecting insights gained from specific details to an understanding of the text as a whole. **2.** Determine the main ideas or information of a primary or secondary source; provide a summary that makes clear the relationships between the key details and ideas. **3.** Analyze how ideas and beliefs emerge, develop, and influence events, based on evidence in the text .
Craft and Structure		
4. Determine the meaning of words and phrases in a text, including vocabulary specific to domains related to history/social studies. **5.** Identify how a history/social studies text presents information (e.g., sequentially, comparatively, causally). **6.** Identify aspects of a text that reveal an author's point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).	**4.** Determine the meaning of words and phrases in a text, including the vocabulary describing political, economic, or social aspects of history. **5.** Explain how an author chooses to structure information or an explanation in a text to emphasize key points or advance a point of view. **6.** Compare the point of view of two or more authors by comparing how they treat the same or similar historical topics, including which details they include and emphasize in their respective accounts.	**4.** Interpret the meaning of words and phrases in a text, including how an author uses and refines the meaning of a key term over the course of a text (e.g., how Madison defines *faction* in Federalist No. 10 and No. 51). **5.** Analyze in detail how a complex primary source is structured, including how key sentences, paragraphs, and larger portions of the text contribute to the whole. **6.** Evaluate authors' differing points of view on the same historical event or issue by assessing the authors' claims, evidence, and reasoning.
Integration of Knowledge and Ideas		
7. Integrate graphical information (e.g., pictures, videos, maps, time lines) with other information in a print or digital text. **8.** Distinguish among fact, opinion, and reasoned judgment in a historical account. **9.** Analyze the relationship between a primary and secondary source on the same topic.	**7.** Integrate quantitative or technical information presented in maps, time lines, and videos with other information in a print or digital text. **8.** Assess the extent to which the evidence n a text supports the author's claims. **9.** Compare and contrast treatments of the same topic in several primary and secondary sources.	**7.** Synthesize ideas and data presented graphically and determine their relationship to the rest of a print or digital text, noting discrepancies between the graphics and other information in the text. **8.** Evaluate an author's premises, claims, and evidence by corroborating or challenging them with other sources of information. **9.** Integrate information from diverse sources, both primary and secondary, into a coherent understanding of an idea or event, noting discrepancies among sources.
Range and Level of Text Complexity		
10. Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts with scaffolding as needed.	**10.** Read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts with scaffolding as needed.	**10.** Read informational text independently, proficiently, and fluently in the grades 11–12 text complexity band; read "stretch" texts with scaffolding as needed.

Reading Standards for Science 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. The standards below begin at grade 6; standards for K–5 reading in science are integrated into the K–5 standards for reading informational text.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Key Ideas and Details		
1. Cite specific textual evidence to support analysis of scientific and technical texts. **2.** Summarize the broad ideas and specific conclusions made in a text, basing the summary on textual information rather than on prior knowledge or opinions. **3.** Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	**1.** Cite specific textual evidence to support analysis of scientific and technical text, including analysis of the precise details of explanations or descriptions. **2.** Analyze the development of a text's explanation of a process or phenomenon, summarizing the central ideas and supporting details. **3.** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	**1.** Cite specific textual evidence to support analysis of scientific and technical texts, including analysis of important distinctions the author makes between ideas or pieces of information. **2.** Summarize complex information or ideas presented in a text, paraphrasing it in simpler but still accurate terms. **3.** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the causes of the specific results based on information from the text.
Craft and Structure		
4. Determine the meaning of key terms, symbols, and domain-specific vocabulary used in a text. **5.** Analyze how each major part of a text contributes to an understanding of the topic discussed in the text. **6.** Analyze the purpose of an experiment or explanation in a text, including defining the problem or question to be resolved.	**4.** Determine the meaning of key terms, symbols, and domain-specific vocabulary used in a text, noting relationships among terms pertaining to important ideas or processes (e.g., *force*, *friction*, *reaction force*, *energy*). **5.** Analyze the relationships among concepts in a text, including developing propositional concept maps to organize and illustrate the ideas. **6.** Analyze the purpose of an experiment, including defining the possibilities ruled out by the experimental results.	**4.** Determine the meaning of key terms, symbols, and domain-specific vocabulary used in a text, attending to the precise meaning of terms as they are used in particular scientific or technical contexts. **5.** Analyze the hierarchical or categorical relationships of concepts or information presented in a text. **6.** Analyze the scope and purpose of an experiment or explanation and determine which related issues remain unresolved or uncertain.
Integration of Knowledge and Ideas		
7. Integrate information provided by the words in a text with a version of that information expressed graphically (e.g., in a flowchart, diagram, model, graph, or table). **8.** Distinguish facts or reasoned judgments based on research findings from opinions. **9.** Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	**7.** Integrate quantitative or technical information presented graphically (e.g., in a flowchart, diagram, model, graph, or table) with other information in a text. **8.** Assess the extent to which the evidence in a text supports a scientific claim or a recommendation for solving a technical problem. **9.** Compare experimental findings presented in a text to information from other sources, noting when the findings support or contradict previous explanations or accounts.	**7.** Synthesize information in different formats by representing complex information in a text in graphical form (e.g., a table or chart) or translating a graphic or equation into words. **8.** Evaluate the hypotheses, data, and conclusions in a scientific text, corroborating or undercutting them with other sources of information. **9.** Integrate information from diverse sources (e.g., video, multimedia sources, experiments, simulations) into a coherent understanding of a concept, process, or phenomenon, noting discrepancies among sources.
Range and Level of Text Complexity		
10. Read informational text independently, proficiently, and fluently in the grades 6–8 text complexity band; read "stretch" texts with scaffolding as needed.	**10.** Read informational text independently, proficiently, and fluently in the grades 9–10 text complexity band; read "stretch" texts with scaffolding as needed.	**10.** Read informational text independently, proficiently, and fluently in the grades 11–CCR text complexity band; read "stretch" texts with scaffolding as needed.

College and Career Readiness Standards for Writing

The grades 6–12 standards on the following pages define what students need to know and be able to do and build toward these ten College and Career Readiness Standards.

Text Types and Purposes[1]

1. Write arguments to support a substantive claim with clear reasons and relevant and sufficient evidence.
2. Write informative/explanatory texts to convey complex information clearly and accurately through purposeful selection and organization of content.
3. Write narratives to convey real or imagined experiences, individuals, or events and how they develop over time.

Production and Distribution of Writing

4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. Strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
6. Use technology, including the Internet, to produce, publish, and interact with others about writing.

Research to Build Knowledge

7. Perform short, focused research projects as well as more sustained research in response to a focused research question, demonstrating understanding of the material under investigation.
8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate and cite the information while avoiding plagiarism.
9. Write in response to literary or informational sources, drawing evidence from the text to support analysis and reflection as well as to describe what they have learned.

Range of Writing

10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.[2]

[1]These broad categories of writing include many subgenres. See Appendix A for definitions of key writing types.
[2]This standard is measured by the proficiency of student writing products.

Note on range and content of student writing

For students, writing is a key means of asserting and defending claims, showing what they know about a subject, and conveying what they have experienced, imagined, thought, and felt. To be college- and career-ready writers, students must take task, purpose, and audience into careful consideration, choosing words, information, structures, and formats deliberately. They need to be able to use technology strategically when creating, refining, and collaborating on writing. They have to become adept at gathering information, evaluating sources, and citing material accurately, reporting findings from their research and analysis of sources in a clear and cogent manner. They must have the flexibility, concentration, and fluency to produce high-quality first-draft text under a tight deadline and the capacity to revisit and make improvements to a piece of writing over multiple drafts when circumstances encourage or require it. To meet these goals, students must devote significant time and effort to writing, producing numerous pieces over short and long time frames throughout the year.

Writing Standards for History/Social Studies and Science 6–12

Following are the standards for grades 6–12, which relate to their College and Career Readiness counterparts by number. The standards below begin at grade 6; standards for K–5 writing in history/social studies and science are integrated into the K–5 standards for writing.

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes		
1. Write arguments focused on *discipline-specific content* in which they: a. Introduce a claim about a topic or issue, distinguish it from alternate or opposing claims, and organize the reasons, data, and evidence logically to support the claim. b. Support the claim with logical reasoning and detailed, accurate data and evidence (science) or information from credible primary, secondary, and tertiary sources (history). c. Use words and phrases as well as domain-specific vocabulary to make clear the relationships among claims, reasons, data, and evidence. d. Sustain an objective style and tone. e. Provide a concluding statement or section that follows logically from the argument.	**1.** Write arguments focused on *discipline-specific content* in which they: a. Introduce a precise claim, distinguish it from alternate or opposing claims, and provide an organization that establishes clear relationships among the claim, reasons, data, and evidence. b. Develop a claim fairly with logical reasoning, supplying detailed, accurate data and evidence acquired in a scientifically acceptable form (science) or gathered from credible primary, secondary, and tertiary sources (history). c. Use precise words and phrases as well as domain-specific vocabulary to make clear the relationships between claims and reasons and between reasons and the data and evidence. d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline. e. Provide a concluding statement or section that follows logically from the argument.	**1.** Write arguments focused on *discipline-specific content* in which they: a. Introduce a substantive claim, establish its significance, distinguish it from alternate or opposing claims, and create an organization so that claims, reasons, data, and evidence are purposefully and logically sequenced. b. Develop a claim thoroughly and fairly with logical reasoning, supplying the most relevant data and evidence acquired in a scientifically acceptable form (science) or gathered from credible primary, secondary, and tertiary sources (history). c. Use precise words and phrases as well as domain-specific vocabulary to make clear the relationships between claims and reasons and between reasons and the data and evidence. d. Sustain an objective style and tone while attending to the norms and conventions of the specific discipline. e. Provide a concluding statement or section that follows logically from the argument.

Writing Standards for History/Social Studies and Science 6–12

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Text Types and Purposes (continued)		
2. Write informative/explanatory texts, including the narration of historical events or scientific procedures/experiments, in which they: a. Introduce and establish a topic and organize information under concepts or into categories. b. Develop a topic that has historical or scientific significance using well-chosen, relevant facts, data, details, quotations, examples, or other information. c. Use varied links and sentence structures to create cohesion and clarify information and ideas. d. Use precise language and domain-specific vocabulary and sustain a formal, objective style appropriate for a reader seeking information. e. Provide a conclusion that follows logically from the information or explanation presented.	**2.** Write informative/explanatory texts, including the narration of historical events or scientific procedures/experiments, in which they: a. Introduce a topic and organize information under concepts and into categories, making clear the connections and distinctions between key ideas; use formatting and graphics (e.g., headings, figures, tables, graphs, illustrations) as useful to clarify ideas. b. Develop a topic that has historical or scientific significance using well-chosen, relevant, and sufficient facts, data, details, quotations, examples, extended definitions, or other information. c. Use varied transitions and sentence structures to create cohesion, clarify information and ideas, and link major sections in the text. d. Use precise language and domain-specific vocabulary to convey a style appropriate to the specific discipline and context as well as to the expertise of likely readers. e. Provide a conclusion that follows logically from the information or explanation provided and that articulates the implications or significance of the topic.	**2.** Write informative/explanatory texts, including the narration of historical events or scientific procedures/experiments, in which they: a. Introduce a complex topic and organize the information so that each new piece of information builds on that which precedes it to create a unified whole; use formatting and graphics (e.g., headings, figures, tables, graphs, illustrations) as useful to clarify ideas. b. Develop a complex topic that has historical and scientific significance using the most significant and relevant facts, data, details, quotations, examples, extended definitions, or other information. c. Use varied transitional devices and sentence structures to create cohesion, clarify complex information and ideas, and link the major sections of the text. d. Use precise language, domain-specific and technical wording, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic; convey a knowledgeable stance in a style that responds to the specific discipline and context as well as to the expertise of likely readers. e. Provide a well-developed conclusion that follows logically from the information or explanation provided and that articulates the implications or significance of the topic.
3. Students' narrative skills continue to grow in these grades. The *Standards* require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to write narrative accounts about individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results.	**3.** Students' narrative skills continue to grow in these grades. The *Standards* require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to write narrative accounts about individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results.	**3.** Students' narrative skills continue to grow in these grades. The *Standards* require that students be able to incorporate narrative elements effectively into arguments and informative/explanatory texts. In history, students must be able to write narrative accounts about individuals or events of historical import. In science, students must be able to write precise enough descriptions of the step-by-step procedures they use in their investigations that others can replicate them and (possibly) reach the same results.

Writing Standards for History/Social Studies and Science 6–12

Grades 6–8 students:	Grades 9–10 students:	Grades 11–12 students:
Production and Distribution of Writing		
4. Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.	**4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.	**4.** Produce writing in which the organization, development, substance, and style are appropriate to task, purpose, and audience.
5. With some guidance and support from peers and adults, strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach after rethinking how well questions of purpose and context have been addressed.	**5.** Strengthen writing as needed by planning, revising, editing, or trying a new approach, focusing on addressing what is most significant for a specific task and context.	**5.** Strengthen writing as needed by planning, revising, editing, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
6. Use technology, including the Internet, to present and cite information effectively in a digital format, including when publishing and responding to writing.	**6.** Use technology, including the Internet, to produce, publish, and collaborate on a shared writing product, incorporating diverse and sometimes conflicting feedback.	**6.** Demonstrate command of technology, including the Internet, to produce, publish, and update work in response to ongoing feedback, including fresh arguments or new information.
Research to Build Knowledge		
7. Perform short, focused research projects in response to a question or problem and generate additional related questions that allow for multiple avenues of exploration.	**7.** Perform short, focused research projects and more sustained research; synthesize multiple sources on a subject to answer a question or solve a problem.	**7.** Perform short, focused research projects and more sustained research; synthesize multiple authoritative sources on a subject to answer a question or solve a problem.
8. Gather relevant information from multiple print and digital sources using effectively tailored searches; assess the credibility and accuracy of each source; and quote or paraphrase the evidence, avoiding plagiarism and following a standard format for citation.	**8.** Gather relevant information from multiple print and digital sources; assess the credibility, accuracy, and strengths and limitations of each source; and integrate selected information into the text, avoiding overreliance on any one source, avoiding plagiarism, and following a standard format for citation.	**8.** Gather relevant information from multiple print and digital sources; assess its credibility and accuracy and its usefulness in terms of purpose, task, and audience; and integrate selected information into the text, avoiding overreliance on any one source, avoiding plagiarism, and following a standard format for citation.
9. Write in response to informational sources, drawing on textual evidence to support analysis and reflection as well as to describe what they have learned.	**9.** Write in response to informational sources, drawing on textual evidence to support analysis and reflection as well as to describe what they have learned.	**9.** Write in response to informational sources, drawing on textual evidence to support analysis and reflection as well as to describe what they have learned.
Range of Writing		
10. Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.	**10.** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Alignment of Common Core ELA/Literacy Standards (CCS; March 2010 DRAFT) with Michigan Grade Level and High School Content Expectations (GLCE/HSCE)

The **K-12 CCS for ELA/Literacy** describe the progressive development of skills and knowledge **across grades and content areas**, necessary for all students to be college and career ready readers, writers, and communicators. The CCS for ELA/Literacy, like the Michigan GLCE and HSCE, are **recursive** in nature, with most Core Standards being addressed at each grade level/span. The CCS writers clearly indicate that the standards **do not represent a curriculum**, but will need to be supported by a rich and rigorous curriculum, engaging instruction, and balanced assessment. "By their structure, the *Standards* encourage curriculum makers to take a comprehensive approach that coordinates ELA courses with courses in other subject areas in order to help students acquire a wide range of ever more sophisticated knowledge and skills through reading, writing, speaking, and listening."

1) *The Standards define **what** all students are expected to know and be able to do but not how teachers should teach. The Standards must be **complemented by a well-developed, content-rich curriculum** consistent with the expectations laid out in this document.*
2) *While the Standards do attempt to **focus on what is most essential**, they do not describe all that can or should be taught. A great deal is left to the discretion of teachers and curriculum developers. The aim of the Standards is to articulate the **fundamentals**, not to set out an exhaustive list nor a set of restrictions that limits what can be taught beyond what is specified herein.*
3) *The* Standards *set grade-level standards but **do not define the intervention** methods or materials necessary to support students who are well below or well above grade-level expectations. No set of grade-level standards can fully reflect the great variety in achievement levels of students in any given classroom. However, the Standards do provide **clear signposts** along the way to the **goal of college and career readiness for all students.***

"The *Standards* do not mandate such things as a particular writing process or specify the full range of metacognitive strategies that students may need to use to monitor and direct their thinking and learning." Nor do the *Standards* indicate a list of recommended texts, reasons for reading great literature, recommendations for portfolio evidence, or discussion of language use and abuse – all **addressed in guidance provided in Michigan HSCE, MMC Course/Credit Expectations, and ELA model units of instruction**. Michigan GLCE and HSCE extend the CCS, providing guidance for curriculum, instruction, and assessment for meeting the CCS and MMC requirements. The GLCE and HSCE do not represent a curriculum.

While the **Michigan GLCE** represent assessment points, listing content and skills to be assessed at grades K-8, the GLCE go well beyond what would be assessed on large-scale assessments. Beyond the reading, writing, speaking, and listening outcomes assessed on the MEAP, the ELA GLCE offer guidance for metacognition, comprehension, reading attitude, writing process, personal writing style, listening and speaking conventions, and speaking discourse. Like the CCS, the GLCE represent literacy across grades and content areas.

The **Michigan HSCE** include standards and expectations meant to guide curriculum, instruction, and assessment. The HSCE were not written as assessment points, but rather as standards to be addressed in increasing levels of complexity and sophistication throughout high school English and content area courses. Strands 1, 2, and 4 of the ELA HSCE define literacy expectations for high school writing, speaking, representing, reading, listening, viewing, and language. Strand 3, Literature and

Culture, provides expectations specific to high school English. The additional guidance provided by the Michigan Merit Curriculum Course/Credit Expectations, Unit Development Framework, ELA model units of instruction, Grammar and Rhetoric Module, and Vocabulary Development Module, extend the essential goals of the CCS and support the development of content-rich curricula that will prepare students to meet the CCS and the MMC requirements

Alignment Analysis

All High School CCS for ELA/Literacy are fully addressed by the ELA HSCE. Many CCS are further supported by the additional modules developed within the MMC Unit Framework and model units of instruction. The CCS focus on the most essential skills and content, and align well with the skills assessed on the ACT. The CCS are not meant to address all that should be taught or assessed at the district and classroom levels, as discussed above. The HSCE extend beyond the focus of the CCS in areas such as writing to various audiences and for various purposes, setting goals for personal growth in writing and reading; metacognitive processes and skills; reasons for reading great literature and for applying knowledge of literary history, traditions, and theory to make meaning of text and to generate new thinking about contemporary society; and for analyzing language use and abuse. Both CCS and HSCE focus specifically on text analysis (close and critical reading), synthesis across texts, and generative thinking.

The K-8 CCS for ELA/Literacy provide more detailed grade level focus on specific content, skills, and products than found in the GLCE. This increased level of specificity is evident across the reading and writing strands and in the areas of grade-level text complexity, vocabulary acquisition and use, and (grammar) conventions in writing and speaking. The GLCE offer more specific guidance than the CCS in the areas of speaking and listening, and address many processes and skills that are expressly not addressed in the CCS, as discussed above. Some CCS are addressed specifically by GLCE at some grades, but more generally or not at all at other grades.

As expressed by a number of reviewers, the CCS do not represent, but do encourage, deep knowledge of core disciplines. When "***complemented by a well-developed, content-rich curriculum,***" the CCS support the development of domain-specific literacy skills needed for success beyond high school in today's world.

Since the CCS being analyzed are in DRAFT form, this alignment study represents an initial attempt, not an analysis ready for field use. A more complete version of this alignment analysis will be produced using the final version of the CCS presented for adoption. In their present form, the alignment documents provide tools for use in analyzing the CCS.

COMMON CORE STATE STANDARDS

FOR Mathematics

Contents

Introduction
Toward greater focus and coherence

The composite standards [of Hong Kong, Korea and Singapore] have a number of features that can inform an international benchmarking process for the development of K–6 mathematics standards in the US. First, the composite standards concentrate the early learning of mathematics on the number, measurement, and geometry strands with less emphasis on data analysis and little exposure to algebra. The Hong Kong standards for grades 1–3 devote approximately half the targeted time to numbers and almost all the time remaining to geometry and measurement.

Ginsburg, Leinwand and Decker, 2009

Mathematics experiences in early childhood settings should concentrate on (1) number (which includes whole number, operations, and relations) and (2) geometry, spatial relations, and measurement, with more mathematics learning time devoted to number than to other topics. The mathematical process goals should be integrated in these content areas. Children should understand the concepts and learn the skills exemplified in the teaching-learning paths described in this report.

National Research Council, 2009

In general, the US textbooks do a much worse job than the Singapore textbooks in clarifying the mathematical concepts that students must learn. Because the mathematics concepts in these textbooks are often weak, the presentation becomes more mechanical than is ideal. We looked at both traditional and non-traditional textbooks used in the US and found this conceptual weakness in both.

Ginsburg et al., 2005

Notable in the research base for these standards are conclusions from TIMSS and other studies of high-performing countries that the traditional US mathematics curriculum must become substantially more coherent and more focused in order to improve student achievement in mathematics. To deliver on the promise of common standards, the standards must address the problem of a curriculum that is 'a mile wide and an inch deep.' The draft Common Core State Standards for Mathematics are a substantial answer to this challenge.

It is important to recognize that "fewer standards" are no substitute for *focused* standards. Achieving "fewer standards" would be easy to do by simply resorting to broad, general statements. Instead, the draft Common Core State Standards for Mathematics aim for clarity and specificity.

Assessing the coherence of a set of standards is more difficult than assessing their focus. William Schmidt and Richard Houang (2002) have said that content standards and curricula are coherent if they are:

> *articulated over time as a sequence of topics and performances that are logical and reflect, where appropriate, the sequential or hierarchical nature of the disciplinary content from which the subject matter derives. That is, what and how students are taught should reflect* **not only the topics** *that fall within a certain academic discipline,* **but also the key ideas** *that determine how knowledge is organized and generated within that discipline. This implies that "to be coherent," a set of content standards must evolve from particulars (e.g., the meaning and operations of whole numbers, including simple math facts and routine computational procedures associated with whole numbers and fractions) to deeper structures inherent in the discipline. This deeper structure then serves as a means for connecting the particulars (such as an understanding of the rational number system and its properties).* **(emphasis added)**

The draft Common Core State Standards for Mathematics endeavor to follow such a design, not only by stressing conceptual understanding of the key ideas, but also by continually returning to organizing principles such as place value or the laws of arithmetic to structure those ideas.

The standards in this draft document define what students should understand and be able to do. Asking a student to understand something means asking a teacher to assess whether the student has understood it. But what does mathematical understanding look like? One hallmark of mathematical understanding is the ability to justify, in a way appropriate to the student's mathematical maturity, *why* a particular mathematical statement is true or where a mathematical rule comes from. There is a world of difference between the student who can summon a mnemonic device such as "FOIL" to expand a product such as $(a + b)(x + y)$ and a student who can explain where that mnemonic comes from. Teachers often observe this difference firsthand, even if large-scale assessments in the year 2010 often do not. The student who can explain the rule understands the mathematics, and may have a better chance to succeed at a less familiar task such as expanding $(a + b + c)(x + y)$. Mathematical understanding and procedural skill are equally important, and both are assessable using mathematical tasks of sufficient richness.

The draft Common Core State Standards for Mathematics begin on the next page with eight Standards for Mathematical Practice. These are not a list of individual math topics, but rather a list of ways in which developing student-practitioners of mathematics increasingly ought to engage with those topics as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.

Grateful acknowledgment is here made to Dr. Cathy Kessel for editing the draft standards.

Mathematics | Standards for Mathematical Practice

Proficient students of all ages expect mathematics to make sense. They take an active stance in solving mathematical problems. When faced with a non-routine problem, they have the courage to plunge in and try something, and they have the procedural and conceptual tools to continue. They are experimenters and inventors, and can adapt known strategies to new problems. They think strategically.

The practices described below are encouraged in apprentices by expert mathematical thinkers. Students who engage in these practices, individually and with their classmates, discover ideas and gain insights that spur them to pursue mathematics beyond the classroom walls. They learn that effort counts in mathematical achievement. Encouraging these practices in students of all ages should be as much a goal of the mathematics curriculum as the learning of specific content.

1 Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

2 Reason abstractly and quantitatively.

Mathematically proficient students make sense of the quantities and their relationships in problem situations. Students bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

3 Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

4 Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, 2-by-2 tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

5 Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, ruler, protractor, calculator, spreadsheet, computer algebra system, statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students interpret graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

6 Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

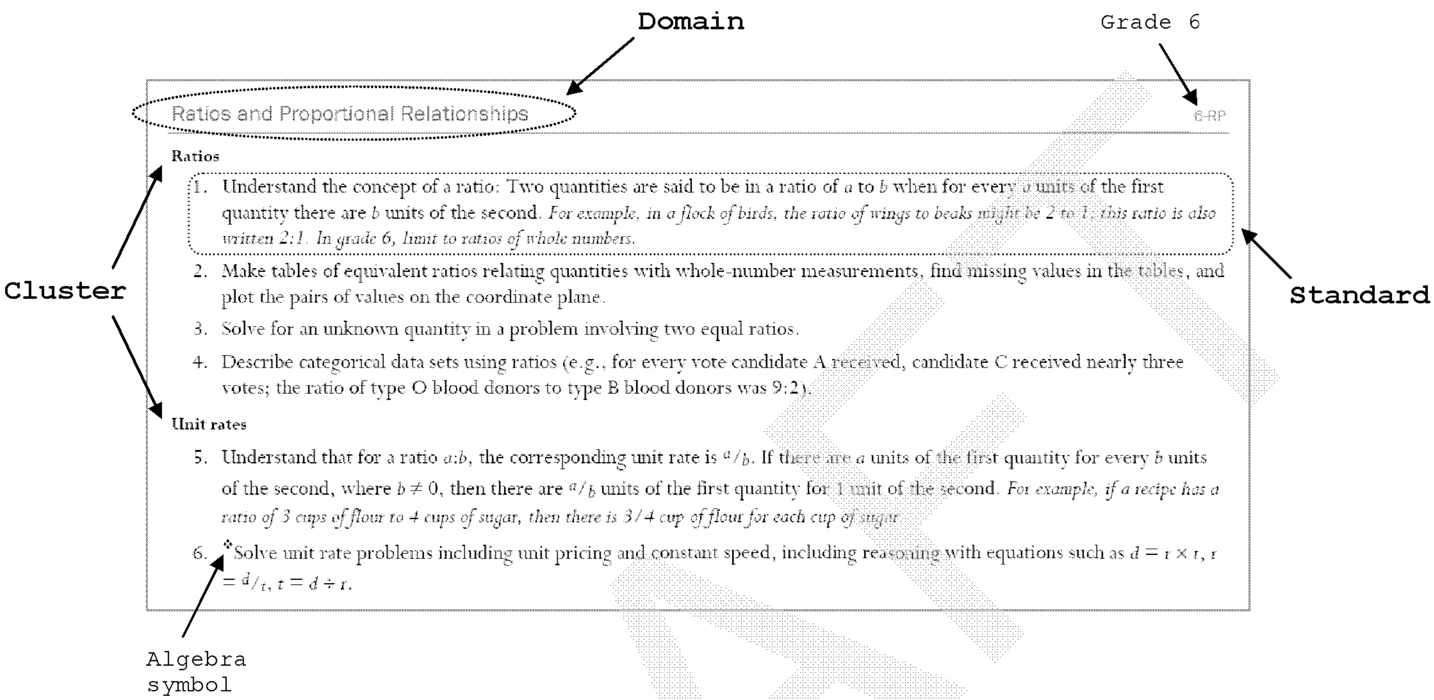
7 Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

8 Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

How to read the grade level standards



Ratios and Proportional Relationships 6-RP

Ratios

1. Understand the concept of a ratio: Two quantities are said to be in a ratio of a to b when for every a units of the first quantity there are b units of the second. *For example, in a flock of birds, the ratio of wings to beaks might be 2 to 1; this ratio is also written 2:1. In grade 6, limit to ratios of whole numbers.*
2. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.
3. Solve for an unknown quantity in a problem involving two equal ratios.
4. Describe categorical data sets using ratios (e.g., for every vote candidate A received, candidate C received nearly three votes; the ratio of type O blood donors to type B blood donors was 9:2).

Unit rates

5. Understand that for a ratio $a{:}b$, the corresponding unit rate is $^{a}/_{b}$. If there are a units of the first quantity for every b units of the second, where $b \neq 0$, then there are $^{a}/_{b}$ units of the first quantity for 1 unit of the second. *For example, if a recipe has a ratio of 3 cups of flour to 4 cups of sugar, then there is 3/4 cup of flour for each cup of sugar.*
6. ❖Solve unit rate problems including unit pricing and constant speed, including reasoning with equations such as $d = r \times t$, $r = {}^{d}/_{t}$, $t = d \div r$.

Standards define what students should understand and be able to do. **Clusters** are groups of related standards. Note that standards from different clusters may sometimes be closely related, because mathematics is a connected subject. **Domains** are larger groups of related standards. For each grade level in Grades K–8, the standards are organized into four or five domains. Standards from different domains may sometimes be closely related.

Algebra Symbol: Key standards for the development of algebraic thinking in Grades K–5 are indicated by ❖.

Dotted Underlines: Dotted underlines, for example, decade words, indicate terms that are explained in the Glossary. In each grade, underlining is used for the first occurrence of a defined term, but not in subsequent occurrences.

Note on Grade Placement of Topics. What students can learn at any particular grade level depends upon what they have learned before. Ideally then, each standard in this document might have been phrased in the form, "Students who already know A should next come to learn B." But in the year 2010 this approach is unrealistic—not least because existing education research cannot specify all such learning pathways. Of necessity therefore, grade placements for specific topics have been made on the basis of state and international comparisons and the collective experience and collective professional judgment of educators, researchers and mathematicians. One promise of common state standards is that over time they will allow research on learning progressions to inform and improve the design of standards to a much greater extent than is possible today. Learning opportunities will continue to vary across schools and school systems, and educators should make every effort to meet the needs of individual students based on their current understanding.

Note on Ordering of Topics within a Grade. These standards do not dictate curriculum. In particular, just because topic A appears before topic B in the standards for a given grade, it does not necessarily mean that topic A must be taught before topic B. A teacher might prefer to teach topic B before topic A, or might choose to highlight connections by teaching topic A and topic B at the same time. Or, a teacher might prefer to teach a topic of his or her own choosing that leads, as a byproduct, to students reaching the standards for topics A and B.

Overview of the Mathematics Standards
Grades K–5

This table shows the domains and clusters in each grade K–5

	K	*1*	*2*	*3*	*4*	*5*
Number—Counting and Cardinality	• Number names • Counting to tell the number of objects • Comparing and ordering numbers					
Number—Operations and the Problems They Solve	• Composing and decomposing numbers; addition and subtraction	• Addition and subtraction • Describing situations and solving problems with addition and subtraction	• Addition and subtraction • Describing situations and solving problems with addition and subtraction	• Multiplication and division • Describing situations and solving problems with multiplication and division	• Multiplication and Division • Problem solving with the four operations	
Number—Base Ten	• Two-digit numbers • Composing and decomposing ten	• Numbers up to 100 • Adding and subtracting in base ten	• Numbers up to 1000 • Adding and subtracting in base ten	• Numbers up to 10,000 • Adding and subtracting in base ten • Multiplying and dividing in base ten	• Numbers up to 100,000 • Multiplying and dividing in base ten	• Whole numbers in base ten • Decimal concepts • Operations on decimals
Number—Fractions				• Fractions as representations of numbers • Fractional quantities	• Operations on fractions • Decimal concepts	• Fraction equivalence • Operations on fractions
Measurement and Data	• Direct measurement • Representing and interpreting data	• Length measurement • Time measurement • Representing and interpreting data	• Length measurement • Time and money • Representing and interpreting data	• The number line and units of measure • Perimeter and area • Representing and interpreting data	• The number line and units of measure • Perimeter and area • Angle measurement • Representing and interpreting data	• Units of measure • Volume • Representing and interpreting data
Geometry	• Shapes, their attributes, and spatial reasoning	• Shapes, their attributes, and spatial reasoning	• Shapes, their attributes, and spatial reasoning	• Properties of 2-dimensional shapes • Structuring rectangular shapes	• Lines and angles • Line symmetry	• Coordinates • Plane figures

Overview of the Mathematics Standards
Grades 6–8

This table shows the domains and clusters in each grade 6–8.

	Grade 6	Grade 7	Grade 8
Ratios and Proportional Relationships	• Ratios • Unit rates	• Analyzing proportional relationships • Percent	
The Number System	• Operations • The system of rational numbers	• The system of rational numbers • The system of real numbers	• The system of real numbers
Expressions and Equations	• Expressions • Quantitative relationships and the algebraic approach to problems	• Expressions • Quantitative relationships and the algebraic approach to solving problems	• Slopes of lines in the coordinate plane • Linear equations and systems
Functions			• Function concepts • Functional relationships between quantities
Geometry	• Properties of area, surface area, and volume	• Congruence and similarity • Angles	• Congruence and similarity • The Pythagorean Theorem • Plane and solid geometry
Statistics and Probability	• Variability and measures of center • Summarizing and describing distributions	• Situations involving randomness • Random sampling to draw inferences about a population • Comparative inferences about two populations	• Patterns of association in bivariate data

Mathematics | Kindergarten

In Kindergarten, instructional time should focus on two critical areas: (1) representing, comparing and ordering whole numbers and joining and separating sets; (2) describing shapes and space. More learning time in Kindergarten should be devoted to number than to other topics.

(1) Students use numbers, including written numerals, to represent quantities and to solve quantitative problems, such as counting objects in a set; creating a set with a given number of objects; comparing and ordering sets or numerals; and modeling simple joining and separating situations with objects. They choose, combine, and apply effective strategies for answering quantitative questions, including quickly recognizing the cardinalities of small sets of objects, counting and producing sets of given sizes, counting the number of objects in combined sets, or counting the number of objects that remain in a set after some are taken away.

(2) Students describe their physical world using geometric ideas (e.g., shape, orientation, spatial relations) and vocabulary. They identify, name, and describe basic shapes, such as squares, triangles, circles, rectangles, (regular) hexagons, and (isosceles) trapezoids, presented in a variety of ways (e.g., with different sizes or orientations), as well as three-dimensional shapes such as spheres, cubes, and cylinders. They use basic shapes and spatial reasoning to model objects in their environment and to construct more complex shapes.

Number—Counting and Cardinality K-NCC

Number names

1. Say the number name sequence to 100.
2. Know the decade words to ninety and recite them in order ("ten, twenty, thirty, …").
3. Say the number name sequence forward or backward beginning from a given number within the known sequence (instead of always beginning at 1).
4. Write numbers from 1 to 20 in base-ten notation.

Counting to tell the number of objects

5. Count to answer "how many?" questions about as many as 20 things. *Objects may be arranged in a line, a rectangular array, a circle, or a scattered configuration.*
6. Understand that when counting objects,
   a. The number names are said in the standard order.
   b. Each object is paired with one and only one number name.
   c. The last number name said tells the number of objects counted.
7. Understand that when counting forward, each successive number name refers to a quantity that is 1 larger.

Comparing and ordering numbers

8. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies. *Include groups with up to ten objects.*
9. Compare and put in order numbers between 1 and 10 presented in written symbols: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

Number—Operations and the Problems They Solve K-NOP

Composing and decomposing numbers; addition and subtraction

1. Understand addition as putting together—e.g., finding the number of objects in a group formed by putting two groups together. Understand subtraction as taking apart—e.g., finding the number of objects left when a one group is taken from another.
2. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations. *Note that drawings need not show details, but should show the mathematics in the problem. (This note also applies wherever drawings are mentioned in subsequent standards.)*
3. ❖Decompose numbers less than or equal to 10 into pairs in various ways, e.g., using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5 = 2 + 3$). Compose numbers whose sum is less than or equal to 10, e.g., using objects or drawings, and record each composition by a drawing or equation (e.g., $3 + 1 = 4$).❖
4. Compose and decompose numbers less than or equal to 10 in two different ways, and record compositions and decompositions by drawings or equations. *For example, 7 might be composed or decomposed in two different ways by a drawing showing how a group of 2 and a group of 5 together make the same number as do a group of 3 and a group of 4.*
5. ❖Understand that addition and subtraction are related. *For example, when a group of 9 is decomposed into a group of 6 and a group of 3, this means not only $9 = 6 + 3$ but also $9 - 3 = 6$ and $9 - 6 = 3$.*
6. ❖Solve addition and subtraction word problems, and calculate additions and subtractions within 10, e.g., using objects or drawings to represent the problem.
7. Fluently add and subtract, for sums and minuends of 5 or less.

Number—Base Ten K-NBT

Two-digit numbers

1. Understand that 10 can be thought of as a bundle of ones—a unit called a "ten."
2. Understand that a teen number is composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
3. Compose and decompose teen numbers into a ten and some ones, e.g., by using objects or drawings, and record the compositions and decompositions in base-ten notation. *For example, $10 + 8 = 18$ and $14 = 10 + 4$.*
4. Put in order numbers presented in base-ten notation from 1 to 20 (inclusive), and be able to explain the reasoning.
5. Understand that a decade word refers to one, two, three, four, five, six, seven, eight, or nine tens.
6. Understand that the two digits of a two-digit number represent amounts of tens and ones. *In 29, for example, the 2 represents two tens and the 9 represents nine ones.*

Composing and decomposing ten

7. Decompose 10 into pairs of numbers, e.g., by using objects or drawings, and record each decomposition with a drawing or equation.
8. Compose numbers to make 10, e.g., by using objects or drawings, and record each composition with a drawing or equation.
9. ❖For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.

Measurement and Data K-MD

Direct measurement

1. Understand that objects have measurable attributes, such as length or weight. A single object might have several measurable attributes of interest.
2. Directly compare two objects with a measurable attribute in common, to see which object has "more of" the attribute. *For example, directly compare the heights of two books and identify which book is taller.*

Representing and interpreting data

3. Classify objects or people into given categories; count the numbers in each category and sort the categories by count. *Limit category counts to be less than or equal to 10.*

Geometry K-G

Shapes, their attributes, and spatial reasoning

1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to*.
2. Understand that names of shapes apply regardless of the orientation or overall size of the shape. *For example, a square in any orientation is still a square. Students may initially need to physically rotate a shape until it is "level" before they can correctly name it.*
3. Understand that shapes can be two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").
4. Understand that shapes can be seen as having parts, such as sides and vertices ("corners"), and that shapes can be put together to compose other shapes.
5. Analyze and compare a variety of two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, component parts (e.g., number of sides and vertices) and other attributes (e.g., having sides of equal length).
6. Combine two- or three-dimensional shapes to solve problems such as deciding which puzzle piece will fit into a place in a puzzle.

In Grade 1, instructional time should focus on four critical areas: (1) developing understanding of addition, subtraction, and strategies for additions and subtractions within 20; (2) developing understanding of whole number relationships, including grouping in tens and ones, (3) developing understanding of linear measurement and measuring lengths, and (4) composing and decomposing geometric shapes.

(1) Students develop strategies for adding and subtracting whole numbers based on their prior work with small numbers. They use a variety of models, including discrete objects and length-based models (e.g., cubes connected to form lengths), to model "put together/take apart," "add to," "take from," and "compare" situations to develop meaning for the operations of addition and subtraction, and to develop strategies to solve arithmetic problems with these operations. Students understand connections between counting and addition and subtraction (i.e., adding two is the same as counting on two). They use properties of addition (commutativity and associativity) to add whole numbers and to create and use increasingly sophisticated strategies based on these properties (e.g., "making tens") to solve addition and subtraction problems within 20. By comparing a variety of solution strategies, children build their understanding of the inverse relationship between addition and subtraction.

(2) Students compare and order whole numbers (at least to 100), to develop understanding of and solve problems involving their relative sizes. They think of whole numbers between 10 and 100 in terms of tens and ones (especially recognizing the numbers 11 to 19 as composed of a ten and some ones). They understand the sequential order of the counting numbers and their relative magnitudes through activities such as representing numbers on paths of numbered things.

(3) Students develop an understanding of the meaning and processes of measurement, including underlying concepts such as partitioning (the mental activity of decomposing the length of an object into equal-sized units) and transitivity (e.g., in terms of length, if object A is longer than object B and object B is longer than object C, then object A is longer than object C). They understand linear measure as an iteration of units, and use rulers and other measurement tools with that understanding.

(4) Students compose and decompose plane and solid figures (e.g., put two congruent isosceles triangles together to make a rhombus), building understanding of part-whole relationships as well as the properties of the original and composite shapes. As they combine solid and plane figures, they recognize them from different perspectives and orientations, describe their geometric attributes, and determine how they are alike and different, to develop the background for measurement and for initial understandings of properties such as congruence and symmetry.

Number—Operations and the Problems They Solve 1-NOP

Addition and subtraction

1. ❖Understand the properties of addition.
   a. Addition is commutative. *For example, if 3 cups are added to a stack of 8 cups, then the total number of cups is the same as when 8 cups are added to a stack of 3 cups; that is, 8 + 3 = 3 + 8.*
   b. Addition is associative. *For example, 4 + 3 + 2 can be found by first adding 4 + 3 = 7 then adding 7 + 2 = 9, or by first adding 3 + 2 = 5 then adding 4 + 5 = 9.*
   c. 0 is the additive identity.
2. ❖Explain and justify properties of addition and subtraction, e.g., by using representations such as objects, drawings, and story contexts. Explain what happens when:
   a. The order of addends in a sum is changed in a sum with two addends.
   b. 0 is added to a number.
   c. A number is subtracted from itself.
   d. One addend in a sum is increased by 1 and the other addend is decreased by 1. *Limit to two addends.*
3. ❖Understand that addition and subtraction have an inverse relationship. *For example, if 8 + 2 = 10 is known, then 10 – 2 = 8 and 10 – 8 = 2 are also known.*
4. ❖Understand that when all but one of three numbers in an addition or subtraction equation are known, the unknown number can be found. *Limit to cases where the unknown number is a whole number.*
5. Understand that addition can be recorded by an expression (e.g., 6 + 3), or by an equation that shows the sum (e.g., 6 + 3 = 9). Likewise, subtraction can be recorded by an expression (e.g., 9 – 5), or by an equation that shows the difference (e.g., 9 – 5 = 4).

Describing situations and solving problems with addition and subtraction

6. Understand that addition and subtraction apply to situations of adding-to, taking-from, putting together, taking apart, and comparing. *See Glossary, Table 1.*
7. ❖Solve word problems involving addition and subtraction within 20, e.g., by using objects, drawings and equations to represent the problem. *Students should work with all of the addition and subtraction situations shown in the Glossary, Table 1, solving problems with unknowns in all positions, and representing these situations with equations that use a symbol for the unknown (e.g., a question mark or a small square). Grade 1 students need not master the more difficult problem types.*
8. Solve word problems involving addition of three whole numbers whose sum is less than or equal to 20.

Number—Base Ten 1-NBT

Numbers up to 100

1. Read and write numbers to 100.
2. Starting at any number, count to 100 or beyond.
3. Understand that when comparing two-digit numbers, if one number has more tens, it is greater; if the amount of tens is the same in each number, then the number with more ones is greater.
4. Compare and order two-digit numbers based on meanings of the tens and ones digits, using > and < symbols to record the results of comparisons.

Adding and subtracting in base ten

5. Calculate mentally, additions and subtractions within 20.
   a. Use strategies that include counting on; making ten (for example, 7 + 6 = 7 + 3 + 3 = 10 + 3 = 13); and decomposing a number (for example, 17 – 9 = 17 – 7 – 2 = 10 – 2 = 8).
6. Demonstrate fluency in addition and subtraction within 10.
7. Understand that in adding or subtracting two-digit numbers, one adds or subtracts like units (tens and tens, ones and ones) and sometimes it is necessary to compose or decompose a higher value unit.
8. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count.
9. Add one-digit numbers to two-digit numbers, and add multiples of 10 to one-digit and two-digit numbers.
10. Explain addition of two-digit numbers using concrete models or drawings to show composition of a ten or a hundred.
11. ❖Add two-digit numbers to two-digit numbers using strategies based on place value, properties of operations, and/or the inverse relationship between addition and subtraction; explain the reasoning used.

Measurement and Data 1-MD

Length measurement

1. Order three objects by length; compare the length of two objects indirectly by using a third object.
2. Understand that the length of an object can be expressed numerically by using another object as a length unit (such as a paper-clip, yardstick, or inch length on a ruler). The object to be measured is partitioned into as many equal parts as possible with the same length as the length unit. The length measurement of the object is the number of length units that span it with no gaps or overlaps. *For example, "I can put four paperclips end to end along the pencil, so the pencil is four paperclips long."*
3. Measure the length of an object by using another object as a length unit.

Time measurement

4. Tell time from analog clocks in hours and half- or quarter-hours.

Representing and interpreting data

5. Organize, represent, and interpret data with several categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Geometry 1-G

Shapes, their attributes, and spatial reasoning

1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) for a wide variety of shapes.
2. Understand that shapes can be joined together (composed) to form a larger shape or taken apart (decomposed) into a collection of smaller shapes. Composing multiple copies of some shapes creates tilings. *In this grade, "circles," "rectangles," and other shapes include their interiors as well as their boundaries.*
3. Compose two-dimensional shapes to create a unit, using cutouts of rectangles, squares, triangles, half-circles, and quarter-circles. Form new shapes by repeating the unit.
4. Compose three-dimensional shapes to create a unit, using concrete models of cubes, right rectangular prisms, right circular cones, and right circular cylinders. Form new shapes by repeating the unit. *Students do not need to learn formal names such as "right rectangular prism."*
5. Decompose circles and rectangles into two and four equal parts. Describe the parts using the words *halves*, *fourths*, and *quarters*, and using the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the parts. Understand that decomposing into more equal shares creates smaller shares.
6. Decompose two-dimensional shapes into rectangles, squares, triangles, half-circles, and quarter-circles, including decompositions into equal shares.

Mathematics | Grade 2

In Grade 2, instructional time should focus on three critical areas: (1) developing understanding of base-ten notation; (2) developing fluency with additions and subtractions within 20 and fluency with multi-digit addition and subtraction; and (3) describing and analyzing shapes.

(1) Students develop an understanding of the base-ten system (at least to 1000). Their understanding of the base-ten system includes ideas of counting in units (twos, fives, and tens) and multiples of hundreds, tens, and ones, as well as number relationships, including comparing and ordering. They understand multi-digit numbers (up to 1000) written in base-ten notation, recognizing that the digits in each place represent thousands, hundreds, tens, or ones (e.g., 853 is 8 hundreds + 5 tens + 3 ones).

(2) Students use their understanding of addition to develop fluency with additions and subtractions within 20. They solve arithmetic problems by applying their understanding of models for addition and subtraction (such as combining or separating sets or using number lines that begin with zero), relationships and properties of numbers, and properties of addition. They develop, discuss, and use efficient, accurate, and generalizable methods to compute sums and differences of two-digit whole numbers. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally calculate sums and differences. They develop fluency with efficient procedures, including standard algorithms, for adding and subtracting whole numbers; understand and explain why the procedures work based on their understanding of base-ten notation and properties of operations; and use them to solve problems.

(3) Students describe and analyze shapes by examining their sides and angles. Students investigate, describe, and reason about decomposing and combining shapes to make other shapes. Through building, drawing, and analyzing two- and three-dimensional shapes, students develop a foundation for understanding attributes of two- and three-dimensional space such as area and volume, and properties such as congruence and symmetry that they will learn about in later grades.

Number—Operations and the Problems They Solve 2-NOP

Addition and subtraction

1. ❖Explain and justify properties of addition and subtraction, e.g., by using representations such as objects, drawings, and story contexts. Include properties such as:
   a. Changing the order of addends does not change their sum.
   b. Subtracting one addend from a sum of two numbers results in the other addend.
   c. If more is subtracted from a number, the difference is decreased, and if less is subtracted the difference is increased.
   d. In an addition equation, each addend can be decomposed and the parts can be recombined in any order without changing the sum. *For example, 5 + 3 = 8. Because 5 decomposes as 4 + 1, the first addend can be replaced by 4 + 1, yielding (4 + 1) + 3 = 8. Recombining in two different orders: 4 + 4 = 8, also 7 + 1 = 8.*

Describing situations and solving problems with addition and subtraction

2. ❖Solve word problems involving addition and subtraction within 100, e.g., by using drawings or equations to represent the problem. *Students should work with all of the addition and subtraction situations shown in the Glossary, Table 1, solving problems with unknown sums, addends, differences, minuends, and subtrahends, and representing these situations with equations that use a symbol for the unknown (e.g., a question mark or a small square). Focus on the more difficult problem types.*
3. Solve two-step word problems involving addition and subtraction within 100, e.g., by using drawings or equations to represent the problem.

Number—Base Ten 2-NBT

Numbers up to 1000

1. Understand that 100 can be thought of as a bundle of tens—a unit called a "hundred."
2. Read and write numbers to 1000 using base-ten notation, number names, and expanded form.
3. Count within 1000; skip count by 2s, 5s, 10s, and 100s.
4. Understand that when comparing three-digit numbers, if one number has more hundreds, it is greater; if the amount of hundreds is the same in each number, then the number with more tens is greater. If the amount of tens and hundreds is the same in each number, then the number with more ones is greater.
5. Compare and order three-digit numbers based on meanings of the hundreds, tens, and ones digits.

Adding and subtracting in base ten

6. Fluently add and subtract within 20. By end of Grade 2, know from memory sums of one-digit numbers.
7. Mentally compute sums and differences of multiples of 10. *For example, mentally calculate 130 – 80.*
8. Understand that in adding or subtracting three-digit numbers, one adds or subtracts like units (hundreds and hundreds, tens and tens, ones and ones) and sometimes it is necessary to compose or decompose a higher value unit.
9. Given a number from 100 to 900, mentally find 10 more or 10 less than the number, and mentally find 100 more or 100 less than the number, without counting.
10. Understand that algorithms are predefined steps that give the correct result in every case, while strategies are purposeful manipulations that may be chosen for specific problems, may not have a fixed order, and may be aimed at converting one problem into another. *For example, one might mentally compute 503 – 398 as follows: 398 + 2 = 400, 400 + 100 = 500, 500 + 3 = 503, so the answer is 2 + 100 + 3, or 105.*
11. ❖ Compute sums and differences of one-, two-, and three-digit numbers using strategies based on place value, properties of operations, and/or the inverse relationship between addition and subtraction; explain the reasoning used.
12. ❖Explain why addition and subtraction strategies and algorithms work, using place value and the properties of operations. *Include explanations supported by drawings or objects. A range of reasonably efficient algorithms may be covered, not only the standard algorithm.*
13. Compute sums of two three-digit numbers, and compute sums of three or four two-digit numbers, using the standard algorithm; compute differences of two three-digit numbers using the standard algorithm.

Measurement and Data 2-MD

Length measurement

1. Understand that 1 inch, 1 foot, 1 centimeter, and 1 meter are conventionally defined lengths used as standard units.
2. Measure lengths using measurement tools such as rulers, yardsticks and measuring tapes; understand that these tools are used to find out how many standard length units span an object with no gaps or overlaps, when the 0 mark of the tool is aligned with an end of the object.

3. Understand that when measuring a length, if a smaller unit is used, more copies of that unit are needed to measure the length than would be necessary if a larger unit were used.
4. Understand that units can be decomposed into smaller units, e.g., 1 foot can be decomposed into 12 inches and 1 meter can be decomposed into 100 centimeters. A small number of long units might compose a greater length than a large number of small units.
5. Understand that lengths can be compared by placing objects side by side, with one end lined up. The difference in lengths is how far the longer extends beyond the end of the shorter.
6. Understand that a sum of two whole numbers can represent a combination of two lengths; a difference of two whole numbers can represent a difference in length; find total lengths and differences in lengths using addition and subtraction.

Time and money

7. Find time intervals between hours in one day.
8. Solve word problems involving dollar bills, quarters, dimes, nickels and pennies. *Do not include dollars and cents in the same problem.*

Representing and interpreting data

9. Generate measurement data by measuring whole-unit lengths of several objects, or by making repeated measurements of the same object. Show the measurements by making a dot plot, where the horizontal scale is marked off in whole-number units.
10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with several categories. Connect representations on bar graph scales, rulers, and number lines that begin with zero. Solve simple Put Together/Take Apart and Compare problems using information presented in a bar graph. *See Glossary, Table 1.*

Geometry 2-G

Shapes, their attributes, and spatial reasoning

1. Understand that different categories of shapes (e.g., rhombuses, trapezoids, rectangles, and others) can be united into a larger category (e.g., quadrilaterals) on the basis of shared attributes (e.g., having four straight sides).
2. Identify and name polygons of up to six sides by the number of their sides or angles.
3. Recognize rectangles, rhombuses, squares and trapezoids as examples of quadrilaterals; draw examples of quadrilaterals that do not belong to any of these subcategories.
4. Draw and identify shapes that have specific attributes, such as number of equal sides or number of equal angles. *Sizes of lengths and angles are compared directly or visually, not compared by measuring.*
5. Recognize objects as resembling spheres, right circular cylinders, and right rectangular prisms. *Students do not need to learn formal names such as "right rectangular prism."*
6. Decompose circular and rectangular objects into two, three, or four equal parts. Describe the parts using the words *halves*, *thirds*, *half of*, *a third of*, etc.; describe the wholes as two halves, three thirds, four fourths. Recognize that a half, a third, or a fourth of a circular or rectangular object—a graham cracker, for example—is the same size regardless of its shape.

In Grade 3, instructional time should focus on four critical areas: (1) developing understanding of multiplication and division and strategies for multiplication and division within 100; (2) developing understanding of fractions, starting with unit fractions; (3) developing understanding of the structure of rectangular arrays and of area; and (4) describing and analyzing two-dimensional shapes. Multiplication, division, and fractions are the most important developments in Grade 3.

(1) Students develop an understanding of the meanings of multiplication and division of whole numbers through the use of representations such as equal-sized groups, arrays, area models, and equal jumps on number lines for multiplication; and successive subtraction, partitioning, and sharing for division. Through this process, numbers themselves take on new meaning and are no longer only counters for single objects. They represent groups, a number of groups (for example, 3 teams of 6 people), or a comparative factor (3 times as long).

Students use properties of operations to calculate products of whole numbers. They use increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the inverse relationship between multiplication and division.

(2) Students develop an understanding of a definition of a fraction, beginning with unit fractions. They use fractions to represent parts of a whole or distances on a number line that begins with zero. Students understand that the size of a fractional part is relative to the size of the whole (for example, $\frac{1}{4}$ of a mile is longer than $\frac{3}{4}$ of a foot, even though $\frac{1}{4} < \frac{3}{4}$), and they are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing and ordering fractions using by models or strategies based on noticing common numerators or denominators.

(3) Students recognize area as an attribute of two-dimensional regions. They understand that area can be quantified by finding the total number of same-size units of area required to cover the shape without gaps or overlaps. They understand that a 1-unit by 1-unit square is the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area measure to the area model used to represent multiplication, and they use this connection to justify using multiplication to determine the area of a rectangle. Students contrast area with perimeter.

(4) Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify the shapes by their sides and angles, and connect these with definitions of shapes. Students investigate, describe, and reason about decomposing and combining polygons to make other polygons. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of attributes and properties of two-dimensional objects.

Multiplication and division

1. Understand that multiplication of whole numbers is repeated addition. *For example, 5 × 7 means 7 added to itself 5 times. Products can be represented by rectangular arrays, with one factor the number of rows and the other the number of columns.*
2. ❖Understand the properties of multiplication.
   a. Multiplication is commutative. *For example, the total number in 3 groups with 6 things each is the same as the total number in 6 groups with 3 things each, that is, $3 \times 6 = 6 \times 3$.*
   b. Multiplication is associative. *For example, $4 \times 3 \times 2$ can be calculated by first calculating $4 \times 3 = 12$ then calculating $12 \times 2 = 24$, or by first calculating $3 \times 2 = 6$ then calculating $4 \times 6 = 24$.*
   c. 1 is the multiplicative identity.
   d. Multiplication distributes over addition (the distributive property). *For example, $5 \times (3 + 4) = (5 \times 3) + (5 \times 4)$.*
3. ❖Explain and justify properties of multiplication and division, e.g., by using representations such as objects, drawings, and story contexts. Include properties such as:
   a. Changing the order of two factors does not change their product.
   b. The product of a number and 1 is the number.
   c. Dividing a nonzero number by itself yields 1.
   d. Multiplying a quantity by a nonzero number, then dividing by the same number, yields the original quantity.
   e. When one factor in a product is multiplied by a number and another factor divided by the same number, the product is unchanged. *Limit to multiplying and dividing by numbers that result in whole-number quotients.*
   f. Products where one factor is a one-digit number can be computed by decomposing one factor as the sum of two numbers, multiplying each number by the other factor, and adding the two products.
4. ❖Understand that multiplication and division have an inverse relationship. *For example, if $5 \times 7 = 35$ is known, then $35 \div 5 = 7$ and $35 \div 7 = 5$ are also known. The division $35 \div 5$ means the number which yields 35 when multiplied by 5; because $5 \times 7 = 35$, then $35 \div 5 = 7$.*
5. ❖Understand that when all but one of three numbers in a multiplication or division equation are known, the unknown number can be found. *Limit to cases where the unknown number is a whole number.*

Describing situations and solving problems with multiplication and division

6. Understand that multiplication and division apply to situations with equal groups, arrays or area, and comparing. *See Glossary, Table 2.*
7. ❖Solve word problems involving multiplication and division within 100, using an equation with a symbol for the unknown to represent the problem. *This standard is limited to problems with whole-number quantities and whole-number quotients. Focus on situations described in the Glossary, Table 2.*
8. ❖Solve one- or two-step word problems involving the four operations. *This standard is limited to problems with whole-number quantities and whole-number quotients.*
9. Understand that multiplication and division can be used to compare quantities (see Glossary, Table 2); solve multiplicative comparison problems with whole numbers (problems involving the notion of "times as much").

Number—Base Ten 3-NBT

Numbers up to 10,000

1. Understand that 1000 can be thought of as a bundle of hundreds—a unit called a "thousand."
2. Read and write numbers to 10,000 using base-ten notation, number names, and expanded form.
3. Count within 10,000; skip count by 10s, 100s and 1000s.
4. Understand that when comparing four-digit numbers, if one number has more thousands, it is greater; if the amount of thousands is the same in each number, then the number with more hundreds is greater; and so on. Compare and order four-digit numbers based on meanings of the digits.

Adding and subtracting in base ten

5. Mentally calculate sums and differences of multiples of 10, 100, and 1000. *For example, mentally calculate $1300 - 800$*
6. Given a number from 1000 to 9000, mentally find 100 more or 100 less than the number, and mentally find 1000 more or 1000 less than the number, without counting.

Multiplying and dividing in base ten

7. ❖Understand that the distributive property is at the heart of strategies and algorithms for multiplication and division computations with numbers in base-ten notation; use the distributive property and other properties of operations to explain patterns in the multiplication table and to derive new multiplication and division equations from known ones. *For example, the distributive property makes it possible to multiply* 4×7 *by decomposing 7 as* $5 + 2$ *and using* $4 \times 7 = 4 \times (5 + 2) = (4 \times 5) + (4 \times 2) = 20 + 8 = 28$.
8. Fluently multiply one-digit numbers by 10.
9. Use a variety of strategies for multiplication and division within 100. By end of Grade 3, know from memory products of one-digit numbers where one of the factors is 2, 3, 4, or 5.

Number—Fractions 3-NF

Fractions as representations of numbers

1. Understand that a unit fraction corresponds to a point on a number line. *For example, 1/3 represents the point obtained by decomposing the interval from 0 to 1 into three equal parts and taking the right-hand endpoint of the first part. In Grade 3, all number lines begin with zero.*
2. Understand that fractions are built from unit fractions. *For example, 5/4 represents the point on a number line obtained by marking off five lengths of ¼ to the right of 0.*
3. Understand that two fractions are equivalent (represent the same number) when both fractions correspond to the same point on a number line. Recognize and generate equivalent fractions with denominators 2, 3, 4, and 6 (e.g., $1/2 = 2/4$, $4/6 = 2/3$), and explain the reasoning.
4. Understand that whole numbers can be expressed as fractions. *Three important cases are illustrated by the examples* $1 = 4/4$, $6 = 6/1$, *and* $7 = (4 \times 7)/4$. *Expressing whole numbers as fractions can be useful for solving problems or making calculations.*

Fractional quantities

5. Understand that fractions apply to situations where a whole is decomposed into equal parts; use fractions to describe parts of wholes. *For example, to show 1/3 of a length, decompose the length into 3 equal parts and show one of the parts.*
6. Compare and order fractional quantities with equal numerators or equal denominators, using the fractions themselves, tape diagrams, number line representations, and area models. Use > and < symbols to record the results of comparisons.

Measurement and Data 3-MD

The number line and units of measure

1. Understand that a number line has an origin (0) and a unit (1), with whole numbers one unit distance apart. Use number lines to represent problems involving distances, elapsed time, amounts of money and other quantities. *In such problems, the interval from 0 to 1 may represent a unit of distance, time, money, etc.*
2. Understand that a unit of measure can be decomposed into equal-sized parts, whose sizes can be represented as fractions of the unit. Convert measurements in one unit to measurements in a smaller or a larger unit, and solve problems involving such mixed units (e.g., feet and inches, weeks and days).

Perimeter and area

3. Understand and use concepts of area measurement.
   a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
   b. A plane figure which can be covered without gaps or overlaps by *n* unit squares has an area of *n* square units. Areas of some other figures can be measured by using fractions of unit squares or using figures whose areas have been found by decomposing other figures.
   c. When measuring an area, if a smaller unit of measurement is used, more units must be iterated to measure the area in those units.
   d. Determine and compare areas by counting square units. *Use* cm^2, m^2, in^2, ft^2, *and improvised units.*
4. Understand that multiplication of whole numbers can be represented by area models; a rectangular region that is *a* length units by *b* length units (where *a* and *b* are whole numbers) and tiled with unit squares illustrates why the rectangle encloses an area of $a \times b$ square units.
5. Solve problems involving perimeters of polygons.
   a. Add given side lengths, and multiply for the case of equal side lengths.
   b. ❖Find an unknown length of a side in a polygon given the perimeter and all other side lengths; represent these problems with equations involving a letter for the unknown quantity.
   c. Exhibit rectangles with the same perimeter and different area, and with the same area and different perimeter.

Representing and interpreting data

6. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *Include single-unit scales and multiple-unit scales; for example, each square in the bar graph might represent 1 pet, 5 pets, or 10 pets.*
7. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a dot plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Geometry 3-G

Properties of 2-dimensional shapes

1. Understand that a given category of plane figures (e.g., triangles) has subcategories (e.g., isosceles triangles) defined by special properties.
2. Describe, analyze, compare and classify two-dimensional shapes by their properties and connect these properties to the classification of shapes into categories and subcategories (e.g., squares are "special rectangles" as well as "special rhombuses"). *Focus on triangles and quadrilaterals.*

Structuring rectangular shapes

3. Understand that rectangular regions can be tiled with squares in rows and columns, or decomposed into such arrays.
4. Structure a rectangular region spatially by decomposing it into rows and columns of squares. Determine the number of squares in the region using that spatial structure (e.g., by multiplication or skip counting).
5. Understand that shapes can be decomposed into parts with equal areas; the area of each part is a unit fraction of the whole. *For example, when a shape is partitioned into 4 parts with equal area, the area of each part is ¼ of the area of the shape.*

Mathematics | Grade 4

In Grade 4, instructional time should focus on four critical areas: (1) continuing to develop understanding and fluency with whole number multiplication, and developing understanding of multi-digit whole number division; (2) developing an understanding of addition and subtraction of fractions with like denominators, multiplication of fractions by whole numbers, and division of whole numbers with fractional answers; (3) developing an understanding of area; and (4) understanding that geometric figures can be analyzed and classified using properties such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

(1) Students use understandings of multiplication to develop fluency with multiplication and division within 100. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models, equal intervals on a number line), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate products or mentally calculate products. They develop fluency with efficient procedures, including the standard algorithm, for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate quotients and mentally calculate quotients, depending upon the context and the numbers involved.

(2) Students develop understanding of operations with fractions. They apply their understandings of fractions as built from unit fractions, and use fraction models to represent the addition and subtraction of fractions with like denominators. Students use the meaning of fractions and the meaning of multiplication to understand and explain why the procedure for multiplying a fraction by a whole number makes sense. They understand and explain the connection between division and fractions.

(3) Students develop their understanding of area. They understand and apply the area formula for rectangles and also find areas of shapes that can be decomposed into rectangles. They select appropriate units, strategies (e.g., decomposing shapes), and tools for solving problems that involve estimating and measuring area.

(4) Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

Multiplication and division

1. Find the factor pairs for a given whole number less than or equal to 100; recognize prime numbers as numbers greater than 1 with exactly one factor pair. *Example: The factor pairs of 42 are {42, 1}, {21, 2}, {14, 3}, {7, 6}.*

Problem solving with the four operations

2. ❖Solve multistep word problems involving the four operations with whole numbers.
3. ❖Solve problems posed with both whole numbers and fractions. Understand that while quantities in a problem might be described with whole numbers, fractions, or decimals, the operations used to solve the problem depend on the relationships between the quantities regardless of which number representations are involved.
4. Assess the reasonableness of answers using mental computation and estimation strategies including rounding to the nearest 10 or 100.

Number—Base Ten 4-NBT

Numbers up to 100,000

1. Understand that a digit in one place represents ten times what it represents in the place to its right. *For example, 7 in the thousands place represents 10 times as many as than 7 in the hundreds place.*
2. Read, write and compare numbers to 100,000 using base-ten notation, number names, and expanded form.

Multiplying and dividing in base ten

3. Understand how the distributive property and the expanded form of a multi-digit number can be used to calculate products of multi-digit numbers.
   a. ❖The product of a one-digit number times a multi-digit number is the sum of the products of the one-digit number with the summands in the expanded form of the multi-digit number. Illustrate this numerically and visually using equations, rectangular arrays, area models, and tape diagrams.
   b. Algorithms for multi-digit multiplication can be derived and explained by writing multi-digit numbers in expanded form and applying the distributive property.
4. Fluently multiply and divide within 100. By end of Grade 4, know from memory products of one-digit numbers where one of the factors is 6, 7, 8, or 9.
5. Mentally calculate products of one-digit numbers and one-digit multiples of 10, 100, and 1000 (e.g., 7×6000). Mentally calculate whole number quotients with divisors of 10 and 100.
6. Compute products and whole number quotients of two-, three- or four-digit numbers and one-digit numbers, and compute products of two two-digit numbers, using strategies based on place value, the properties of operations, and/or the inverse relationship between multiplication and division; explain the reasoning used.
7. Explain why multiplication and division strategies and algorithms work, using place value and the properties of operations. *Include explanations supported by drawings, equations, or both. A range of reasonably efficient algorithms may be covered, not only the standard algorithms.*
8. Compute products of two-digit numbers using the standard algorithm, and check the result using estimation.
9. Given two whole numbers, find an equation displaying the largest multiple of one which is less than or equal to the other. *For example, given 325 and 7, the equation $325 = 46 \times 7 + 3$ shows the largest multiple of 7 less than or equal to 325.*

Number—Fractions 4-NF

Operations on fractions

1. Understand addition of fractions:
   a. Adding or subtracting fractions with the same denominator means adding or subtracting copies of unit fractions. *For example, $2/3 + 4/3$ is 2 copies of $1/3$ plus 4 copies of $1/3$, or 6 copies of $1/3$ in all, that is $6/3$.*
   b. Sums of related fractions can be computed by replacing one with an equivalent fraction that has the same denominator as the other. *For example, the sum of the related fractions $2/3$ and $1/6$ can be computed by rewriting $2/3$ as $4/6$ and computing $4/6 + 1/6 = 5/6$.*
2. Compute sums and differences of fractions with like denominators, add and subtract related fractions within 1 (e.g., $\frac{1}{2} + \frac{1}{4}$, $\frac{3}{10} + \frac{4}{100}$, $\frac{7}{8} - \frac{1}{4}$), and solve word problems involving these operations.
3. ❖ Understand that the meaning of multiplying a fraction by a whole number comes from interpreting multiplication by a whole number as repeated addition. *For example, $3 \times 2/5 = 6/5$ because $3 \times 2/5 = 2/5 + 2/5 + 2/5 = 6/5$.*

4. Solve word problems that involve multiplication of fractions by whole numbers; represent multiplication of fractions by whole numbers using tape diagrams and area models that explain numerical results.
5. ❖Understand that fractions give meaning to the quotient of any whole number by any non-zero whole number. *For example, $3 \div 4 = 3/4$, because $3/4$ multiplied by 4 equals 3. (The division $3 \div 4$ means the number which yields 3 when multiplied by 4.)*
6. Solve word problems that involve non-whole number quotients of whole numbers; represent quotients of whole numbers using tape diagrams and area models that explain numerical results.

Decimal concepts

7. Understand that a two-digit decimal is a sum of fractions with denominators 10 and 100. *For example, 0.34 is $3/10 + 4/100$.*
8. Use decimals to hundredths to describe parts of wholes; compare and order decimals to hundredths based on meanings of the digits; and write fractions of the form $a/10$ or $a/100$ in decimal notation. *Use > and < symbols to record the results of comparisons.*

Measurement and Data 4-MD

The number line and units of measure

1. Understand that the unit length on a number line (interval from 0 to 1) can be divided into parts of equal fractional length. Draw number line representations of problem situations involving length, height, and distance including fractional or decimal units. *For example, show distances along a race course to tenths of a mile on a number line, by dividing the unit length into 10 equal parts to get parts of length 1/10; the endpoint of the segment of 1/10 length from 0 represents 1/10 of a mile from the starting point of the race. In Grade 4, all numbers lines begin with zero.*

Perimeter and area

2. Understand that if a region is decomposed into several disjoint pieces, then the area of the region can be found by adding the areas of the pieces (when these areas are expressed in the same units).
3. ❖Apply the formulas for area of squares and rectangles. Measure and compute whole-square-unit areas of objects and regions enclosed by geometric figures which can be decomposed into rectangles. *Limit to situations requiring products of one-or two-digit numbers.*
4. ❖Find one dimension of a rectangle, given the other dimension and the area or perimeter; find the length of one side of a square, given the area or perimeter. Represent these problems using equations involving a letter for the unknown quantity.

Angle measurement

5. Understand what an angle is and how it is measured:
   a. An angle is formed by two rays with a common endpoint.
   b. An angle is measured by reference to a circle with its center at the common endpoint of the rays. The measure of an angle is based on the fraction of the circle between the points where the two rays intersect the circle.
   c. A one-degree angle turns through 1/360 of a circle, where the circle is centered at the common endpoint of its rays; the measure of a given angle is the number of one-degree angles turned with no gaps or overlaps.
6. Measure angles in whole-number degrees using a protractor; sketch angles of specified measure; ❖find the measure of a missing part of an angle, given the measure of the angle and the measure of a part of it, representing these problems with equations involving a letter for the unknown quantity.

Representing and interpreting data

7. Make a dot plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in dot plots. *For example, from a dot plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

Geometry 4-G

Lines and angles

1. Draw points, lines, line segments, rays, angles, and perpendicular and parallel lines; identify these in plane figures.
2. Identify right angles, and angles smaller than or greater than a right angle in geometric figures; recognize right triangles.
3. Classify shapes based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of specified size.

Line symmetry

4. Understand that a line of symmetry for a geometric figure is a line across the figure such that the figure can be folded along the line into matching parts

5. Identify line-symmetric figures; given a horizontal or vertical line and a drawing that is not a closed figure, complete the drawing to create a figure that is symmetric with respect to the given line.

Mathematics | Grade 5

In Grade 5, instructional time should focus on four critical areas: (1) developing fluency with addition and subtraction of fractions, developing understanding of the multiplication of fractions and of division of fractions in limited cases (fractions divided by whole numbers and whole numbers divided by unit fractions); (2) developing understanding of and fluency with division of multi-digit whole numbers; (3) developing understanding of and fluency with addition, subtraction, multiplication, and division of decimals; and (4) developing understanding of volume.

(1) Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the inverse relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing fractions by whole numbers and whole numbers by unit fractions.)

(2) Students develop fluency with division of whole numbers; understand why procedures work based on the meaning of base-ten notation and properties of operations; and use these procedures to solve problems. Based on the context of a problem situation, they select the most useful form of the quotient for the answer and interpret it appropriately.

(3) Students apply their understandings of models for decimals, decimal notation, and properties of operations to compute sums and differences of finite decimals. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of finite decimals efficiently and accurately.

(4) Students recognize volume as an attribute of three-dimensional space. They understand that volume can be quantified by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve problems.

Whole numbers in base ten

1. Compute quotients of two-, three-, and four-digit whole numbers and two-digit whole numbers using strategies based on place value, the properties of operations, and/or the inverse relationship between multiplication and division; explain the reasoning used.
2. Explain why division strategies and algorithms work, using place value and the properties of operations. *Include explanations supported by drawings, equations, or both. A range of reasonably efficient algorithms may be covered, not only the standard algorithm.*
3. Use the standard algorithm to compute quotients of two-, three- and four-digit whole numbers and two-digit whole numbers, expressing the results as an equation (e.g., $145 = 11 \times 13 + 2$ or $120 \div 7 = 17\ 1/7$).
4. Fluently add, subtract and multiply whole numbers using the standard algorithm for each operation.

Decimal concepts

5. Read, write, and compare numbers expressed as decimals. Understand that a digit in one place represents ten times what it represents in the place to its right. *For example, 7 in the hundredths place represents 10 times as many as 7 in the thousandths place.*
6. Round decimals (to hundredths) to the nearest whole number.
7. Write fractions in decimal notation for fractions with denominators 2, 4, 5, 8, 10, and 100.

Operations on decimals

8. Understand that in adding or subtracting finite decimals, one adds or subtracts like units (tenths and tenths, hundredths and hundredths, etc.) and sometimes it is necessary to compose or decompose a higher value unit.
9. Fluently find 0.1 more than a number and less than a number; 0.01 more than a number and less than a number; and 0.001 more than a number and less than a number, for numbers expressed as finite decimals.
10. Compute sums and differences of finite decimals by expressing the decimals as fractions and adding the fractions. *For example, $0.05 + 0.91 = 5/100 + 91/100 = 96/100$ or 0.96.*
11. Compute sums, differences, products, and quotients of finite decimals using strategies based on place value, the properties of operations, and/or the inverse relationships between addition and subtraction and between multiplication and division; explain the reasoning used. *For example, transform $1.5 \div 0.3$ into $15 \div 3 = 5$.*
12. Explain why strategies and algorithms for computations with finite decimals work. *Include explanations supported by drawings, equations, or both. A range of reasonably efficient algorithms may be covered, not only the standard algorithm.*
13. Use the standard algorithm for each of the four operations on decimals (to hundredths).
14. Solve word problems involving operations on decimals.

Number—Fractions 5-NF

Fraction equivalence

1. ❖Understand fraction equivalence:
   a. Multiplying the numerator and denominator of a fraction by the same nonzero whole number produces an equivalent fraction. *For example, $2/3 = (2 \times 4)/(3 \times 4) = 8/12$. (1/3 is 4 copies of 1/12, so 2/3 is 8 copies of 1/12.)*
   b. Equivalent fractions correspond to the same point on a number line. *In Grade 5, all numbers lines begin with zero.*
   c. When the numerators of equivalent fractions are divided by their denominators, the resulting quotients are the same.
2. Identify pairs of equivalent fractions; given two fractions with unlike denominators, find two fractions with the same denominator and equivalent to each.
3. Compare and order fractions with like or unlike denominators, e.g., by finding equivalent fractions with the same denominator, and describe the sizes of fractional quantities from a context with reference to the context. *Compare using the fractions themselves, tape diagrams or number line representations, and area models.*

Operations on fractions

4. Understand that sums and differences of fractions with unlike denominators can be computed by replacing each with an equivalent fraction so that the resulting fractions have the same denominator. *For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$.*
5. Compute sums and differences of fractions with like or unlike denominators, and solve word problems involving addition and subtraction of fractions. Estimate fraction sums and differences to assess the reasonableness of results.
6. ❖ Understand that multiplying a fraction by a/b means taking a parts of a decomposition of the fraction into b equal parts. *For example, to multiply $2/3 \times 4/5 = 8/15$, one may decompose a whole of size 4/5 into 3 equal parts; each part has size 4/15. Two*

of these parts then make 8/15, so 2/3 × 4/5 = 8/15. (In general, a/b × p/q = ap/bq.) This standard includes multiplication of a whole number by a fraction, by writing the whole number as fraction with denominator 1.

7. Understand that the area of a rectangle with side lengths *a/b* and *c/d* is the product *a/b × p/q*. This extends the area formula for rectangles to fractional side lengths, and also allows products of fractions to be represented visually as areas of rectangles.
8. ❖Explain and justify the properties of operations with fractions, e.g., by using equations, number line representations, area models, and story contexts.
9. Understand division of unit fractions by whole numbers and division of whole numbers by unit fractions:
   a. Dividing a unit fraction 1/b by a whole number a results in a smaller unit fraction 1/a × b. *For example, 1/3 ÷ 2 = 1/6 because when 1/3 is divided into 2 equal parts, the size of each part is 1/6; a third of a pound of cheese shared between two people will give each person a sixth of a pound. (Using the inverse relationship between multiplication and division: 1/3 ÷ 2 = 1/6 because 1/6 × 2 = 1/3.)*
   b. Dividing a whole number a by a unit fraction 1/b results in a greater whole number a × b. *For example, 2 ÷ 1/3 = 6 because 6 is the number of 1/3s in 2; two pounds of cheese will make six portions of a third of a pound each. (Using the inverse relationship between multiplication and division: 2 ÷ 1/3 = 6 because 6 × 1/3 = 2.)*
10. Calculate products of fractions, and quotients of unit fractions and nonzero whole numbers (with either as divisor), and solve word problems involving these operations. Represent these operations using equations, area models and length models.
11. Understand that a mixed number such as 3 2/5 represents the sum of a whole number and a fraction less than one. Because a whole number can be represented as a fraction (3 = 3/1), and the sum of two fractions is also a fraction, a mixed number also represents a fraction (3 2/5 = 3 + 2/5 = 15/5 + 2/5 = 17/5). Write fractions as equivalent mixed numbers and vice versa.

Measurement and Data 5-MD

Units of measure

1. Understand that quantities expressed in like units can be added or subtracted giving a sum or difference with the same unit; different quantities may be multiplied to obtain a new kind of quantity (e.g., as when two lengths are multiplied to compute an area, or when an area and a length are multiplied to compute a volume).
2. Understand that when measuring a quantity, if a smaller unit is used, more units must be iterated to measure the quantity in those units.
3. Convert among different-sized standard measurement units within a given measurement system (e.g., feet to yards, centimeters to meters) and use conversion in solving multi-step word problems.

Volume

4. Understand concepts of volume measurement:
   a. A cube with side length 1 unit (a unit cube) is said to have "one cubic unit" of volume, and can be used to measure volume.
   b. The volume of a right rectangular prism with whole-unit side lengths can be found by packing it with unit cubes and using multiplication to count their number. *For example, decomposing a right rectangular prism 3 length units wide by 5 units deep by 2 units tall shows that its volume is 3 × 5 × 2 cubic units. The base of the prism has area 3 × 5 square units, so the volume can also be expressed as the height times the area of the base.*
   c. When measuring a volume, if a smaller unit is used, more units must be iterated to measure the volume in those units.
   d. If a solid figure is decomposed into several disjoint pieces, then the volume enclosed by the figure can be found by adding the volumes of the pieces (when these volumes are expressed in the same units).
5. Decompose right rectangular prisms into layers of arrays of cubes; determine and compare volumes of right rectangular prisms, and objects well described as right rectangular prisms, by counting cubic units (using cm^3, m^3, in^3, ft^3, and improvised units).

Representing and interpreting data

6. Make a dot plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in dot plots. *For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.*

Geometry 5-G

Coordinates

1. Understand that a pair of perpendicular number lines, called axes, defines a coordinate system.
   a. Their intersection is called the origin, usually arranged to coincide with the 0 on each line.
   b. A given point in the plane can be located by using an ordered pair of numbers, called its coordinates. The first number indicates how far to travel from the origin in the direction of one axis, the second number indicates how far to travel in the direction of the second axis.
   c. To avoid ambiguity, conventions dictate that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).
2. Graph points in the first quadrant of the coordinate plane, and identify the coordinates of graphed points. Where ordered pairs arise in a problem situation, interpret the coordinate values in the context of the situation.

Plane figures

3. Understand that properties belonging to a category of plane figures also belong to all subcategories of that category. *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*
4. Classify plane figures in a hierarchy based on properties.

In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division; (2) developing understanding of and fluency with division of fractions and developing fluency with multiplication of fractions; (3) developing understanding of and using formulas to determine areas of two-dimensional shapes and distinguishing between volume and surface area of three-dimensional shapes; and (4) writing, interpreting, and using expressions and equations.

(1) Students use reasoning about multiplication and division with quantities to solve ratio and rate problems. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students extend whole number multiplication and division to ratios and rates. Thus students expand their repertoires of problems in which multiplication and division can be used to solve problems, and they build on their understanding of fractions to understand ratios. Students solve a wide variety of problems involving ratios and rates.

(2) Students use the meaning of fractions, the meanings of multiplication and division, and the inverse relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students are able to add, subtract, multiply, and divide fractions fluently, and use these operations to solve problems, including multi-step problems and problems involving measurement.

(3) Students reason about relationships among shapes to determine area and surface area. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposition into pieces whose area they can determine.

(4) Students write mathematical expressions and equations that correspond to given situations, they evaluate expressions, and they use expressions and formulas to solve problems. Students understand that a variable is a letter standing for a number, where the number is unknown, or where, for the purpose at hand, it can be any number in the domain of interest. Students understand that expressions in different forms can be equivalent, and they use the laws of arithmetic to rewrite expressions to represent a total quantity in a different way (such as to represent it more compactly or to feature different information). Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships in a table.

Having represented and analyzed data in Grades K–5, students in Grade 6 begin a serious engagement with statistics. The study of variability in data distinguishes statistics from mathematics. Students beginning their study of variability must first recognize statistical questions as those that anticipate variability in the answers. From this conceptual beginning, they learn to describe and summarize distributions of data—an activity that goes beyond merely computing summary statistics to include assessing the shape of a distribution and considering other issues as described in the standards.

Ratios

1. Understand the concept of a ratio: Two quantities are said to be in a ratio of a to b when for every a units of the first quantity there are b units of the second. *For example, in a flock of birds, the ratio of wings to beaks might be 2 to 1; this ratio is also written 2:1. In Grade 6, limit to ratios of whole numbers.*
2. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.
3. Solve for an unknown quantity in a problem involving two equal ratios.
4. Describe categorical data sets using ratios (e.g., for every vote candidate A received, candidate C received nearly three votes; the ratio of type O blood donors to type B blood donors was 9:2).

Unit rates

5. Understand that for a ratio $a{:}b$, the corresponding unit rate is $^a/_b$. If there are a units of the first quantity for every b units of the second, where $b \neq 0$, then there are $^a/_b$ units of the first quantity for 1 unit of the second. *For example, if a recipe has a ratio of 3 cups of flour to 4 cups of sugar, then there is 3/4 cup of flour for each cup of sugar.*
6. ❖Solve unit rate problems including unit pricing and constant speed, including reasoning with equations such as $d = r \times t$, $r = {}^d/_t$, $t = d \div r$.

The Number System 6-NS

Operations

1. Understand that the properties of operations apply to, and can be used with, addition and multiplication of fractions.
2. Understand that division of fractions is defined by viewing a quotient as the solution for an unknown-factor multiplication problem. *For example, $(2/3) \div (5/7) = 14/15$ because $(5/7) \times (14/15) = (2/3)$.*
3. Solve word problems requiring arithmetic with fractions, using the properties of operations and converting between forms as appropriate; estimate to check reasonableness of answers.
4. Fluently divide whole numbers using the standard algorithm.

The system of rational numbers

5. Understand that a number is a point on the number line.
6. Understand that some quantities have opposite directions, such as elevation above and below sea level or money received and spent. These quantities can be described using positive and negative numbers.
7. Understand that number lines familiar from previous grades can be extended to represent negative numbers to the left of zero. *Number lines can also be vertically oriented, as when a coordinate system is formed. Then the conventional terms "to the right of 0" and "to the left of 0" conventionally become "above 0" and "below 0."*
   a. Two different numbers, such as 7 and –7, that are equidistant from zero on a number line are said to be opposites of one another. The opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$. The opposite of 0 is 0.
   b. The absolute value of a number q, written $|q|$, is its distance from zero, and is always positive or zero.
   c. Fractions and their opposites form a system of numbers called the rational numbers, represented by points on a number line. Whole numbers and their opposites form the integers, which are contained in the rational numbers.
   d. Previous ways of comparing positive numbers can be extended to the rational numbers. The statement $p > q$ means that p is located to the right of q on a number line, while $p < q$ means that p is located to the left of q on a number line. Comparisons can also be made by reasoning appropriately about signed quantities (e.g, $-3 > -7$ makes sense because –3°C is a higher temperature than –7°C). The way two numbers compare does not always agree with the way their absolute values compare; for example, $-3 > -7$, but $|-3| < |-7|$.
8. Find and position rational numbers, including integers, on a number line.
9. Use rational numbers to describe quantities such as elevation, temperature, account balance and so on. Compare these quantities, recording the results of comparisons using > and < symbols.
10. Graph points and identify coordinates of points on the coordinate plane in all four quadrants. Where ordered pairs arise in a problem situation, interpret the coordinate values in the context of the situation.

Expressions and Equations 6-EE

Expressions

1. Understand that an expression records operations with numbers or with letters standing for numbers. *For example, the expression $2 \cdot (8 + 7)$ records adding 8 and 7 then multiplying by 2; the expression $5 - y$ records subtracting y from 5. Focus on the operations of addition, subtraction, multiplication and division, with some attention to square or cube roots.*
2. Understand the use of variables in expressions and algebraic conventions:
   a. A letter is used to stand for a number in an expression in cases where the number is unknown, or where, for the purpose at hand, it can be any number in a domain of interest. Such a letter is called a variable.
   b. If a variable appears in an expression more than once (e.g., as in $t + 3t$), that variable is understood to refer to the same number in each instance.
   c. The multiplication symbol can be omitted when writing products of two or more variables or of a number and a variable. *For example, the expressions xy and $2a$ indicate $x \times y$ and $2 \times a$, respectively.*
3. Describe the structure and elements of simple expressions using correct terminology (sum, term, product, factor, quotient, coefficient); describe an expression by viewing one or more of its parts as a single entity. *For example, describe the expression $2 \cdot (8 + 7)$ as a product of two factors, by viewing $(8 + 7)$ as a single entity. The second factor is itself a sum of two terms.*
4. Understand and generate equivalent expressions:
   a. Understand that two expressions are equivalent if they name the same number regardless of which numbers the variables in them stand for. *For example, the expressions $x + 3$ and $4x$ are not equivalent, even though they happen to name the same number in the case when x stands for 1.*
   b. Understand that applying the laws of arithmetic to an expression results in an equivalent expression. *For example, applying the distributive law to the expression $3 \cdot (2 + x)$ leads to the equivalent expression $6 + 3x$. Applying the distributive law to $y + y + y$ leads to the equivalent expression $y \times (1 + 1 + 1)$, i.e., $y \times 3$ and then the commutative law of multiplication leads to the equivalent expression $3y$.*
   c. Generate equivalent expressions to reinterpret the meaning of an expression. *For example, $2t + 3t$ records the addition of twice a quantity to three times itself; applying the distributive law leads to the equivalent expression $5t$, so that the original expression can be reinterpreted as recording five times the quantity.*

Quantitative relationships and the algebraic approach to problems

5. Understand that an equation is a statement that two expressions are equal, and a solution to an equation is a replacement value of the variable (or replacement values for all the variables if there is more than one) that makes the equation true.
6. Using the idea of maintaining equality between both sides of the equation, solve equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.
7. Choose variables to represent quantities in a word problem, and construct simple expressions or equations to solve the problem by reasoning about the quantities.
8. Understand that a variable can be used to represent a quantity that can change, often in relationship to another changing quantity, and an equation can express one quantity, thought of as the dependent variable, in terms of other quantities, thought of as the independent variables; represent a relationship between two quantities using equations, graphs, and tables; translate between any two of these representations. *For example, describe the terms in a sequence $t = 3, 6, 9, 12, \ldots$ of multiples of 3 by writing the equation $t = 3n$ for $n = 1, 2, 3, 4, \ldots$.*

Geometry 6-G

Properties of area, surface area, and volume

1. Understand that plane figures can be decomposed, reassembled, and completed into new figures; use this technique to derive area formulas.
2. Find the areas enclosed by right triangles, other triangles, special quadrilaterals, and polygons (by composing into rectangles or decomposing into triangles and other shapes).
3. Understand that three-dimensional figures can be formed by joining rectangles and triangles along their edges to enclose a solid region with no gaps or overlaps. The surface area is the sum of the areas of the enclosing rectangles and triangles.
4. Find the surface area of cubes, prisms and pyramids (include the use of nets to represent these figures).
5. Solve problems involving area, volume and surface area of objects.
6. Give examples of right rectangular prisms with the same surface area and different volumes, and with the same volume and different surface areas.

7. Use exponents and symbols for square roots and cube roots to express the area of a square and volume of a cube in terms of their side lengths, and to express their side lengths in terms of their area or volume.

Statistics and Probability 6-SP

Variability and measures of center

1. Understand that a statistical question is one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, "How old am I?" is not a statistical question , but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.*
2. Understand that a set of data generated by answers to a statistical question typically shows variability—not all of the values are the same—and yet often the values show an overall pattern, often with a tendency to cluster.
   a. A measure of center for a numerical data set summarizes all of its values using a single number. The median is a measure of center in the sense that approximately half the data values are less than the median, while approximately half are greater. The mean is a measure of center in the sense that it is the value that each data point would take on if the total of the data values were redistributed fairly, and in the sense that it is the balance point of a data distribution shown on a dot plot.
   b. A measure of variation for a numerical data set describes how its values vary using a single number. The interquartile range and the mean absolute deviation are both measures of variation.

Summarizing and describing distributions

3. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
4. Summarize numerical data sets, such as by:
   a. Reporting the number of observations.
   b. Describing the nature of the variable, including how it was measured and its units of measurement. *Data sets can include fractional values at this grade but not negative values.*
   c. Describing center and variation, as well as describing any overall pattern and any striking deviations from the overall pattern.
5. Relate the choice of the median or mean as a measure of center to the shape of the data distribution being described and the context in which it is being used. Do the same for the choice of interquartile range or mean average deviation as a measure of variation. *For example, why are housing prices often summarized by reporting the median selling price, while students' assigned grades are often based on mean homework scores?*

Mathematics | Grade 7

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and solving linear equations; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence; and (4) drawing inferences about populations based on samples.

(1) Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about similar objects (including geometric figures) by using scale factors that relate corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.

(2) Students develop a unified understanding of number, recognizing fractions, decimals, and percents as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division and their properties to all rational numbers, including integers and numbers represented by complex fractions and negative fractions. By applying the laws of arithmetic, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain why the rules for adding, subtracting, multiplying, and dividing with negative numbers make sense. They use the arithmetic of rational numbers as they formulate and solve linear equations in one variable and use these equations to solve problems.

(3) Students use ideas about distance and angles, how they behave under dilations, translations, rotations and reflections, and ideas about congruence and similarity to describe and analyze figures and situations in two- and three-dimensional space and to solve problems, including multi-step problems. Students prove that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students apply this reasoning about similar triangles to solve problems, such as finding heights and distances. Students see the plausibility of the formulas for the circumference and area of a circle. For example, in the case of area, they may do so by reasoning about how lengths and areas scale in similar figures or by decomposing a circle or circular region and rearranging the pieces.

(4) Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

Ratios and Proportional Relationships 7-RP

Analyzing proportional relationships

1. Form ratios of nonnegative rational numbers and compute corresponding unit rates. *For example, a person might walk ½ mile in each ¼ hour; the unit rate for this ratio is (1/2)/(1/4) miles per hour, equivalently 2 miles per hour. Include ratios of lengths, areas and other quantities, including when quantities being compared are measured in different units.*
2. Recognize situations in which two quantities covary and have a constant ratio. (The quantities are then said to be in a proportional relationship and the unit rate is called the constant of proportionality.) Decide whether two quantities that covary are in a proportional relationship, e.g., by testing for equivalent ratios or graphing on a coordinate plane.
3. Compute unit rates and solve proportional relationship problems in everyday contexts, such as shopping, cooking, carpentry, party planning, etc. Represent proportional relationships by equations that express how the quantities are related via the constant of proportionality or unit rate. *For example, total cost, t, is proportional to the number, n, purchased at a constant price, p; this relationship can be expressed as $t = pn$.*
4. Plot proportional relationships on a coordinate plane where each axis represents one of the two quantities involved, observe that the graph is a straight line through the origin, and find unit rates from a graph. Explain what a point (x, y) means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.
5. Compare tables, graphs, formulas, diagrams, and verbal descriptions that represent or partially represent proportional relationships; explain correspondences among the representations including how the unit rate is shown in each.

Percent

6. Understand that percentages are rates per 100. For example, 30% of a quantity means $^{30}/_{100}$ times the quantity. A percentage can be a complex fraction, as in 3.75% = $^{3.75}/_{100}$.
7. Find a percentage of a quantity; solve problems involving finding the whole given a part and the percentage.
8. Solve multistep percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error, expressing monthly rent as a percentage of take-home pay.*

The Number System 7-NS

The system of rational numbers

1. Understand that the rules for manipulating fractions extend to complex fractions.
2. Understand and perform addition and subtraction with rational numbers:
   a. Understand that on a number line, the sum $p + q$ is the number located a distance $|q|$ from p, to the right of p if q is positive and to the left of p if q is negative. A number and its opposite are additive inverses (i.e., their sum is zero).
   b. Compute sums of signed numbers using the laws of arithmetic. *For example, $7 + (-3) = 4$ because $7 + (-3) = (4 + 3) + (-3) = 4 + [3 + (-3)] = 4 + [0] = 4$.*
   c. Understand that subtraction of rational numbers is defined by viewing a difference as the solution of an unknown-addend addition problem. Subtraction of a rational number gives the same answer as adding its additive inverse.
   d. Explain and justify rules for adding and subtracting rational numbers, using a number line and practical contexts. *For example, relate $r + (-s) = r - s$ to a bank transaction; explain why $p - (q + r) = p - q - r$.*
   e. Understand that the additive inverse of a sum is the sum of the additive inverses, that is $-(p + q) = -p + -q$. *For example, $-(6 + -2) = (-6) + 2$ because $[6 + (-2)] + [(-6) + 2] = [6 + (-6)] + [(-2) + 2] = [0] + [0] = 0$.*
3. Understand and perform multiplication and division with rational numbers:
   a. Understand that the extension of multiplication from fractions to rational numbers is determined by the requirement that multiplication and addition satisfy the laws of arithmetic, particularly the distributive law, leading to products such as $(-1)(-1) = 1$ and the rules for multiplying signed numbers.
   b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p/q is a rational number, then $-(p/q) = (-p)/q = p/(-q)$.
   c. Calculate products and quotients of rational numbers, and use multiplication and division to solve word problems. *Include signed quantities.*

The system of real numbers

4. Understand that there are numbers that are not rational numbers, called irrational numbers, e.g., π and $\sqrt{2}$. Together the rational and irrational numbers form the real number system. In school mathematics, the real numbers are assumed to satisfy the laws of arithmetic.

Expressions and Equations 7-EE

Expressions

1. Interpret numerical expressions at a level necessary to calculate their value using a calculator or spreadsheet. For expressions with variables, use and interpret conventions of algebraic notation, such as $y/2$ is $y \div 2$ or $1/2 \times y$; $(3 \pm y)/5$ is $(3 \pm y) \div 5$ or $1/5 \times (3 \pm y)$; a^2 is $a \times a$, a^3 is $a \times a \times a$, a^2b is $a \times a \times b$.
2. Generate equivalent expressions from a given expression using the laws of arithmetic and conventions of algebraic notation. Include:
   a. Adding and subtracting linear expressions, as in $(2x + 3) + x + (2 - x) = 2x + 5$.
   b. Factoring, as in $4x + 4y = 4(x + y)$ or $5x + 7x + 10y + 14y = 12x + 24y = 12(x + 2y)$.
   c. Simplifying, as in $-2(3x - 5) + 4x = 10 - 2x$ or $x/3 + (x - 2)/4 = 7x/12 - 1/2$.

Quantitative relationships and the algebraic approach to problems

3. Choose variables to represent quantities in a word problem, and construct simple equations to solve the problem by reasoning about the quantities.
   a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are nonnegative rational numbers and the solution is a nonnegative rational number. Fluently solve equations of these forms, e.g., by undoing the operations involved in producing the expression on the left.
   b. Solve the same word problem arithmetically and algebraically. *For example, "J. has 4 packages of balloons and 5 single balloons. In all, he has 21 balloons. How many balloons are in a package?" Solve this problem arithmetically (using a sequence of operations on the given numbers), and also solve it by using a variable to stand for the number of balloons in a package, constructing an equation such as $4b + 5 = 21$ to describe the situation then solving the equation.*
   c. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, $P + 0.05P = 1.05P$ means that "increase by 5%" is the same as "multiply by 1.05."*

Geometry 7-G

Congruence and similarity

1. Verify experimentally the fact that a rigid motion (a sequence of rotations, reflections, and translations) preserves distance and angle, e.g., by using physical models, transparencies, or dynamic geometry software:
   a. Lines are taken to lines, and line segments to line segments of the same length.
   b. Angles are taken to angles of the same measure.
   c. Parallel lines are taken to parallel lines.
2. Understand the meaning of congruence: a plane figure is congruent to another if the second can be obtained from the first by a rigid motion.
3. Verify experimentally that a dilation with scale factor k preserves lines and angle measure, but takes a line segment of length L to a line segment of length kL.
4. Understand the meaning of similarity: a plane figure is similar to another if the second can be obtained from the first by a similarity transformation (a rigid motion followed by a dilation).
5. Solve problems involving similar figures and scale drawings. *Include computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.*
6. Use informal arguments involving approximation by lines, squares, and cubes to see that a similarity transformation with a scale factor of k leaves angle measures unchanged, changes lengths by a factor of k, changes areas by a factor of k^2, and changes volumes by a factor of k^3.
7. Know the formulas relating the area, radius and circumference of a circle and solve problems requiring the use of these formulas; give an informal derivation of the relationship between the circumference and area of a circle.

Angles

8. Justify facts about the angle sum of triangles, exterior angles, and alternate interior angles created when parallel lines are cut by a transversal, e.g., by using physical models, transparencies, or dynamic geometry software to make rigid motions and give informal arguments. *For example, arrange three copies of the same triangle so that the three angles appear to form a line, and give an argument in terms of transversals why this is so.*
9. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

Situations involving randomness

1. Simulate situations involving randomness using random numbers generated by a calculator or a spreadsheet or taken from a table. *For example, if you guess at all ten true/false questions on a quiz, how likely are you to get at least seven answers correct?*
2. Use proportional reasoning to predict relative frequencies of outcomes for situations involving randomness, but for which a theoretical answer can be determined. For *example, when rolling a number cube 600 times, one would predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times. How far off might your prediction be? Use technology to generate multiple samples to approximate a distribution of sample proportions. Repeat the process for smaller sample sizes.*

Random sampling to draw inferences about a population

3. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.
4. Understand the importance of measures of variation in sample quantities (like means or proportions) in reasoning about how well a sample quantity estimates or predicts the corresponding population quantity.
5. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*

Comparative inferences about two populations

6. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean average deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.*
7. Use measures of center and measures of variability for numerical data from uniform random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade book are generally longer than the words in a chapter of a sixth-grade book.*

Mathematics | Grade 8

In Grade 8, instructional time should focus on three critical areas: (1) solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) understanding and applying the Pythagorean Theorem.

(1) Students use linear equations, and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize proportions ($y/x = m$ or $y = mx$) as a special case of linear equations, $y = mx + b$, understanding that the constant of proportionality (m) is the slope and the graphs are lines through the origin. They understand that the slope (m) of a line is a constant rate of change, so that if the input or x-coordinate changes by an amount A, the output or y-coordinate changes by the amount mA. Students also formulate and solve linear equations in one variable and use these equations to solve problems. Students also use a linear equation to describe the association between two quantities in a data set (such as arm span vs. height for students in a classroom). At this grade, fitting the model, and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question.

Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence, they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

(2) Students grasp the concept of a function as a rule that assigns to each element of its domain exactly one element of its range. They use function notation and understand that functions describe situations where one quantity determines another. They can translate among verbal, tabular, graphical, and algebraic representations of functions (noting that tabular and graphical representations are usually only partial representations), and they describe how aspects of the function are reflected in the different representations.

(3) Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem is valid, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons.

The Number System 8-NS

The system of real numbers

1. Understand informally that every number on a number line has a decimal expansion, which can be found for rational numbers using long division. Rational numbers are those with repeating decimal expansions (this includes finite decimals which have an expansion that ends in a sequence of zeros).
2. Informally explain why $\sqrt{2}$ is irrational.
3. Use rational approximations (including those obtained from truncating decimal expansions) to compare the size of irrational numbers, locate them approximately on a number line, and estimate the value of expressions (e.g., π^2). *For example, show that the square root of 2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.*

Expressions and Equations 8-EE

Linear equations in one variable

1. Understand that a linear equation in one variable might have one solution, infinitely many solutions, or no solutions. Which of these possibilities is the case can be determined by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).
2. Solve linear equations with rational number coefficients, including equations that require expanding expressions using the distributive law and collecting like terms.

Linear equations in two variables

3. Understand that the slope of a non-vertical line in the coordinate plane has the same value for any two distinct points used to compute it. This can be seen using similar triangles.
4. Understand that two lines with well-defined slopes are parallel if and only if their slopes are equal.
5. Understand that the graph of a linear equation in two variables is a line, the set of pairs of numbers satisfying the equation. If the equation is in the form $y = mx + b$, the graph can be obtained by shifting the graph of $y = mx$ by b units (upwards if b is positive, downwards if b is negative). The slope of the line is m.
6. Understand that a proportional relationship between two variable quantities y and x can be represented by the equation $y = mx$. The constant m is the unit rate, and tells how much of y per unit of x.
7. Graph proportional relationships and relationships defined by a linear equation; find the slope and interpret the slope in context.
8. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*

Systems of linear equations

9. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
10. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because the quantity $3x + 2y$ cannot simultaneously be 5 and 6.*
11. Solve and explain word problems leading to two linear equations in two variables.
12. Solve problems involving lines and their equations. *For example, decide whether a point with given coordinates lies on the line with a given equation; construct an equation for a line given two points on the line or one point and the slope; given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*

Functions 8-F

Function concepts

1. Understand that a function from one set (called the domain) to another set (called the range) is a rule that assigns to each element of the domain (an input) exactly one element of the range (the corresponding output). The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. *Function notation is not required in Grade 8.*
2. Evaluate expressions that define functions, and solve equations to find the input(s) that correspond to a given output.
3. Compare properties of two functions represented in different ways (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.*

Understand that a function is linear if it can be expressed in the form $y = mx + b$ or if its graph is a straight line. *For example, the function $y = x^2$ is not a linear function because its graph contains the points (1,1), (–1,1) and (0,0), which are not on a straight line.*

Functional relationships between quantities

5. Understand that functions can describe situations where one quantity determines another.
6. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship; from two (x, y) values, including reading these from a table; or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.
7. Describe qualitatively the functional relationship between two quantities by reading a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

Geometry 8-G

Congruence and similarity

1. Use coordinate grids to transform figures and to predict the effect of dilations, translations, rotations and reflections.
2. Explain using rigid motions the meaning of congruence for triangles as the equality of all pair of sides and all pairs of angles.
3. Give an informal explanation using rigid motions of the SAS and ASA criteria for triangle congruence, and use them to prove simple theorems.
4. Explain using similarity transformations the meaning of similarity for triangles as the equality of all pairs of angles and the proportionality of all pairs of sides.
5. Give an informal explanation using similarity transformations of the AA and SAS criteria for triangle similarity, and use them to prove simple theorems.

The Pythagorean Theorem

6. The side lengths of a right triangle are related by the Pythagorean Theorem. Conversely, if the side lengths of a triangle satisfy the Pythagorean Theorem, it is a right triangle.
7. Explain a proof of the Pythagorean Theorem and its converse.
8. Use the Pythagorean Theorem to determine unknown side lengths in right triangles and to solve problems in two and three dimensions.
9. Use the Pythagorean Theorem to find the distance between two points in a coordinate system.

Plane and solid geometry

10. Draw (freehand, with ruler and protractor, and with technology) geometric shapes from given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the triangle is uniquely defined, ambiguously defined or nonexistent.
11. Understand that slicing a three-dimensional figure with a plane produces a two-dimensional figure. Describe plane sections of right rectangular prisms and right rectangular pyramids.
12. Use hands-on activities to demonstrate and describe properties of: parallel lines in space, the line perpendicular to a given line through a given point, lines perpendicular to a given plane, lines parallel to a given plane, the plane or planes passing through three given points, and the plane perpendicular to a given line at a given point.

Statistics and Probability 8-SP

Patterns of association in bivariate data

1. Understand that scatter plots for bivariate measurement data may reveal patterns of association between two quantities.
2. Construct and interpret scatter plots for bivariate measurement data. Describe patterns such as clustering, outliers, positive or negative association, linear association, nonlinear association.
3. Understand that a straight line is a widely used model for exploring relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.
4. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*
5. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables

collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. *For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?*

Mathematics Standards for High School

Where is the College-and-Career-Readiness line drawn?

The high school standards specify the mathematics that all students should learn in order to be college and career ready. The high school standards also describe additional mathematics that students should learn to pursue careers and majors in science, technology, engineering and mathematics (STEM) fields. Other forms of advanced work are possible (for example in discrete mathematics or advanced statistics) and can be eventually added to the standards.

Standards beyond the college and career readiness level that are necessary for STEM careers are prefixed with a symbol STEM, as in this example:

> STEM Graph complex numbers in polar form and interpret arithmetic operations on complex numbers geometrically.

Any standard without this tag is understood to be in the common core mathematics curriculum for all students.

How are the high school standards organized?

The high school standards are listed in conceptual categories, as shown in the Table below. **Appendix A (online) contains drafts of model course descriptions based on these standards**. Conceptual categories portray a coherent view of core high school mathematics; a student's work with Functions, for example, crosses a number of traditional course boundaries, potentially up through and including Calculus.

Conceptual Organization of the High School Standards

CCRS Draft September 17th	**High School Standards Draft March 10**
Number Quantity	Number and Quantity
Expressions Equations Coordinates	Algebra
Functions	Functions
Geometry	Geometry
Statistics Probability	Statistics and Probability
Modeling	Modeling**

* Standards formerly appearing under Coordinates now appear under other headings.

** Making mathematical models is now a Standard for Mathematical Practice. Standards formerly appearing under Modeling are now distributed under other major headings. High school standards with relevance to modeling are flagged with a (★) symbol. A narrative description of modeling remains in the high school standards, but there are no specific standard statements in that narrative description.

Mathematics | High School—Number and Quantity

Numbers and Number Systems. During the years from kindergarten to eighth grade, students must repeatedly extend their conception of number. At first, "number" means "counting number": 1, 2, 3, ... Soon after that, 0 is used to represent "none" and the whole numbers are formed by the counting numbers together with zero. The next extension is fractions. At first, fractions are barely numbers and tied strongly to pictorial representations. Yet by the time students understand division of fractions, they have a strong concept of fractions as numbers and have connected them, via their decimal representations, with the base-ten system used to represent the whole numbers. During middle school, fractions are augmented by negative fractions to form the rational numbers. In Grade 7, students extend this system once more, augmenting the rational numbers with the irrational numbers to form the real numbers. In high school, students will be exposed to yet another extension of number, when the real numbers are augmented by the imaginary numbers to form the complex numbers.

Students sometimes have difficulty accepting new kinds of numbers when these differ in appearance and properties from those of a familiar system. For example, students might decide that complex numbers are not numbers because they are not written with numerical digits, or because they do not describe positive or negative quantities. Indeed, this ascent through number systems makes it fair to ask: what does the word *number* mean that it can mean all of these things? One possible answer is that a number is something that can be used to do mathematics: calculate, solve equations, or represent measurements. Historically, number systems have been extended when there is an intellectual or practical benefit in using the new numbers to solve previously insoluble problems.[1]

Although the referent of "number" changes, the four operations stay the same in important ways. The commutative, associative, and distributive laws extend the properties of operations to the integers, rational numbers, real numbers, and complex numbers. The inverse relationships between addition and subtraction, and multiplication and division are maintained in these larger systems.

Calculators are useful in this strand to generate data for numerical experiments, to help understand the workings of matrix, vector, and complex number algebra, and to experiment with non-integer exponents.

Quantities. In their work in measurement up through Grade 8, students primarily measure commonly used attributes such as length, area, volume, and so forth. In high school, students encounter novel situations in which they themselves must conceive the attributes of interest. Such a conceptual process might be called quantification. Quantification is important for science, as when surface area suddenly "stands out" as an important variable in evaporation. Quantification is also important for companies, who must conceptualize relevant attributes and create or choose suitable metrics by which to measure them.

Content Outline

The Real Number System

Quantities

The Complex Number System

Vector Quantities and Matrices

[1] See Harel, G., "A Standpoint of Research on Middle/Higher Number and Quantity," a research review provided for the Common Core State Standards Initiative.

The Real Number System N-RN

1. Understand that the laws of exponents for positive integer exponents follow from an understanding of exponents as indicating repeated multiplication, and from the associative law for multiplication.
2. Understand that the definition of the meaning of zero, positive rational, and negative exponents follows from extending the laws of exponents to those values, allowing for a notation for radicals in terms of rational exponents. *For example, since* $(5^{1/3})^3 = 5^{(1/3)\cdot 3} = 5^1 = 5$, $5^{1/3}$ *is a cube root of* 5.
3. Understand that sums and products of rational numbers are rational.
4. Understand that the sum of a rational number and an irrational number is irrational, and that the product of a nonzero rational number and an irrational number is irrational.
5. Rewrite expressions using the laws of exponents. *For example,* $(5^{1/2})^3 = 5^{3/2}$ *and* $1/5 = 5^{-1}$.

Quantities★ N-Q

1. Understand that the magnitude of a quantity is independent of the unit used to measure it. *For example, the density of a liquid does not change when it is measured in another unit. Rather, its measure changes. The chosen unit "measures" the quantity by giving it a numerical value ("the density of lead is 11.3 times that of water").*
2. Use units as a way to understand problems and to guide the solution of multi-step problems, involving, e.g., acceleration, currency conversions, derived quantities such as person-hours and heating degree days, social science rates such as per-capita income, and rates in everyday life such as points scored per game.
3. Define metrics for the purpose of descriptive modeling. *For example, find a good measure of overall highway safety; propose and debate measures such as fatalities per year, fatalities per year per driver, or fatalities per vehicle-mile traveled.*
4. Add, subtract, multiply, and divide numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.
5. Use and interpret quantities and units correctly in algebraic formulas.
6. Use and interpret quantities and units correctly in graphs and data displays (function graphs, data tables, scatter plots, and other visual displays of quantitative information). Generate graphs and data displays using technology.

The Complex Number System N-CN

1. Understand that the relation $i^2 = -1$ and the commutative, associative, and distributive laws can be used to calculate with complex numbers.
2. STEM Understand that polynomials can be factored over the complex numbers, e.g., as in $x^2 + 4 = (x + 2i)(x - 2i)$.
3. STEM Understand that complex numbers can be visualized on the complex plane. Real numbers correspond to points on the horizontal (real) axis, and imaginary numbers to points on the vertical axis.
4. STEM Understand that on the complex plane, arithmetic of complex numbers can be interpreted geometrically: addition is analogous to vector addition, and multiplication can be understood as rotation and dilation about the origin. Complex conjugation is reflection across the real axis.
5. STEM Understand that on the complex plane, as on the real line, the distance between numbers is the absolute value of the difference, and the midpoint of a segment is the average of the numbers at its endpoints.
6. Add, subtract, and multiply complex numbers.
7. STEM Find the conjugate of a complex number; use conjugates to find absolute values and quotients of complex numbers.
8. STEM Solve quadratic equations with real coefficients that have complex solutions using a variety of methods.
9. STEM Graph complex numbers in rectangular form.
10. STEM Graph complex numbers in polar form and interpret arithmetic operations on complex numbers geometrically.
11. STEM Explain why the rectangular and polar forms of a complex number represent the same number.

★ Standard with close connection to modeling.

1. STEM Understand that vector quantities have both magnitude and direction. Vector quantities are typically represented by directed line segments. The magnitude of a vector **v** is commonly denoted |**v**| or ||**v**||.
2. STEM Understand that vectors are determined by the coordinates of their initial and terminal points, or by their components.
3. STEM Understand that vectors can be added end-to-end, component-wise, or by the parallelogram rule. The magnitude of a sum of two vectors is typically not the sum of the magnitudes.
4. STEM Understand that a vector **v** can be multiplied by a real number c (called a scalar in this context) to form a new vector c**v** with magnitude $|c|v$. When $|c|v \neq 0$, the direction of c**v** is either along **v** (for $c > 0$) or against **v** (for $c < 0$). Scalar multiplication can be shown graphically by scaling vectors and possibly reflecting them in the origin; scalar multiplication can also be performed component-wise, e.g., as $c(v_x, v_y) = (cv_x, cv_y)$.
5. STEM Understand that vector subtraction **v** – **w** is defined as **v** + (–**w**). Two vectors can be subtracted graphically by connecting the tips in the appropriate order.
6. STEM Understand that matrices can be multiplied by scalars to produce new matrices, e.g., as when all of the payoffs in a game are doubled. Matrices of the same dimensions can be added or subtracted. Matrices with compatible dimensions can be multiplied. Unlike multiplication of numbers, matrix multiplication is not a commutative operation, but still satisfies the associative and distributive laws.
7. STEM Understand that a vector, when regarded as a matrix with one column, can be multiplied by a matrix of suitable dimensions to produce another vector. A 2×2 matrix can be viewed as a transformation of the plane.
8. STEM Understand that a system of linear equations can be represented as a single matrix equation in a vector variable.
9. STEM Understand that the zero and identity matrices play a role in matrix addition and multiplication similar to the role of 0 and 1 in the real numbers. The determinant of a square matrix is nonzero if and only if the matrix has a multiplicative inverse.
10. STEM Perform basic vector operations (addition, subtraction, scalar multiplication) both graphically and algebraically.
11. STEM Given two vectors in magnitude and direction form, determine the magnitude and direction of their sum.
12. STEM Solve problems involving velocity and quantities that can be represented by vectors.★
13. STEM Add, subtract, and multiply matrices of appropriate dimensions.
14. STEM Use matrices to store and manipulate data, e.g., to represent payoffs or incidence relationships in a network.
15. STEM Represent systems of linear equations as matrix equations.
16. STEM Find the inverse of a matrix if it exists and use it to solve systems of linear equations (using technology for matrices of dimension greater than 3×3).

★ Standard with close connection to modeling.

Mathematics | High School—Algebra

Expressions. An expression is a description of a computation on numbers and symbols that represent numbers, using arithmetic operations and the operation of raising a number to rational exponents. Conventions about the use of parentheses and the order of operations assure that each expression is unambiguous. Creating an expression that describes a computation involving a general quantity requires the ability to express the computation in general terms, abstracting from specific instances.

Reading an expression with comprehension involves analysis of its underlying structure. This may suggest a different but equivalent way of writing the expression that exhibits some different aspect of its meaning. For example, $p + 0.05p$ can be interpreted as the addition of a 5% tax to a price p. Rewriting $p + 0.05p$ as $1.05p$ shows that adding a tax is the same as multiplying the price by a constant factor.

Algebraic manipulations are governed by deductions from the commutative, associative, and distributive laws and the inverse relationships between the four operations, and the conventions of algebraic notation. These extend what students have learned about arithmetic expressions in K–8 to expressions that involve exponents, radicals, and representations of real numbers, and, for STEM-intending students, complex numbers.

At times, an expression is the result of applying operations to simpler expressions. Viewing such an expression by singling out these simpler expressions can sometimes clarify its underlying structure.

A spreadsheet or a CAS environment can be used to experiment with algebraic expressions, perform complex algebraic manipulations,and understand how algebraic manipulations behave.

Equations and inequalities. An equation is a statement that two expressions are equal. Solutions to an equation are numbers that make the equation true when assigned to the variables in it. If the equation is true for all numbers, then it is called an identity; identities are often discovered by using the laws of arithmetic or the laws of exponents to transform one expression into another.

The solutions of an equation in one variable form a set of numbers; the solutions of an equation in two variables form a set of ordered pairs of numbers, which can be graphed in the coordinate plane. Two or more equations and/or inequalities form a system. A solution for such a system must satisfy every equation and inequality in the system.

An equation can often be solved by successively transforming it into one or more simpler equations. The process is governed by deductions based on the properties of equality. For example, one can add the same constant to both sides without changing the solutions, but squaring both sides might lead to extraneous solutions. Strategic competence in solving includes looking ahead for productive manipulations and anticipating the nature and number of solutions.

Some equations have no solutions in a given number system, stimulating the extension of that system. For example, the solution of $x + 1 = 0$ is an integer, not a whole number; the solution of $2x + 1 = 0$ is a rational number, not an integer; the solutions of $x^2 - 2 = 0$ are real numbers, not rational numbers; and the solutions of $x^2 + 2 = 0$ are complex numbers, not real numbers.

The same solution techniques used to solve equations can be used to rearrange formulas. For example, the formula for the area of a trapezoid, $A = ((b_1+b_2)/2)h$, can be solved for h using the same deductive process.

Inequalities can be solved by reasoning about the properties of inequality. Many, but not all, of the properties of equality continue to hold for inequalities and can be useful in solving them.

Connections to Functions and Modeling. Expressions can define functions, and equivalent expressions define the same function. Equations in two variables may also define functions. Asking when two functions have the same value leads to an equation; graphing the two functions allows for the approximate solution of the equation. Converting a verbal description to an equation, inequality, or system of these is an essential skill in modeling.

Content Outline

Seeing Structure in Expressions

Arithmetic with Polynomials and Rational Expressions

Creating Equations that Describe Numbers or Relationships

Reasoning with Equations and Inequalities

Seeing Structure in Expressions A-SSE

1. Understand that different forms of an expression may reveal different properties of the quantity in question; a purpose in transforming expressions is to find those properties. *Examples: factoring a quadratic expression reveals the zeros of the function it defines, and putting the expression in vertex form reveals its maximum or minimum value; the expression* 1.15^t *can be rewritten as* $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ *to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*
2. Understand that complicated expressions can be interpreted by viewing one or more of their parts as single entities.
3. Interpret an expression that represents a quantity in terms of the context. *Include interpreting parts of an expression, such as terms, factors and coefficients.* ★
4. Factor, expand, and complete the square in quadratic expressions.
5. See expressions in different ways that suggest ways of transforming them. *For example, see* $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, *thus recognizing it as a difference of squares that can be factored as* $(x^2 - y^2)(x^2 + y^2)$.
6. Rewrite expressions using the laws of exponents. *For example,* $(x^{1/2})^3 = x^{3/2}$ *and* $1/x = x^{-1}$.
7. Use the laws of exponents to interpret expressions for exponential functions, recognizing positive rational exponents as indicating roots of the base and negative exponents as indicating the reciprocal of a power. *For example, identify the per unit percentage change in functions such as* $y = (1.02)^t$, $y = (0.97)^t$, $y = (1.01)^{12t}$, $y = (1.2)^{t/10}$, *and conclude whether it represents exponential growth or decay. Recognize that any nonzero number raised to the zero power is 1, for example,* $12(1.05)^0 = 12$. *Avoid common errors such as confusing* $6(1.05)^t$ *with* $(6\cdot 1.05)^t$ *and* $5(0.03)^t$ *with* $5(1.03)^t$.
8. STEM Prove the formula for the sum of a geometric series, and use the formula to solve problems.

Arithmetic with Polynomials and Rational Expressions A-APR

1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication.
2. Understand that polynomial identities become true statements no matter which real numbers are substituted. *For example, the polynomial identity* $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ *can be used to generate Pythagorean triples.*
3. Understand the Remainder Theorem: For a polynomial $p(x)$ and a number a, the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$.
4. STEM Understand that the Binomial Theorem gives the expansion of $(x + a)^n$ in powers of x for a positive integer n and a real number a, with coefficients determined for example by Pascal's Triangle. The Binomial Theorem can be proved by mathematical induction or by a combinatorial argument.
5. STEM Understand that rational expressions are quotients of polynomials. They form a system analogous to the rational numbers, closed under division by a nonzero rational function.
6. Add, subtract and multiply polynomials.
7. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the polynomial.
8. Transform simple rational expressions using the commutative, associative, and distributive laws, and the inverse relationship between multiplication and division.
9. Divide a polynomial $p(x)$ by a divisor of the form $x - a$ using long division.
10. STEM Identify zeros and asymptotes of rational functions, when suitable factorizations are available, and use the zeros and asymptotes to construct a rough graph of the function.
11. STEM Divide polynomials, using long division for linear divisors and long division or a computer algebra system for higher degree divisors.

Creating Equations That Describe Numbers or Relationships A-CED★

1. Understand that equations in one variable are often created to describe properties of a specific but unknown number.
2. Understand that equations in two or more variables that represent a relationship between quantities can be built by experimenting with specific numbers in the relationship.
3. Write equations and inequalities that specify an unknown quantity or to express a relationship between two or more quantities. Use the equations and inequalities to solve problems. *Include equations arising from linear and quadratic functions, and simple rational and exponential functions.*

★ Standard with close connection to modeling.

Rearrange formulas to highlight a quantity of interest. *For example, transform Ohm's law $V = IR$ to highlight resistance R; in motion with constant acceleration, transform $v_{f,x}{}^2 - v_{i,x}{}^2 = 2a_x(x_f - x_i)$ to highlight the change in position along the x-axis, $x_f - x_i$.*

Reasoning with Equations and Inequalities A-REI

1. Understand that to solve an equation algebraically, one makes logical deductions from the equality asserted by the equation, often in steps that replace it with a simpler equation whose solutions include the solutions of the original one.
2. Understand that the method of completing the square can transform any quadratic equation in x into an equivalent equation of the form $(x - p)^2 = q$. This leads to the quadratic formula.
3. Understand that given a system of two linear equations in two variables, adding a multiple of one equation to another produces a system with the same solutions. This principle, combined with principles already encountered with equations in one variable, allows for the simplification of systems.
4. Understand that the graph of an equation in two variables is the set of its solutions plotted in the coordinate plane, often forming a curve or a line.
5. Understand that solutions to two equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.
6. Understand that the solutions to a linear inequality in two variables can be graphed as a half-plane (excluding the boundary in the case of a strict inequality).
7. Understand that solutions to several linear inequalities in two variables correspond to points in the intersection of the regions in the plane defined by the solutions to the inequalities.
8. Understand that equations and inequalities can be viewed as constraints in a problem situation, e.g., inequalities describing nutritional and cost constraints on combinations of different foods.★
9. STEM Understand that the relationship between an invertible function f and its inverse function can be used to solve equations of the form $f(x) = c$.
10. Solve simple rational and radical equations in one variable, noting and explaining extraneous solutions.
11. Solve linear equations in one variable, including equations with coefficients represented by letters.
12. Solve quadratic equations in one variable. *Include methods such as inspection (e.g. for $x^2 = 49$), square roots, completing the square, the quadratic formula and factoring. Recognize when the quadratic formula gives complex solutions and write them as $a \pm bi$ for real numbers a and b.*
13. Solve equations $f(x) = g(x)$ approximately by finding the intersections of the graphs of $f(x)$ and $g(x)$, e.g. using technology to graph the functions. *Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, exponential, and logarithmic functions.*
14. Solve linear inequalities in one variable and graph the solution set on a number line.
15. Solve systems of linear equations algebraically and graphically, focusing on pairs of linear equations in two variables.
16. Solve algebraically a simple system consisting of one linear equation and one quadratic equation in two variables; for example, find points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.
17. Graph the solution set of a system of linear inequalities in two variables.
18. In modeling situations, represent constraints by systems of equations and/or inequalities, and interpret solutions of these systems as viable or non-viable options in the modeling context.★
19. In the context of exponential models, solve equations of the form $a\, b^{ct} = d$ where a, c, and d are specific numbers and the base b is 2, 10, or e.★
20. STEM Relate the properties of logarithms to the laws of exponents and solve equations involving exponential functions.
21. STEM Use inverse functions to solve equations of the form $a\sin(bx + c) = d$, $a\cos(bx + c) = d$, and $a\tan(bx + c) = d$.

★ Standard with close connection to modeling.

Mathematics | High School—Functions

Functions describe situations where one quantity determines another. For example, the return on $10,000 invested at an annualized percentage rate of 4.25% is a function of the length of time the money is invested. Because nature and society are full of dependencies between quantities, functions are important tools in the construction of mathematical models.

In school mathematics, functions usually have numerical inputs and outputs and are often defined by an algebraic expression. For example, the time in hours it takes for a car to drive 100 miles is a function of the car's speed in miles per hour, v; the rule $T(v) = 100/v$ expresses this relationship algebraically and defines a function whose name is T.

The set of inputs to a function is called its domain. We often infer the domain to be all inputs for which the expression defining a function has a value, or for which the function makes sense in a given context.

A function can be described in various ways, such as by a graph (e.g., the trace of a seismograph); by a verbal rule, as in, "I'll give you a state, you give me the capital city"; or by an algebraic expression like $f(x) = a + bx$. The graph of a function is often a useful way of visualizing the relationship the function models, and manipulating a mathematical expression for a function can throw light on the function's properties. Graphing technology and spreadsheets are also useful tools in the study of functions.

Functions presented as expressions can model many important phenomena. Two important families of functions characterized by laws of growth are linear functions, which grow at a constant rate, and exponential functions, which grow at a constant percent rate. Linear functions with a constant term of zero describe proportional relationships.

A graphing utility or a CAS can be used to experiment with properties of the functions and their graphs and to build computational models of functions, including recursively defined functions.

Connections to Expressions, Equations, Modeling and Coordinates. Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

Content Outline

Interpreting Functions

Building Functions

Linear, Quadratic, and Exponential Models

Trigonometric Functions

Limits and Continuity†

Differential Calculus†

Applications of Derivatives†

Integral Calculus†

Applications of Integration†

Infinite Series†

† Specific standards for calculus domains are not listed.

Interpreting Functions A-IF

1. Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If f is a function and x is an element of its domain, then $f(x)$ denotes the output of f corresponding to the input x.
2. Understand that functions of a single variable have key characteristics, including: zeros; extreme values; average rates of change (over intervals); intervals of increasing, decreasing and/or constant behavior; and end behavior.
3. Understand that a function defined by an expression may be written in different but equivalent forms, which can reveal different properties of the function.
4. Use function notation and evaluate functions for inputs in their domains.
5. Describe qualitatively the functional relationship between two quantities by reading a graph (e.g., where the function is increasing or decreasing, what its long-run behavior appears to be, and whether it appears to be periodic). ★
6. Sketch a graph that exhibits the qualitative features of a function that models a relationship between two quantities. ★
7. Compare properties of two functions represented in different ways (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, draw conclusions about the graph of a quadratic function from its algebraic expression.*
8. Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. *For example, if the function h(n) gives the number of person-hours it takes to assemble n engines in a factory, then the positive integers would be an appropriate domain for the function.* ★
9. Describe the qualitative behavior of functions presented in graphs and tables. *Identify: intercepts; intervals where the function is increasing, decreasing, positive or negative; relative maximums and minimums; symmetries; end behavior; and periodicity.* ★
10. Use technology to exhibit the effects of parameter changes on the graphs of linear, power, quadratic, square root, cube root, and polynomial functions, and simple rational, exponential, logarithmic, sine, cosine, absolute value, and step functions. ★
11. Transform quadratic polynomials algebraically to reveal different features of the function they define, such as zeros, extreme values, and symmetry of the graph.

Building Functions A-BF

1. Understand that functions can be described by specifying an explicit expression, a recursive process or steps for calculation.
2. Understand that sequences are functions whose domain is a subset of the nonnegative integers.
3. STEM Understand that composing a function f with a function g creates a new function called the composite function—for an input number x, the output of the composite function is $f(g(x))$.
4. STEM Understand that the inverse of an invertible function "undoes" what the function does; that is, composing the function with its inverse in either order returns the original input. One can sometimes produce an invertible function from a non-invertible function by restricting the domain (e.g., squaring is not an invertible function on the real numbers, but squaring is invertible on the nonnegative real numbers).
5. Write a function that describes a relationship between two quantities, for example by varying parameters in and combining standard function types (such as linear, quadratic or exponential functions). Use technology to experiment with parameters and to illustrate an explanation of the behavior of the function when parameters vary. ★
6. Solve problems involving linear, quadratic, and exponential functions. ★
7. Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on the graph using technology.
8. Generate an arithmetic or geometric sequence given a recursive rule for the sequence. ★
9. As a way to describe routine modeling situations, write arithmetic and geometric sequences both recursively and in closed form, and translate between the two forms. ★
10. STEM Evaluate composite functions and compose functions symbolically.
11. STEM Read values of an inverse function from a graph or a table, given that the function has an inverse.
12. STEM For linear or simple exponential functions, find a formula for an inverse function by solving an equation.
13. STEM Verify symbolically by composition that one function is the inverse of another.

Linear, Quadratic, and Exponential Models A-LQE

1. Understand that a linear function, defined by $f(x) = mx + b$ for some constants m and b, models a situation in which a quantity changes at a constant rate, m, relative to another.★
2. Understand that quadratic functions have maximum or minimum values and can be used to model problems with optimum solutions.★
3. Understand that an exponential function, defined by $f(x) = ab^x$ or by $f(x) = a(1 + r)^x$ for some constants a, $b > 0$ and $r > -1$, models a situation where a quantity grows or decays by a constant factor or a constant percentage change over each unit interval.★
4. Understand that linear functions grow by equal differences over equal intervals; exponential functions grow by equal factors over equal intervals.★
5. Understand that in an arithmetic sequence, differences between consecutive terms form a constant sequence, and second differences are zero. Conversely, if the second differences are zero, the sequence is arithmetic. Arithmetic sequences can be seen as linear functions.★
6. Understand that in a sequence that increases quadratically (e.g., $a_n = 3n^2 + 2n + 1$), differences between consecutive terms form an arithmetic sequence, and second differences form a constant sequence. Conversely, if the second differences form a constant sequence with nonzero value, the sequence increases quadratically.★
7. Understand that in a geometric sequence, ratios of consecutive terms are all the same.★
8. Understand that a quantity increasing exponentially eventually exceeds a quantity increasing linearly, quadratically, or (more generally) as a polynomial function.★
9. Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.★
10. Construct a function to describe a linear relationship between two quantities. Determine the rate of change and constant term of a linear function from a graph, a description of a relationship, or from two (x, y) values (include reading these from a table).★
11. Use quadratic functions to model problems, e.g., in situations with optimum solutions.★
12. Construct an exponential function in the form $f(x) = a(1 + r)^x$ or $f(x) = ab^x$ to describe a relationship in which one quantity grows with respect to another at a constant percent growth rate or a with a constant growth factor.★
13. Interpret the rate of change and constant term of a linear function or sequence in terms of the situation it models, and in terms of its graph or a table of values.★
14. Calculate and interpret the growth factor for an exponential function (presented symbolically or as a table) given a fixed interval. Estimate the growth factor from a graph.★
15. Recognize a quantitative relationship as linear, exponential, or neither from description of a situation.★
16. Compare quantities increasing exponentially to quantities increasing linearly or as a polynomial function.★

Trigonometric Functions — F-TF

1. STEM Understand that the unit circle in the coordinate plane enables one to define the sine, cosine, and tangent functions for real numbers.
2. STEM Understand that trigonometric functions are periodic by definition, and sums and products of functions with the same period are periodic.
3. STEM Understand that restricting trigonometric functions to a domain on which they are always increasing or always decreasing allows for the construction of an inverse function.
4. STEM Revisit trigonometric functions and their graphs in terms of radians.
5. STEM Use the unit circle to determine geometrically the values of sine, cosine, tangent for integer multiples of $\pi/4$ and $\pi/6$.
6. STEM Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.
7. STEM Solve simple trigonometric equations formally using inverse trigonometric functions and evaluate the solutions numerically using technology. *Solving trigonometric equations by means of the quadratic formula is optional.*

Limits and Continuity† — F-LC

★ Standard with close connection to modeling.

† Specific standards for calculus domains are not listed.

Differential Calculus† F-DC

Applications of Derivatives† F-AD

Integral Calculus† F-IC

Applications of Integration† F-AI

Infinite Series† F-IS

† Specific standards for calculus domains are not listed.

Mathematics | High School—Modeling

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.

A model can be very simple, such as writing total cost as a product of unit price and number bought, or using a geometric shape to describe a physical object like a coin. Even such simple models involve making choices. It is up to us whether to model a coin as a three-dimensional cylinder, or whether a two-dimensional disk works well enough for our purposes. Other situations—modeling a delivery route, a production schedule, or a comparison of loan amortizations—need more elaborate models that use other tools from the mathematical sciences. Real-world situations are not organized and labeled for analysis; formulating tractable models, representing such models, and analyzing them is appropriately a creative process. Like every such process, this depends on acquired expertise as well as creativity.

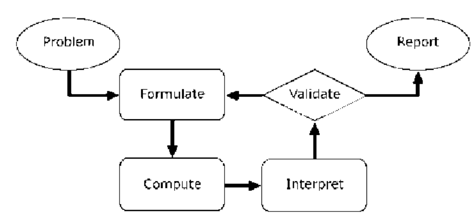
Some examples of such situations might include:

- Estimating how much water and food is needed for emergency relief in a devastated city of 3 million people, and how it might be distributed.
- Planning a table tennis tournament for 7 players at a club with 4 tables, where each player plays against each other player.
- Designing the layout of the stalls in a school fair so as to raise as much money as possible.
- Analyzing stopping distance for a car.
- Modeling savings account balance, bacterial colony growth, or investment growth.
- Critical path analysis, e.g., applied to turnaround of an aircraft at an airport.
- Risk situations, like extreme sports, pandemics and terrorism.
- Relating population statistics to individual predictions.

In situations like these, the models devised depend on a number of factors: How precise an answer do we want or need? What aspects of the situation do we most need to understand, control, or optimize? What resources of time and tools do we have? The range of models that we can create and analyze is also constrained by the limitations of our mathematical, statistical, and technical skills, and our ability to recognize significant variables and relationships among them. Diagrams of various kinds, spreadsheets and other technology, and algebra are powerful tools for understanding and solving problems drawn from different types of real-world situations.

One of the insights provided by mathematical modeling is that essentially the same mathematical or statistical structure can model seemingly different situations. Models can also shed light on the mathematical structures themselves, for example as when a model of bacterial growth makes more vivid the explosive growth of the exponential function.

The basic modeling cycle is summarized in the diagram. It involves (1) identifying variables in the situation and selecting those than represent essential features, (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables, (3) analyzing and performing operations on these relationships to draw conclusions, (4) interpreting the results of the mathematics in terms of the original situation, (5) validating the conclusions by comparing them with the situation, and then, either improving the model or, if it is acceptable, (6) reporting on the conclusions and the reasoning behind them. Choices, assumptions and approximations are present throughout this cycle.



In descriptive modeling, a model simply describes the phenomena or summarizes them in a compact form. Graphs of observations are a familiar descriptive model—for example, graphs of global temperature and atmospheric CO_2 over time.

Analytic modeling seeks to explain data on the basis of deeper theoretical ideas, albeit with parameters that are empirically based; for example, exponential growth of bacterial colonies (until cut-off mechanisms such as pollution or starvation intervene) follows from a constant reproduction rate. Functions are an important tool for analyzing such problems.

Graphing utilities, spreadsheets, CAS environments, and dynamic geometry software are powerful tools that can be used to model purely mathematical phenomena (e.g., the behavior of polynomials) as well as physical phenomena.

Modeling Standards

Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★).

Mathematics | High School—Statistics and Probability★

Decisions or predictions are often based on data—numbers in context. These decisions or predictions would be easy if the data always sent a clear message, but the message is often obscured by variability. Statistics provides tools for describing variability in data and for making informed decisions that take it into account.

Data are gathered, displayed, summarized, examined, and interpreted to discover patterns and deviations from patterns. Quantitative data can be described in terms of key characteristics: measures of shape, center, and spread. The shape of a data distribution might be described as symmetric, skewed, flat, or bell shaped, and it might be summarized by a statistic measuring center (such as mean or median) and a statistic measuring spread (such as standard deviation or interquartile range). Different distributions can be compared numerically using these statistics or compared visually using plots. Knowledge of center and spread are not enough to describe a distribution. Which statistics to compare, which plots to use, and what the results of a comparison might mean, depend on the question to be investigated and the real-life actions to be taken.

Randomization has two important uses in drawing statistical conclusions. First, collecting data from a random sample of a population makes it possible to draw valid conclusions about the whole population, taking variability into account. Second, randomly assigning individuals to different treatments allows a fair comparison of the effectiveness of those treatments. A statistically significant outcome is one that is unlikely to be due to chance alone, and this can be evaluated only under the condition of randomness. The conditions under which data are collected are important in drawing conclusions from the data; in critically reviewing uses of statistics in public media and other reports it is important to consider the study design, how the data were gathered, and the analyses employed as well as the data summaries and the conclusions drawn.

Random processes can be described mathematically by using a probability model. One begins to make a probability model by listing or describing the possible outcomes (the sample space) and assigning probabilities. In situations such as flipping a coin, rolling a number cube, or drawing a card, it might be reasonable to assume various outcomes are equally likely. In a probability model, sample points represent outcomes and combine to make up events; probabilities of events can be computed by applying the additive and multiplicative laws of probability. Interpreting these probabilities relies on an understanding of independence and conditional probability, which can be approached through the analysis of two-way tables.

Technology plays an important role in statistics and probability by making it possible to generate plots, functional models, and correlation coefficients, and to simulate many possible outcomes in a short amount of time.

Connections to Functions and Modeling. Functional models may be used to approximate data; if the data are approximately linear, the relationship may be modeled with a regression line and the strength and direction of such a relationship may be expressed through a correlation coefficient.

Content Outline

Summarizing Categorical and Measurement Data

Probability Models

Independently Combined Probability Models

Making Inferences and Justifying Conclusions Drawn from Data

Conditional Probability and the Laws of Probability

Experimenting and Simulating to Model Probabilities

Using Probability to Make Decisions

★ Most or all of the standards in Statistics and Probability have a close connection to modeling.

Summarizing Categorical and Quantitative Data S-SI

1. Understand that statistical methods take variability into account to support making informed decisions based on data collected to answer specific questions.
2. Understand that visual displays and summary statistics condense the information in data sets into usable knowledge.
3. Understand that patterns of association or relationships between variables may emerge through careful analysis of multi-variable data.
4. Summarize comparative or bivariate categorical data in two-way frequency tables. Interpret joint, marginal and conditional relative frequencies in the context of the data, recognizing possible associations and trends in bivariate categorical data.
5. Compare data on two or more count or measurement variables by using plots on the real number line (dot plots, histograms, and box plots). Use statistics appropriate to the shape of the data distribution to summarize center (median, mean) and spread (interquartile range, standard deviation) of the data sets. Interpret changes in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).
6. Represent bivariate quantitative data on a scatter plot and describe how the variables are related.
7. Fit a linear function for scatter plots that suggest a linear association. Informally assess the fit of the model function by plotting and analyzing residuals.
8. Use a model function fitted to the data to solve problems in the context of the data, interpreting the slope (rate of change) and the intercept (constant term).
9. Compute (using technology) and interpret the correlation coefficient for a linear relationship between variables.
10. Distinguish between correlation and causation.

Probability Models S-PM

1. Understand that in a probability model, individual outcomes have probabilities that sum to 1. When outcomes are categorized, the probability of a given type of outcome is the sum of the probabilities of all the individual outcomes of that type.
2. Understand that uniform probability models are useful models for processes such as (i) the selection of a person from a population; (ii) the selection of a number in a lottery; (iii) any physical situation in which symmetry suggests that different individual outcomes are equally likely.
3. Understand that two different empirical probability models for the same process will rarely assign exactly the same probability to a given type of outcome. But if the data sets are large and the methods used to collect the data for the two data sets are consistent, the agreement between the models is likely to be reasonably good.
4. Understand that a (theoretical) uniform probability model may be judged by comparing it to an empirical probability model for the same process. If the theoretical assumptions are appropriate and the data set is large, then the two models should agree approximately. If the agreement is not good, then it may be necessary to modify the assumptions underlying the theoretical model or look for factors that might have affected the data used to create the empirical model.
5. Use a uniform probability model to compute probabilities for a process involving uncertainty, including the random selection of a person from a population and physical situations where symmetry suggests that different individual outcomes are equally likely.
   a. List the individual outcomes to create a sample space.
   b. Label the individual outcomes in the sample space to reflect important characteristics or quantities associated with them.
   c. Determine probabilities of individual outcomes, and determine the probability of a type or category of outcome as the fraction of individual outcomes it includes.
6. Generate data by sampling, repeated experimental trials, and simulations. Record and appropriately label such data, and use them to construct an empirical probability model. Compute probabilities in such models.
7. Compare probabilities from a theoretical model to probabilities from a corresponding empirical model for the same situation. If the agreement is not good, explain possible sources of the discrepancies.

Independently Combined Probability Models S-IPM

1. Understand that to describe a pair of random processes (such as tossing a coin and rolling a number cube), or one random process repeated twice (such as randomly selecting a student in the class on two different days), two probability models can be combined into a single model.

a. The sample space for the combined model is formed by listing all possible ordered pairs that combine an individual outcome from the first model with an individual outcome from the second. Each ordered pair is an individual outcome in the combined model.

b. The total number of individual outcomes (ordered pairs) in the combined model is the product of the number of individual outcomes in each of the two original models.

2. Understand that when two probability models are combined independently, the probability that one type of outcome in the first model occurs together with another type of outcome in the second model is the product of the two corresponding probabilities in the original models (the Multiplication Rule).
3. Combine two uniform models independently to compute probabilities for a pair of random processes (e.g., flipping a coin twice, selecting one person from each of two classes).
   a. Use organized lists, tables and tree diagrams to represent the combined sample space.
   b. Determine probabilities of ordered pairs in the combined model, and determine the probability of a particular type or category of outcomes in the combined model, as the fraction of ordered pairs corresponding to it.
4. For two independently combined uniform models, use the Multiplication Rule to determine probabilities.

Making Inferences and Justifying Conclusions — S-IC

1. Understand that statistics is a process for making inferences about population parameters based on a sample from that population; randomness is the foundation for statistical inference.
2. Understand that the design of an experiment or sample survey is of critical importance to analyzing the data and drawing conclusions.
3. Understand that simulation-based techniques are powerful tools for making inferences and justifying conclusions from data.
4. Use probabilistic reasoning to decide if a specified model is consistent with results from a given data-generating process. (For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?)
5. Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.
6. Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.
7. Use data from a randomized experiment to compare two treatments; justify significant differences between parameters through the use of simulation models for random assignment.
8. Evaluate reports based on data.

Conditional Probability and the Laws of Probability — S-CP

1. Understand that events are subsets of a sample space; often, events of interest are defined by using characteristics (or categories) of the sample points, or as unions, intersections, or complements thereof ("and," "or," "not"). A sample point may belong to several events (categories).
2. Understand that if A and B are two events, then in a uniform model the conditional probability of A given B, denoted by $P(A \mid B)$, is the fraction of B's sample points that also lie in A.
3. Understand that the laws of probability allow one to use known probabilities to determine other probabilities of interest.
4. Compute probabilities by constructing and analyzing sample spaces, representing them by tree diagrams, systematic lists, and Venn diagrams.
5. Use the laws of probability to compute probabilities.
6. Apply concepts such as intersections, unions and complements of events, and conditional probability and independence to define or analyze events, calculate probabilities and solve problems.
7. Construct and interpret two-way tables to show probabilities when two characteristics (or categories) are associated with each sample point. Use a two-way table to determine conditional probabilities.★
8. Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations.★
9. Use permutations and combinations to compute probabilities of compound events and solve problems.

★ Standard with close connection to modeling.

Experimenting and Simulating to Model Probabilities S-ES

1. Understand that sets of data obtained from surveys, simulations or other means can be used as probability models, by treating the data set itself as a sample space, in which the sample points are the individual pieces of data.
2. Understand that the probability of an outcome can be interpreted as an assertion about the long-run proportion of the outcome's occurrence if the random experiment is repeated a large number of times.
3. Calculate experimental probabilities by performing simulations or experiments involving a probability model and using relative frequencies of outcomes.
4. Compare the results of simulations with predicted probabilities. When there are substantial discrepancies between predicted and observed probabilities, explain them.
5. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets and tables to estimate areas under the normal curve.

Using Probability to Make Decisions S-MD

1. Understand that the expected value of a random variable is the weighted average of its possible values, with weights given by their respective probabilities.
2. Understand that when the possible outcomes of a decision can be assigned probabilities and payoff values, the decision can be analyzed as a random variable with an expected value, e.g., of an investment.
3. Calculate expected value, e.g. to determine the fair price of an investment.
4. Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).
5. Evaluate and compare two investments or strategies with the same expected value, where one investment or strategy is safer than the other.
6. Evaluate and compare two investments or strategies, where one investment or strategy is safer but has lower expected value. Include large and small investments, and situations with serious consequences.
7. Analyze decisions and strategies using probability concepts (e.g. product testing, medical testing, pulling a hockey goalie at the end of a game).

Mathematics | High School—Geometry

An understanding of the attributes and relationships of geometric objects can be applied in diverse contexts—interpreting a schematic drawing, estimating the amount of wood needed to frame a sloping roof, rendering computer graphics, or designing a sewing pattern for the most efficient use of material.

Understanding the attributes of geometric objects often relies on measurement: a circle is a set of points in a plane at a fixed distance from a point; a cube is bounded by six squares of equal area; when two parallel lines are crossed by a transversal, pairs of corresponding angles are congruent.

The concepts of congruence, similarity and symmetry can be united under the concept of geometric transformation. Reflections and rotations each explain a particular type of symmetry, and the symmetries of an object offer insight into its attributes—as when the reflective symmetry of an isosceles triangle assures that its base angles are congruent. Applying a scale transformation to a geometric figure yields a similar figure. The transformation preserves angle measure, and lengths are related by a constant of proportionality.

The definitions of sine, cosine and tangent for acute angles are founded on right triangle similarity, and, with the Pythagorean theorem, are fundamental in many real-world and theoretical situations.

Coordinate geometry is a rich field for exploration. How does a geometric transformation such as a translation or reflection affect the coordinates of points? How is the geometric definition of a circle reflected in its equation? Coordinates can describe locations in three dimensions and extend the use of algebraic techniques to problems involving the three-dimensional world we live in.

Dynamic geometry environments provide students with experimental and modeling tools that allow them to investigate geometric phenomena in much the same was as CAS environments allow them to experiment with algebraic phenomena.

Connections to Equations and Inequalities. The correspondence between numerical coordinates and geometric points allows methods from algebra to be applied to geometry and vice versa. The solution set of an equation becomes a geometric curve, making visualization a tool for doing and understanding algebra. Geometric shapes can be described by equations, making algebraic manipulation into a tool for geometric understanding, modeling and proof.

Content Outline

Congruence

Similarity, Right Triangles, and Trigonometry

Circles

Expressing Geometric Properties with Equations

Trigonometry of General Triangles

Geometric Measurement and Dimension

Modeling with Geometry

Congruence G-CO

1. Understand that two geometric figures are congruent if there is a sequence of rigid motions (rotations, reflections, translations) that carries one onto the other. This is the principle of superposition.
2. Understand that criteria for triangle congruence are ways to specify enough measures in a triangle to ensure that all triangles drawn with those measures are congruent.
3. Understand that criteria for triangle congruence (ASA, SAS, and SSS) can be established using rigid motions.
4. Understand that geometric diagrams can be used to test conjectures and identify logical errors in fallacious proofs.
5. Know and use (in reasoning and problem solving) definitions of angles, polygons, parallel, and perpendicular lines, rigid motions, parallelograms and rectangles.
6. Prove theorems about lines and angles. *Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; two lines parallel to a third are parallel to each other; points on a perpendicular bisector of a segment are exactly those equidistant from the segment's endpoints.*
7. Prove theorems about triangles. *Theorems include: measures of interior angles of a triangle sum to 180°, base angles of isosceles triangles are congruent, the triangle inequality, the longest side of a triangle faces the angle with the greatest measure and vice-versa, the exterior-angle inequality, and the segment joining midpoints of two sides of a triangle parallel to the third side and half the length.*
8. Use and prove properties of and relationships among special quadrilaterals: parallelogram, rectangle, rhombus, square, trapezoid and kite.
9. Characterize parallelograms in terms of equality of opposite sides, in terms of equality of opposite angles, and in terms of bisection of diagonals; characterize rectangles as parallelograms with equal diagonals.
10. Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc). *Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.*
11. Construct an equilateral triangle, a square and a regular hexagon inscribed in a circle.
12. Use two-dimensional representations to transform figures and to predict the effect of translations, rotations, and reflections.
13. Use two-dimensional representations to transform figures and to predict the effect of dilations.

Similarity, Right Triangles, and Trigonometry G-SRT

1. Understand that dilating a line produces a line parallel to the original. (In particular, lines passing through the center of the dilation remain unchanged.)
2. Understand that the dilation of a given segment is parallel to the given segment and longer or shorter in the ratio given by the scale factor. A dilation leaves a segment unchanged if and only if the scale factor is 1.
3. Understand that the assumed properties of dilations can be used to establish the AA, SAS, and SSS criteria for similarity of triangles.
4. Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of sine, cosine, and tangent.
5. Understand that a line parallel to one side of a triangle divides the other two proportionally, and conversely.
6. Use triangle similarity criteria to solve problems and to prove relationships in geometric figures. *Include a proof of the Pythagorean theorem using triangle similarity.*
7. Use and explain the relationship between the sine and cosine of complementary angles.
8. Use sine, cosine, tangent, and the Pythagorean Theorem to solve right triangles[2] in applied problems.
9. STEM Give an informal explanation using successive approximation that a dilation of scale factor r changes the length of a curve by a factor of r and the area of a region by a factor of r^2.

Circles G-C

1. Understand that dilations can be used to show that all circles are similar.
2. Understand that there is a unique circle through three non-collinear points, and four circles tangent to three non-concurrent lines.

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[2] A right triangle has five parameters, its three lengths and two acute angles. Given a length and any other parameter, "solving a right triangle" means finding the remaining three parameters.

3. Identify and define radius, diameter, chord, tangent, secant, and circumference.
4. Identify and describe relationships among angles, radii, and chords. *Include the relationship between central, inscribed and circumscribed angles; inscribed angles on a diameter are right angles; the radius of a circle is perpendicular to the tangent where the radius intersects the circle.*
5. Determine the arc lengths and the areas of sectors of circles, using proportions.
6. STEM Construct a tangent line from a point outside a given circle to the circle.
7. STEM Prove and use theorems about circles, and use these theorems to solve problems involving:
   a. Symmetries of a circle
   b. Similarity of a circle to any other
   c. Tangent line, perpendicularity to a radius
   d. Inscribed angles in a circle, relationship to central angles, and equality of inscribed angles
   e. Properties of chords, tangents, and secants as an application of triangle similarity.

Expressing Geometric Properties with Equations — G-GPE

1. Understand that two lines with well-defined slopes are perpendicular if and only if the product of their slopes is equal to –1.
2. Understand that the equation of a circle can be found using its definition and the Pythagorean Theorem.
3. Understand that transforming the graph of an equation by reflecting in the axes, translating parallel to the axes, or applying a dilation in one of the coordinate directions corresponds to substitutions in the equation.
4. STEM Understand that an ellipse is the set of all points whose distances from two fixed points (the foci) are a constant sum. The graph of $x^2/a^2 + y^2/b^2 = 1$ is an ellipse with foci on one of the axes.
5. STEM Understand that a parabola is the set of points equidistant from a fixed point (the focus) and a fixed line (the directrix). The graph of any quadratic function is a parabola, and all parabolas are similar.
6. STEM Understand that the formula $A = \pi ab$ for the area of an ellipse can be derived from the formula for the area of a circle.★
7. Use the slope criteria for parallel and perpendicular lines to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point).
8. Find the point on the segment between two given points that divides the segment in a given ratio.
9. Use coordinates to compute perimeters of polygons and areas for triangles and rectangles, e.g. using the distance formula.★
10. Decide whether a point with given coordinates lies on a circle defined by a given equation.
11. Use coordinates to prove simple geometric theorems algebraically. For example, prove or disprove that a figure defined by four given points in the coordinate plane is a rectangle; prove or disprove that the point $(1, \sqrt{3})$ lies on the circle centered at the origin and containing the point $(0, 2)$.
12. Complete the square to find the center and radius of a circle given by an equation.
13. STEM Find an equation for an ellipse given in the coordinate plane with major and minor axes parallel to the coordinate axes.
14. STEM Calculate areas of ellipses to solve problems.★

Trigonometry of General Triangles — G-TGT

1. STEM Understand that the formula $A = \frac{1}{2} ab \sin(C)$ for the area of a triangle can be derived by drawing an auxiliary line from a vertex perpendicular to the opposite side. Applying this formula in three different ways leads to the Law of Sines.
2. STEM Understand that the Law of Cosines generalizes the Pythagorean Theorem.
3. STEM Understand that the sine, cosine and tangent of the sum or difference of two angles can be expressed in terms of sine, cosine, and tangent of the angles themselves using the addition formulas.
4. STEM Understand that the Laws of Sines and Cosines embody the triangle congruence criteria, in that three pieces of information are usually sufficient to completely solve a triangle. Furthermore, these laws yield two possible solutions in the ambiguous case, illustrating that "Side-Side-Angle" is not a congruence criterion.
5. STEM Explain proofs of the Law of Sines and the Law of Cosines.

★ Standard with close connection to modeling.

6. STEM Use the Law of Sines and the Law of Cosines to find unknown measurements in right and non-right triangles (e.g., surveying problems, resultant forces).

Geometric Measurement and Dimension G-GMD

1. Understand that the area of a decomposed figure is the sum of the areas of its components and is independent of the choice of dissection.
2. STEM Understand that lengths of curves and areas of curved regions can be defined using the informal notion of limit.
3. STEM Understand that Cavalieri's principle allows one to understand volume formulas informally by visualizing volumes as stacks of thin slices.
4. Find areas of polygons by dissecting them into triangles.
5. Explain why the volume of a cylinder is the area of the base times the height, using informal arguments.
6. For a pyramid or a cone, give a heuristic argument to show why its volume is one-third of its height times the area of its base.
7. Apply formulas and solve problems involving volume and surface area of right prisms, right circular cylinders, right pyramids, cones, spheres and composite figures.
8. STEM Identify cross-sectional shapes of slices of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.
9. STEM Use the behavior of length and area under dilations to show that the circumference of a circle is proportional to the radius and the area of a circle is proportional to the square of the radius. Identify the relation between the constants of proportionality with an informal argument involving dissection and recomposition of a circle into an approximate rectangle.

Modeling with Geometry G-MG

1. Understand that models of objects and structures can be built from a library of standard shapes; a single kind of shape can model seemingly different objects. ★
2. Use geometric shapes, their measures and their properties to describe objects (e.g., modeling a tree trunk or a human torso or as a cylinder). ★
3. Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot). ★
4. Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy constraints or minimize cost; working with typographic grid systems based on ratios). ★

★ Standard with close connection to modeling.

Glossary

Addition and subtraction within 10, 20, or 100. Addition or subtraction of whole numbers with whole number answers, and with sum or minuend at most 10, 20, or 100. Example: $8 + 2 = 10$ is an addition within 10, $14 - 5 = 9$ is a subtraction within 20, and $55 - 18 = 37$ is a subtraction within 100.

Additive inverses. Two numbers whose sum is 0 are additive inverses of one another. Example: $3/4$ and $-3/4$ are additive inverses of one another because $3/4 + (-3/4) = (-3/4) + 3/4 = 0$.

Box plot. A method of visually displaying a distribution of data values by using the median, quartiles, and extremes of the data set. A box shows the middle 50% of the data.[3]

Complex fraction. A fraction A/B where A and/or B are fractions.

Congruent. Two plane or solid figures are congruent if one can be obtained from the other by a sequence of rigid motions (rotations, reflections, and translations).

Counting on. A strategy for finding the number of objects in a group without having to count every member of the group. For example, if a stack of books is known to have 8 books and 3 more books are added to the top, it is not necessary to count the stack all over again; one can find the total by *counting on*—pointing to the top book and saying "eight," following this with "nine, ten, eleven. There are eleven books now."

Decade word. A word referring to a single-digit multiple of ten, as in *twenty*, *thirty*, *forty*, etc.

Dot plot. A method of visually displaying a distribution of data values where each data value is shown as a dot or mark above a number line. Also known as a line plot.[4]

Dilation. A transformation that moves each point along the ray through the point emanating from a fixed center, and multiplies distances from the center by a common scale factor.

Empirical probability model. A probablity model based on a data set for a random process in which the probability of a particular type or category of outcome equals the percentage of data points included in the category. Example: If a coin is tossed 10 times and 4 of the tosses are Heads, then the empirical probability of Heads in the empirical probability model is $4/10$ (equivalently 0.4 or 40%).

Equivalent fractions. Two fractions a/b and c/d that represent the same number.

Expanded form. A multidigit number is expressed in expanded form when it is written as a sum of single-digit multiples of powers of ten. For example, $643 = 600 + 40 + 3$.

First quartile. For a data set with median M, the first quartile is the median of the data values less than M. Example: For the data set $\{1, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the first quartile is 6.[5] *See also* median, third quartile, interquartile range.

Fraction. A number expressible in the form a/b where a is a whole number and b is a positive whole number. (The word *fraction* in these standards always refers to a nonnegative number.) *See also* rational number.

Independently combined probability models. Two probability models are said to be combined independently if the probability of each ordered pair in the combined model equals the product of the original probabilities of the two individual outcomes in the ordered pair.

Integer. A number expressible in the form a or $-a$ for some whole number a.

Interquartile Range. A measure of variation in a set of numerical data, the interquartile range is the distance between the first and third quartiles of the data set. Example: For the data set $\{1, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the interquartile range is $15 - 6 = 9$. *See also* first quartile, third quartile.

Laws of arithmetic. See Table 3 in this Glossary.

Line plot. See dot plot.

Mean. A measure of center in a set of numerical data, computed by adding the values in a list and then dividing by the number of values in the list.[6] Example: For the data set $\{1, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the mean is 21.

Mean absolute deviation. A measure of variation in a set of numerical data, computed by adding the distances between each data value and the mean, then dividing by the number of data values. Example: For the data set $\{2, 3, 6, 7, 10, 12, 14, 15, 22, 120\}$, the mean absolute deviation is 20.

Median. A measure of center in a set of numerical data. The median of a list of values is the value appearing at the center of a sorted version of the list—or the mean of the two central values, if the list contains an even number of values. Example: For the data set $\{2, 3, 6, 7, 10, 12, 14, 15, 22, 90\}$, the median is 11.

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3 Adapted from Wisconsin Department of Public Instruction, http://dpi.wi.gov/standards/mathglos.html, accessed March 2, 2010.

4 Adapted from Wisconsin Department of Public Instruction, *op. cit.*.

5 Many different methods for computing quartiles are in use. The method defined here is sometimes called the Moore and McCabe method. See Langford, E., "Quartiles in Elementary Statistics," *Journal of Statistics Education* Volume 14, Number 3 (2006),

6 To be more precise, this defines the *arithmetic mean*.

Multiplication and division within 100. Multiplication or division of whole numbers with whole number answers, and with product or dividend at most 100. Example: $72 \div 8 = 9$.

Multiplicative inverses. Two numbers whose product is 1 are multiplicative inverses of one another. Example: $3/4$ and $4/3$ are multiplicative inverses of one another because $3/4 \times 4/3 = 4/3 \times 3/4 = 1$.

Properties of equality. See Table 4 in this Glossary.

Properties of inequality. See Table 5 in this Glossary.

Properties of operations. Associativity and commutativity of addition and multiplication, distributivity of multiplication over addition, the additive identity property of 0, and the multiplicative identity property of 1.See Table 3 in this Glossary.

Probability. A number between 0 and 1 used to quantify likelihood for processes that have uncertain outcomes (such as tossing a coin, selecting a person at random from a group of people, tossing a ball at a target, testing for a medical condition).

Rational number. A number expressible in the form a/b or $-a/b$ for some fraction a/b. The rational numbers include the integers.

Related fractions. Two fractions are said to be related if one denominator is a factor of the other.[7]

Rigid motion. A transformation of points in space consisting of one or more translations, reflections, and/or rotations. Rigid motions are here assumed to preserve distances and angle measures.

Sample space. In a probability model for a random process, a list of the individual outcomes that are to be considered.

Scatter plot. A graph in the coordinate plane representing a set of bivariate data. For example, the heights and weights of a group of people could be displayed on a scatter plot.[8]

Similarity transformation. A rigid motion followed by a dilation.

Tape diagrams. Drawings that look like a segment of tape, used to illustrate number relationships. Also known as strip diagrams, bar models or graphs, fraction strips, or length models.

Teen number. A whole number that is greater than or equal to 11 and less than or equal to 19.

Third quartile. For a data set with median M, the third quartile is the median of the data values greater than M. Example: For the data set {2, 3, 6, 7, 10, 12, 14, 15, 22, 120}, the third quartile is 15. *See also* median, first quartile, interquartile range.

Uniform probability model. A probability model in which the individual outcomes all have the same probability ($1/N$ if there are N individual outcomes in the sample space). If a given type of outcome consists of M individual outcomes, then the probability of that type of outcome is M/N. Example: if a uniform probability model is used to model the process of randomly selecting a person from a class of 32 students, and if 8 of the students are left-handed, then the probability of randomly selecting a left-handed student is $8/32$ (equivalently $1/4$, 0.25 or 25%).

Whole numbers. The numbers 0, 1, 2, 3, ….

[7] See Ginsburg, Leinwand and Decker (2009), *Informing Grades 1-6 Mathematics Standards Development: What Can Be Learned from High-Performing Hong Kong, Korea, and Singapore?*, Table A1, p. A-5, grades 3 and 4.

[8] Adapted from Wisconsin Department of Public Instruction, *op. cit.*.

TABLE 1. Common addition and subtraction situations.[9]

	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? $2 + 3 = ?$	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were five bunnies. How many bunnies hopped over to the first two? $2 + ? = 5$	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were five bunnies. How many bunnies were on the grass before? $? + 3 = 5$
Take from	Five apples were on the table. I ate two apples. How many apples are on the table now? $5 – 2 = ?$	Five apples were on the table. I ate some apples. Then there were three apples. How many apples did I eat? $5 – ? = 3$	Some apples were on the table. I ate two apples. Then there were three apples. How many apples were on the table before? $? – 2 = 3$

	Total Unknown	Addend Unknown	Both Addends Unknown[10]
Put Together/ Take Apart[11]	Three red apples and two green apples are on the table. How many apples are on the table? $3 + 2 = ?$	Five apples are on the table. Three are red and the rest are green. How many apples are green? $3 + ? = 5$, $5 – 3 = ?$	Grandma has five flowers. How many can she put in her red vase and how many in her blue vase? $5 = 0 + 5$, $5 = 5 + 0$ $5 = 1 + 4$, $5 = 4 + 1$ $5 = 2 + 3$, $5 = 3 + 2$

	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare[12]	("How many more?" version): Lucy has two apples. Julie has five apples. How many more apples does Julie have than Lucy? ("How many fewer?" version): Lucy has two apples. Julie has five apples. How many fewer apples does Lucy have than Julie? $2 + ? = 5$, $5 – 2 = ?$	(Version with "more"): Julie has three more apples than Lucy. Lucy has two apples. How many apples does Julie have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Lucy has two apples. How many apples does Julie have? $2 + 3 = ?$, $3 + 2 = ?$	(Version with "more"): Julie has three more apples than Lucy. Julie has five apples. How many apples does Lucy have? (Version with "fewer"): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? $5 – 3 = ?$, $? + 3 = 5$

[9] Adapted from Box 2-4 of National Research Council (2009, op. cit., pp. 32, 33).

[10] These *take apart* situations can be used to show all the decompositions of a given number. The associated equations, which have the total on the left of the equal sign, help children understand that the = sign does not always mean *makes* or *results in* but always does mean *is the same number as*.

[11] Either addend can be unknown, so there are three variations of these problem situations. Both Addends Unknown is a productive extension of this basic situation especially for small numbers less than or equal to 10.

[12] For the Bigger Unknown or Smaller Unknown situations, one version directs the correct operation (the version using *more* for the bigger unknown and using *less* for the smaller unknown). The other versions are more difficult.

TABLE 2. Common multiplication and division situations.[13]

	Unknown Product	Group Size Unknown ("How many in each group?" Division)	Number of Groups Unknown ("How many groups?" Division)
	$3 \times 6 = ?$	**$3 \times ? = 18$ and $18 \div 3 = ?$**	**$? \times 6 = 18$ and $18 \div 6 = ?$**
Equal Groups	There are 3 bags with 6 plums in each bag. How many plums are there in all? *Measurement example*. You need 3 lengths of string, each 6 inches long. How much string will you need altogether?	If 18 plums are shared equally into 3 bags, then how many plums will be in each bag? *Measurement example*. You have 18 inches of string, which you will cut into 3 equal pieces. How long will each piece of string be?	If 18 plums are to be packed 6 to a bag, then how many bags are needed? *Measurement example*. You have 18 inches of string, which you will cut into pieces that are 6 inches long. How many pieces of string will you have?
Arrays,[14] Area[15]	There are 3 rows of apples with 6 apples in each row. How many apples are there? *Area example*. What is the area of a 3 cm by 6 cm rectangle?	If 18 apples are arranged into 3 equal rows, how many apples will be in each row? *Area example*. A rectangle has area 18 square centimeters. If one side is 3 cm long, how long is a side next to it?	If 18 apples are arranged into equal rows of 6 apples, how many rows will there be? *Area example*. A rectangle has area 18 square centimeters. If one side is 6 cm long, how long is a side next to it?
Compare	A blue hat costs \$6. A red hat costs 3 times as much as the blue hat. How much does the red hat cost? *Measurement example*. A rubber band is 6 cm long. How long will the rubber band be when it is stretched to be 3 times as long?	A red hat costs \$18 and that is 3 times as much as a blue hat costs. How much does a blue hat cost? *Measurement example*. A rubber band is stretched to be 18 cm long and that is 3 times as long as it was at first. How long was the rubber band at first?	A red hat costs \$18 and a blue hat costs \$6. How many times as much does the red hat cost as the blue hat? *Measurement example*. A rubber band was 6 cm long at first. Now it is stretched to be 18 cm long. How many times as long is the rubber band now as it was at first?
General	$a \times b = ?$	$a \times ? = p$ and $p \div a = ?$	$? \times b = p$ and $p \div b = ?$

[13] The first examples in each cell are examples of discrete things. These are easier for students and should be given before the measurement examples.
[14] The language in the array examples shows the easiest form of array problems. A harder form is to use the terms rows and columns: The apples in the grocery window are in 3 rows and 6 columns. How many apples are in there? Both forms are valuable.
[15] Area involves arrays of squares that have been pushed together so that there are no gaps or overlaps, so array problems include these especially important measurement situations.

TABLE 3. The laws of arithmetic, including the properties of operations (identified with °). Here a, b and c stand for arbitrary numbers in a given number system. The laws of arithmetic apply to the rational number system, the real number system, and the complex number system.

°*Associative law of addition*	$(a + b) + c = a + (b + c)$
°*Commutative law of addition*	$a + b = b + a$
°*Additive identity property of 0*	$a + 0 = 0 + a = a$
Existence of additive inverses	For every a there exists $-a$ so that $a + (-a) = (-a) + a = 0$.
°*Associative law of multiplication*	$(a \times b) \times c = a \times (b \times c)$
°*Commutative law of multiplication*	$a \times b = b \times a$
°*Multiplicative identity property of 1*	$a \times 1 = 1 \times a = a$
Existence of multiplicative inverses	For every $a \neq 0$ there exists $1/a$ so that $a \times 1/a = 1/a \times a = 1$.
°*Distributive law of multiplication over addition*	$a \times (b + c) = a \times b + a \times c$

TABLE 4. The properties of equality. Here a, b and c stand for arbitrary numbers in the rational, real, or complex number systems.

Reflexive property of equality	$a = a$
Symmetric property of equality	If $a = b$, then $b = a$.
Transitive property of equality	If $a = b$ and $b = c$, then $a = c$.
Addition property of equality	If $a = b$, then $a + c = b + c$.
Subtraction property of equality	If $a = b$, then $a - c = b - c$.
Multiplication property of equality	If $a = b$, then $a \times c = b \times c$.
Division property of equality	If $a = b$ and $c \neq 0$, then $a \div c = b \div c$.
Substitution property of equality	If $a = b$, then b may be substituted for a in any expression containing a.

TABLE 5. The properties of inequality. Here a, b and c stand for arbitrary numbers in the rational or real number systems.

Exactly one of the following is true: $a < b$, $a = b$, $a > b$.
If $a > b$ and $b > c$ then $a > c$.
If $a > b$, then $b < a$.
If $a > b$, then $-a < -b$.
If $a > b$, then $a \pm c > b \pm c$.
If $a > b$ and $c > 0$, then $a \times c > b \times c$.
If $a > b$ and $c < 0$, then $a \times c < b \times c$.
If $a > b$ and $c > 0$, then $a \div c > b \div c$.
If $a > b$ and $c < 0$, then $a \div c < b \div c$.

Sample of Works Consulted

Existing state standards documents.
Research summaries and briefs provided to the Working Group by researchers.
Mathematics documents from: Alberta, Canada; Belgium; China; Chinese Taipei; Denmark; England; Finland; Hong Kong; India; Ireland; Japan; Korea, New Zealand, Singapore; Victoria (British Columbia).
Adding it Up: Helping Children Learn Mathematics. National Research Council, Mathematics Learning Study Committee, 2001.
Benchmarking for Success: Ensuring U.S. Students Receive a World-Class Education. National Governors Association, Council of Chief State School Officers, and Achieve, Inc., 2008.
Crossroads in Mathematics (1995) and *Beyond Crossroads* (2006). American Mathematical Association of Two-Year Colleges (AMATYC).
Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence. National Council of Teachers of Mathematics, 2006.
Focus in High School Mathematics: Reasoning and Sense Making. National Council of Teachers of Mathematics. Reston, VA: NCTM.
Foundations for Success: The Final Report of the National Mathematics Advisory Panel. U.S. Department of Education: Washington, DC, 2008.
Guidelines for Assessment and Instruction in Statistics Education (GAISE) Report: A PreK-12 Curriculum Framework.
How People Learn: Brain, Mind, Experience, and School. Bransford, J.D., Brown, A.L., and Cocking, R.R., eds. Committee on Developments in the Science of Learning, Commission on Behavioral and Social Sciences and Education, National Research Council, 1999.
Mathematics and Democracy, The Case for Quantitative Literacy, Steen, L.A. (ed.). National Council on Education and the Disciplines, 2001.
Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity. Cross, C.T., Woods, T.A., and Schweingruber, S., eds. Committee on Early Childhood Mathematics, National Research Council, 2009.
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/
Principles and Standards for School Mathematics. National Council of Teachers of Mathematics, 2000.
The Proficiency Illusion. Cronin, J., Dahlin, M., Adkins, D., and Kingsbury, G.G.; foreword by C.E. Finn, Jr., and M. J. Petrilli. Thomas B. Fordham Institute, 2007.
Ready or Not: Creating a High School Diploma That Counts. American Diploma Project, 2004.
A Research Companion to Principles and Standards for School Mathematics. National Council of Teachers of Mathematics, 2003.
Sizing Up State Standards 2008. American Federation of Teachers, 2008.
A Splintered Vision: An Investigation of U.S. Science and Mathematics Education. Schmidt, W.H., McKnight, C.C., Raizen, S.A., et al. U.S. National Research Center for the Third International Mathematics and Science Study, Michigan State University, 1997.
Stars By Which to Navigate? Scanning National and International Education Standards in 2009. Carmichael, S.B., W.S. Wilson, Finn, Jr., C.E., Winkler, A.M., and Palmieri, S. Thomas B. Fordham Institute, 2009.
Blum, W., Galbraith, P. L., Henn, H-W. and Niss, M. (Eds) *Applications and Modeling in Mathematics Education*, ICMI Study 14. Amsterdam: Springer.
Cobb and Moore, "Mathematics, Statistics, and Teaching," *Amer. Math. Monthly* 104(9), pp. 801-823, 1997.
Conley, D.T. *Knowledge and Skills for University Success*, 2008.
Conley, D.T. *Toward a More Comprehensive Conception of College Readiness*, 2007.
Cuoco, A., Goldenberg, E. P., and Mark, J., "Habits of Mind: An Organizing Principle for a Mathematics Curriculum," *Journal of Mathematical Behavior*, 15(4), 375-402, 1996.
Ginsburg, A., Leinwand, S., and Decker, K., "Informing Grades 1-6 Standards Development: What Can Be Learned from High-Performing Hong Kong, Korea, and Singapore?" American Institutes for Research, 2009.
Ginsburg et al., "What the United States Can Learn From Singapore's World-Class Mathematics System (and what Singapore can learn from the United States)," American Institutes for Research, 2005.
Ginsburg et al., "Reassessing U.S. International Mathematics Performance: New Findings from the 2003 TIMMS and PISA," American Institutes for Research, 2005.
Harel, G., "What is Mathematics? A Pedagogical Answer to a Philosophical Question," in R. B. Gold and R. Simons (Eds.), *Current Issues in the Philosophy of Mathematics from the Perspective of Mathematicians*. Mathematical Association of America, 2008.
Howe, R., "From Arithmetic to Algebra."
Howe, R., "Starting Off Right in Arithmetic," http://math.arizona.edu/~ime/2008-09/MIME/BegArith.pdf.
Jordan, N. C., Kaplan, D., Ramineni, C., and Locuniak, M. N., "Early math matters: kindergarten number competence and later mathematics outcomes," *Dev. Psychol.* 45, 850–867, 2009.
Kilpatrick, J., Mesa, V., and Sloane, F., "U.S. Algebra Performance in an International Context," in Loveless (ed.), *Lessons Learned: What International Assessments Tell Us About Math Achievement*. Washington, D.C.: Brookings Institution Press, 2007.
Leinwand, S., and Ginsburg, A., "Measuring Up: How the Highest Performing state (Massachusetts) Compares to the Highest Performing Country (Hong Kong) in Grade 3 Mathematics," American Institutes for Research, 2009.
Niss, M., "Quantitative Literacy and Mathematical Competencies," in *Quantitative Literacy: Why Numeracy Matters for Schools and Colleges*, Madison, B. L., and Steen, L.A. (eds.), National Council on Education and the Disciplines. Proceedings of the National Forum on Quantitative Literacy held at the National Academy of Sciences in Washington, D.C., December 1-2, 2001.
Reys, B. (ed.), *The Intended Mathematics Curriculum as Represented in State-Level Curriculum Standards: Consensus or Confusion?* IAP-Information Age Publishing, 2006.
Schmidt, W., Houang, R., and Cogan, L., "A Coherent Curriculum: The Case of Mathematics," *American Educator*, Summer 2002, p. 4.
Schmidt, W.H. and Houang, R.T., "Lack of Focus in the Intended Mathematics Curriculum: Symptom or Cause?" in Loveless (ed.), *Lessons Learned: What International Assessments Tell Us About Math Achievement*. Washington, D.C.: Brookings Institution Press, 2007.
Wu, H., "Fractions, decimals, and rational numbers," 2007, http://math.berkeley.edu/~wu/ (March 19, 2008).
Wu, H., "Lecture Notes for the 2009 Pre-Algebra Institute," September 15, 2009.
Wu, H., "Preservice professional development of mathematics Teachers," http://math.berkeley.edu/~wu/pspd2.pdf.
Massachusetts Department of Education. Progress Report of the Mathematics Curriculum Framework Revision Panel, Massachusetts Department of Elementary and Secondary Education, 2009. www.doe.mass.edu/boe/docs/0509/item5_report.pdf.
ACT College Readiness Benchmarks™
ACT College Readiness Standards™
ACT National Curriculum Survey™
Adelman, C. *The Toolbox Revisited: Paths to Degree Completion From High School Through College*, 2006.
Advanced Placement Calculus, Statistics and Computer Science Course Descriptions. May 2009, May 2010. College Board, 2008.
Aligning Postsecondary Expectations and High School Practice: The Gap Defined (ACT: Policy Implications of the ACT National Curriculum Survey Results 2005-2006).
Condition of Education, 2004: Indicator 30, Top 30 Postsecondary Courses, U.S. Department of Education, 2004.
Condition of Education, 2007: High School Course-Taking. U.S. Department of Education, 2007.
Crisis at the Core: Preparing All Students for College and Work, ACT.
Achieve, Inc., Florida Postsecondary Survey, 2008.
Golfin, Peggy, et. al. CNA Corporation. *Strengthening Mathematics at the Postsecondary Level: Literature Review and Analysis*, 2005.
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).
CLEP Precalculus Curriculum Survey: Summary of Results. The College Board, 2005.
College Board Standards for College Success: Mathematics and Statistics. College Board, 2006.
Miller, G.E., Twing, J., and Meyers, J. "Higher Education Readiness Component (HERC) Correlation Study." Austin, TX: Pearson.
On Course for Success: A Close Look at Selected High School Courses That Prepare All Students for College and Work, ACT.

Out of Many, One: Towards Rigorous Common Core Standards from the Ground Up. Achieve, 2008.

Ready for College and Ready for Work: Same or Different? ACT.

Rigor at Risk: Reaffirming Quality in the High School Core Curriculum, ACT.

The Forgotten Middle: Ensuring that All Students Are on Target for College and Career Readiness before High School, ACT.

Achieve, Inc., Virginia Postsecondary Survey, 2004.

ACT Job Skill Comparison Charts

Achieve, Mathematics at Work, 2008.

The American Diploma Project Workplace Study. National Alliance of Business Study, 2002.

Carnevale, Anthony and Desrochers, Donna. *Connecting Education Standards and Employment: Course-taking Patterns of Young Workers,* 2002.

Colorado Business Leaders Top Skills, 2006.

Hawai'i Career Ready Study: access to living wage careers from high school, 2007.

States' Career Cluster Initiative. *Essential Knowledge and Skill Statements*, 2008.

ACT WorkKeys Occupational Profiles™

Program for International Student Assessment (PISA), 2006.

Trends in International Mathematics and Science Study (TIMSS), 2007.

International Baccalaureate, Mathematics Standard Level, 2006.

University of Cambridge International Examinations: General Certificate of Secondary Education in Mathematics, 2009.

EdExcel, General Certificate of Secondary Education, Mathematics, 2009.

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.

Individuals with Disabilities Education Act (IDEA), 34 CFR §300.34 (a). (2004).

Individuals with Disabilities Education Act (IDEA), 34 CFR §300.39 (b)(3). (2004).

Office of Special Education Programs, U.S. Department of Education. "IDEA Regulations: Identification of Students with Specific Learning Disabilities," 2006.

Thompson, S. J., Morse, A.B., Sharpe, M., and Hall, S., "Accommodations Manual: How to Select, Administer and Evaluate Use of Accommodations and Assessment for Students with Disabilities," 2nd Edition. Council of Chief State School Officers, 2005.

Alignment of Common Core Mathematics Standards (CCS; March 2010 DRAFT) with Michigan Grade Level and High School Content Expectation (GLCE/HSCE)

The CCS outline what students must understand and be able to do at each grade level.
The GLCE outline content to be assessed, and do not address some content at the grade levels in which it is customarily introduced in many Michigan districts. The CCS outline the content to be taught and assessed at the classroom level, but do not represent an assessment framework. At many grade levels, the CCS provide more information than included in the GLCE; the CCS make explicit the content implied by the GLCE. For example, in Grade 2 (p. 8), the GLCE outline what can be assessed on the MEAP, and the CCS make visible the teaching that needs to happen in the classroom if students are to add and subtract fluently. Michigan's response to CCSSO/NGA regarding the March draft CCS included a request that the writers revisit the excessive rigor represented in the areas of computation with addition and subtraction in 1st and 2nd grade progressions. Michigan also requested that the learning of the multiplication facts should be organized to include an algebraic approach, which would indicate that as students learn 2s, they should extend their learning to 4s and 8s. Similarly, as they learn 3s, extend to 6s and so on. As currently written the draft CCS do not build the intended foundation for algebraic thinking.

The CCS are *standards*, not curriculum. Neither the GLCE nor the CCS represent curriculum. The K-8 CCS for Mathematics provide grade-specific progressions that prepare students for the rigors of high school mathematics. The progression from K-8 through high school is not clearly articulated in the CCS. Many options for meeting college and career readiness standards (CCR) are suggested. Meeting the CCS will require the support of a content-rich, coherent curriculum and engaging instruction.

The *Common Core State Standards for Mathematics* and the Michigan High School Content Expectations serve similar purposes but are organized using different structures. While both CCS and HSCE are written to inform curriculum, instruction, and assessment, the two documents offer different levels of guidance. The HSCE are written in language more applicable to assessment; the CCS are written from an instructional standpoint. Both provide a definition of college and career readiness, articulating what students should know/understand and be able to do to be prepared for entry-level college courses and career training programs. Like the HSCE, the CCS do not represent a curriculum, but need to be supported by a content-rich, coherent curriculum and engaging instruction.

The K-12 CCS provide focused and specific progressions of understandings, content knowledge, and skills that lead to and past college and career readiness to readiness for advanced mathematics courses such as Calculus. The CCS for high school mathematics are organized under six conceptual categories, the equivalent of Michigan's strands, that encompass the progressions developed through the K-12 continuum; CCS are further grouped in clusters that reflect HSCE topics. The CCS include statements that define what students should "understand" as well as what students should be able to do ("can and do") to demonstrate understanding; there is overlap in the two groups of statements, as indicated in the chart below.

CCS Category	Understanding	Can and Do	Total
Number and Quantity	19	19	38
Algebra	18	26	44
Functions	18	29	47
Geometry	25	37	62
Statistics and Probability	19	31	50
Modeling	0	0	0
Total	99	142	241

Of the 241 HS Mathematics CCS, 178 represent college and career readiness (CCR) and should be met by all students. The other 63 CCS have been designated STEM (Science, Technology, Engineering, Math) to indicate that students who wish to take advanced mathematics courses, such as Calculus, should also meet these standards. Some CCS designated STEM are traditionally addressed in Algebra II courses; a few reflect foundational knowledge addressed in earlier courses. Michigan's response to CCSSO/NGA regarding the March draft CCS included a request that the CCR-STEM assignments be adjusted to better reflect closer alignment with traditional courses, ADP benchmarks, and other CCR indicators. Of the 63 STEM standards, 31 align with Michigan HSCE and are expected of all students. Twelve (12) STEM standards are addressed in Algebra I and Geometry in Michigan. The MMC course/credit alignments for each HS Mathematics CCS are listed in the CCS – HSCE alignment chart.

All but 6 CCS designated as representing CCR (for all) align with current HSCE content and skills, as indicated in the document as "***No Alignment***" in a shaded cell in Column 5. Five (5) STEM standards do not align with HSCE. All CCS in the Statistics and Probability Category are considered CCR (for all); 33 align with HSCE originally assigned to MMC Algebra II, but removed from the Algebra II Course/Credit Expectations in 09/09. Seven (7) additional STEM CCS align with other HSCE removed from Algebra II. Decisions about additional guidance for meeting MMC requirements and MMC Course/Credit definition adjustments will be made based on analysis of the final version of the Common Core State Standards (May 2010).

The March draft CCS include initial considerations of pathways for addressing the CCS for HS Mathematics into courses. While not required, the eventual course descriptions included in the May draft may inform possible adjustments in MMC Course/Credit Expectations.

The **HSCE – CCS HS alignment chart** is organized by Michigan Mathematics HSCE (v. 11/07). The MMC course/credit in which each expectation is addressed, and the course in which the expectations would be addressed based on the A3a model pathway as described in Appendix A of the March draft CCS, are listed in the columns that follow. Additional alignment analyses using the organization of the HSCE will further inform possible course/credit description decisions.

Since the CCS analyzed here are in DRAFT form, this alignment study represents an initial attempt, not an analysis ready for field use. A more complete version of this alignment analysis will be produced using the final version of the CCS presented for adoption. In its present form, the alignment document provides a tool for use in analyzing the draft CCS.

AGENDA

MICHIGAN
STATE BOARD OF EDUCATION

Ladislaus B. Dombrowski Board Room
Fourth Floor, John A. Hannah Building
608 West Allegan
Lansing, Michigan

October 13, 2009
9:30 a.m.

Regular Meeting

I. CALL TO ORDER

II. APPROVAL OF AGENDA AND ORDER OF PRIORITY

Committee of the Whole Meeting

III. DISCUSSION ITEMS

** A. Presentation of the Draft 2009 State of Michigan Educational Technology Plan (Education Improvement and Innovation – MaryAlice Galloway)

B. Presentation on Common Core Standards (Education Improvement and Innovation – MaryAlice Galloway)

C. Presentation on Draft State Board of Education Integrating Mental Health in Schools Policy (Grants Coordination and School Support – Mary Ann Chartrand)

D. Presentation on Proposed Performance Standards for MEAP-Access Grades 3-8 Reading and Mathematics Assessments (Educational Assessment and Accountability – Joseph Martineau)

NOTE: The public will be given an opportunity to comment prior to a vote. Because it is impossible to project an exact time for each item, the public is encouraged to attend the entire meeting to be assured an opportunity to comment on a specific item.

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E. Presentation on National Consortium on Health Sciences Education (NCHSE) National Healthcare Foundation Skills Assessment for Career and Technical Education (CTE) Health Science Students and the Use of the National Cut Scores (Career and Technical Education – Patty Cantu)

F. Presentation/Discussion on American Recovery and Reinvestment Act (ARRA) of 2009 (Executive Office – Jann Jencka)

G. Discussion Regarding Criteria for Grant Programs

- Criteria for the *Early On* Michigan Interagency Collaboration Grant Awards under the FY 2009-2010 Part C Allocation to Michigan

IV. RECESS

Regular Meeting

V. CALL TO ORDER

VI. APPROVAL OF STATE BOARD OF EDUCATION MINUTES

H. Approval of Minutes of Regular and Committee of the Whole Meeting of September 9, 2009

VII. PRESIDENT'S REPORT

VIII. REPORT OF THE SUPERINTENDENT (Items on the Report of the Superintendent include information on administrative decisions made by the Superintendent. The documents are provided to the members of the Board for their information.)

Reports

I. Human Resources Report

J. Report on the Midland County Educational Service Agency Plan for the Delivery of Special Education Programs and Services (Special Education and Early Intervention – Jacquelyn Thompson)

K. Report on Administrative Rule Waivers

L. Report on Department of Education Cosponsorship

M. Report on Property Transfer Decisions

Grants

N. Report on Grant Awards

- 2008-2009 Section 57 Advanced and Accelerated Program – Amendment
- 2009-2010 Early On Formula Allocation Grants (Part C of the Individuals with Disabilities Education Act) – Initial
- 2009-2010 Early On Formula Allocation Grants (Part C of the Individuals with Disabilities Education Act) – Amendment
- 2008-2009 IDEA, Part B Mandated Activities Projects – Amendment ($772,500)
- 2008-2009 IDEA, Part B Mandated Activities Projects – Amendment ($50,000)
- 2009-2010 Special Education-State Personnel Development Grant – Continuation
- 2009-2010 School Breakfast Challenge – Initial
- 2009-2010 National School Lunch Program Equipment Assistance Grant – Initial
- 2009-2010 National School Lunch Program Equipment Assistance Grant – Amendment
- 2008-2009 Title II, Part A(3) – Improving Teacher Quality – Initial
- 2009-2010 Michigan Charter School Grant Program – Continuation
- 2009-2010 Secondary Perkins State Leadership – Initial
- 2008-2009 Title I, Part C Summer Migrant Program Allocations – Amendment
- 2008-2009 Title III, English Language Acquisition Program – Amendment
- 2008-2009 Designated State Aid Grant – School-Based Crisis Intervention – Continuation
- 2008-2009 Title I, Part A – Improving Basic Programs – Amendment
- 2009-2010 Training and Technical Assistance for William F. Goodling Even Start Family Literacy Programs – Continuation
- 2009-2010 Individuals with Disabilities Act, Sec. 619 Preschool Grants: American Recovery and Reinvestment Act (ARRA) of 2009 – Initial
- 2009-2010 Early On Formula Allocation Grants (Part C of the Individuals with Disabilities Education Act) for the American Recovery and Reinvestment Act (ARRA) of 2009 – Initial
- 2009-2010 Title I Schoolwide Program Planning Grant – Initial
- 2009-2010 IDEA, Part B Mandated Activities Projects – Initial
- 2009-2010 Training and Technical Assistance for 21st Century Community Learning Centers Program Grant – Continuation
- 2009-2010 21st Century Community Learning Centers (21st CCLC) Evaluation Grant – Continuation

- 2007-2009 Michigan After-School Partnership Grant – Amendment
- 2008-2009 21st Century Schools Grant – Initial
- * 2009-20010 Early On Formula Allocation Grants (Part C of the Individuals with Disabilities Education Act) - Initial

IX. REPORT OF MICHIGAN TEACHER OF THE YEAR

X. PUBLIC PARTICIPATION IN STATE BOARD OF EDUCATION MEETING

XI. DISCUSSION/ACTION ITEMS

O. State and Federal Legislative Report (Legislative Director - Lisa Hansknecht)

P. Approval of Michigan's Position on Proposed NASBE Bylaws Changes, Public Policy Positions and Election of Officers

Q. Approval of Robert M. Miller College as a Teacher Preparation Institution with Probationary Approval (Professional Preparation Services – Flora Jenkins)

R. Approval of Finlandia University as a Teacher Preparation Institution with Probationary Approval (Professional Preparation Services – Flora Jenkins)

XII. CONSENT AGENDA (Items are on the consent agenda to be voted on as a single item by the Board. Board members may remove items from the consent agenda prior to the vote. Items removed from the consent agenda will be discussed individually.)

Criteria

S. Approval of Criteria for the *Early On* Michigan Interagency Collaboration Grant Awards under the FY 2009-2010 Part C Allocation to Michigan (Early Childhood Education and Family Services – Lindy Buch)

Approval

T. Approval of Michigan Educational Technology Standards for Students (Education Improvement and Innovation – MaryAlice Galloway)

U. Approval of Camp T Spending Plan (Financial Management – Rick Floria)

Resolution

V. Adoption of Resolution Regarding Local School Board Member Recognition Month

W. Adoption of Resolution Regarding Inclusive Schools Week

XIII. COMMENTS BY STATE BOARD OF EDUCATION MEMBERS

XIV. TENTATIVE AGENDA FOR NEXT MEETING

XV. FUTURE MEETING DATES

A. Tuesday, November 10, 2009
B. Tuesday, December 8, 2009
C. Tuesday, January 12, 2010
D. Tuesday, February 9, 2010

XVI. ADJOURNMENT

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* This item has been added to the agenda.
** This item has been removed from the agenda.

AGENDA

MICHIGAN
STATE BOARD OF EDUCATION

Ladislaus B. Dombrowski Board Room
Fourth Floor, John A. Hannah Building
608 West Allegan
Lansing, Michigan

February 9, 2010
9:30 a.m.

I. CALL TO ORDER

II. APPROVAL OF AGENDA AND ORDER OF PRIORITY

Committee of the Whole Meeting

III. DISCUSSION ITEMS

A. Presentation on the Michigan Test for Teacher Certification Results for 2008-2009 (Professional Preparation – Flora Jenkins)

B. Presentation of the Proposed Standards for the Preparation of School Counselors Endorsement (NT), Preliminary Employment Authorization to Work as a School Counselor, and School Counselor License (Professional Preparation – Flora Jenkins)

C. Presentation on the Proposed Standards for the Preparation of American Sign Language Teachers (Professional Preparation – Flora Jenkins)

D. Presentation on Education Reform Legislation, Specifically Michigan Department of Education Redesign/Reform Office

E. Presentation of an Alignment of Michigan Standards and Content Expectations with the Draft K-12 Common Core Standards (Education Improvement and Innovation – MaryAlice Galloway)

NOTE: The public will be given an opportunity to comment prior to a vote. Because it is impossible to project an exact time for each item, the public is encouraged to attend the entire meeting to be assured an opportunity to comment on a specific item.

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F. Discussion Regarding Criteria for Grant Programs

- Criteria for the 2010-13 Elementary and Secondary Education Act (ESEA) Region 3 Intermediate School District Partnership Grant Title I, Region 3 Grant Criteria (Field Services – Mike Radke)
- * Criteria for the Office of Education Improvement and Innovation Collaboration Grant (Education Improvement and Innovation – MaryAlice Galloway)

IV. RECESS

REGULAR MEETING

V. CALL TO ORDER

VI. APPROVAL OF STATE BOARD OF EDUCATION MINUTES

G. Approval of Minutes of Regular and Committee of the Whole Meeting of December 8, 2009

H. Approval of Minutes of Regular and Committee of the Whole Meeting of January 12, 2010

VII. PRESIDENT'S REPORT

VIII. REPORT OF THE SUPERINTENDENT (Items on the Report of the Superintendent include information on administrative decisions made by the Superintendent. The documents are provided to the members of the Board for their information.)

Reports

I. Human Resources Update

J. Report on Property Transfer Decisions

K. Report on Department of Education Cosponsorship

Grants

L. Report on Grant Awards

- 2009-2010 Title I, Part A – Improving Basic Programs – Amendment
- 2009-2010 ARRA Title I, Part A – Improving Basic Programs – Amendment
- 2009-2010 Title I Technical Assistance Grant – Continuation

- 2009-2010 Title I, Part C Regular Migrant Program Allocations – Amendment
- 2009-2010 Title I, Part D – Prevention and Intervention for Neglected and Delinquent – Amendment
- 2009-2010 ARRA Title I, Part D – Prevention and Intervention for Neglected and Delinquent – Amendment
- 2009-2010 Title II, Part A – Teacher and Principal Training and Recruiting – Amendment
- 2009-2010 Title II, Part D, Enhancing Education Through Technology – Initial
- 2009-2010 Enhancing Education Through Technology, Title II, Part D, Competitive Programs – Amendment
- 2009-2010 Title III – English Language Acquisition Program – Amendment
- 2009-2010 Title III, Immigrant Grant Program – Initial
- 2009-2010 Title VI, Part B, Rural and Low Income School Program - Amendment
- 2009-2010 Great Start Readiness Program Evaluation Grant – Continuation
- 2009-2010 IDEA, Part B Mandated Activities Projects – Initial
- 2009-2010 U. S. Department of Agriculture (USDA) Fresh Fruit and Vegetable Program (FFVP) - Amendment

IX. REPORT OF MICHIGAN TEACHER OF THE YEAR

X. PUBLIC PARTICIPATION IN STATE BOARD OF EDUCATION MEETING

XI. DISCUSSION/ACTION ITEMS

M. State and Federal Legislative Update (Legislative Director – Lisa Hansknecht)

N. Presentation and Approval of Additional Accountability Workbook Amendment for 2009-10 (Education Improvement and Innovation – MaryAlice Galloway; Educational Assessment and Accountability – Joseph Martineau)

XII. CONSENT AGENDA (Items are on the consent agenda to be voted on as a single item by the Board. Board members may remove items from the consent agenda prior to the vote. Items removed from the consent agenda will be discussed individually.)

Resolutions

O. Adoption of Resolution on National School Breakfast Week (Grants Coordination and School Support – Mary Ann Chartrand)

P. <u>Adoption of Resolution Regarding National Child and Adult Care Food Program Week</u> (Grants Coordination and School Support – Mary Ann Chartrand)

Q. <u>Adoption of Resolution Regarding National Teacher Appreciation Week – May 3-7, 2010</u>

<u>Approvals</u>

R. <u>Appointment of Two Replacement Members for the Committee of Scholars Previously Appointed to Review the Baker College Application for Approval as a Teacher Preparation Institution</u> (Professional Preparation – Flora Jenkins)

S. <u>Approval of MEAP-Access Fall 2009 Assessment Results and Recommendations</u> (Educational Assessment and Accountability – Joseph Martineau)

T. <u>Approval of Policy on Integrating Mental Health in Schools</u> (Grants Coordination and School Support – Mary Ann Chartrand)

U. <u>Approval of 2010 State of Michigan Educational Technology Plan</u> (Education Improvement and Innovation – MaryAlice Galloway)

<u>Criteria</u>

V. <u>Approval of Criteria for the 2010-13 Elementary and Secondary Education Act (ESEA), Region 3 Intermediate School District Partnership Grant</u> (Field Services – Mike Radke)

*W. <u>Approval of Criteria for the Office of Education Improvement and Innovation Collaboration Grant</u> (Education Improvement and Innovation – MaryAlice Galloway)

XIII. COMMENTS BY STATE BOARD OF EDUCATION MEMBERS

XIV. FUTURE MEETING DATES

A. Wednesday, February 17, 2010 (1:00 p.m.)
B. Tuesday, March 9, 2010 (9:30 a.m.)
C. Tuesday, April 13, 2010 (9:30 a.m.)
D. Tuesday, May 11, 2010 (9:30 a.m.)

XVI. ADJOURNMENT

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* The Superintendent has requested the <u>addition</u> of this item to the agenda.

AGENDA

MICHIGAN
STATE BOARD OF EDUCATION

Ladislaus B. Dombrowski Board Room
Fourth Floor, John A. Hannah Building
608 West Allegan
Lansing, Michigan

May 11, 2010
9:30 a.m.

I. CALL TO ORDER

II. APPROVAL OF AGENDA AND ORDER OF PRIORITY

COMMITTEE OF THE WHOLE MEETING

III. DISCUSSION ITEMS

A. Discussion Regarding State Board of Education's Recommendations Regarding School Reform/Finance

B. Update on Common Core Standards (Marianne McGuire, Treasurer; and Education Improvement and Innovation – Linda Forward and Deb Clemmons)

C. Presentation on Michigan's Phase 2 Race To The Top Application (Deputy Superintendent – Sally Vaughn)

IV. RECESS

REGULAR MEETING

V. CALL TO ORDER

VI. APPROVAL OF STATE BOARD OF EDUCATION MINUTES

D. Approval of Minutes of Regular and Committee of the Whole Meeting of April 13, 2010
E. Approval of Minutes of Closed Session of April 13, 2010
F. Approval of Record of Committee of the Whole Meeting of April 28, 2010

NOTE: The public will be given an opportunity to comment prior to a vote. Because it is impossible to project an exact time for each item, the public is encouraged to attend the entire meeting to be assured an opportunity to comment on a specific item.

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VII. PRESIDENT'S REPORT

VIII. REPORT OF THE SUPERINTENDENT (Items on the Report of the Superintendent include information on administrative decisions made by the Superintendent. The documents are provided to the members of the Board for their information.)

Reports

G. Human Resources Report

H. Report on Branch Intermediate School District Plan for the Delivery of Special Education Programs and Services (Special Education and Early Intervention Services – Jacquelyn Thompson)

I. Report on Administrative Rule Waivers (Special Education and Early Intervention Services – Jacquelyn Thompson)

Grants

J. Report on Grant Awards

- 2009-2010 Title I, School Improvement Funds to Support Regional Assistance to High Priority Schools - Amendment
- 2009-2010 Title I, Part A, Pilot ISD Partnership – Amendment and Continuation
- 2009-2010 Safe and Drug-Free Schools Technical Assistance Grant – Initial
- 2009-2010 Michigan Charter School Grant Program – Amendment and Continuation
- 2009-2010 Title I Technical Assistance Grant – Amendment and Continuation
- 2008-2009 Reading First – Amendment
- 2009-2010 Title II, Part D, Enhancing Education Through Technology – Amendment
- 2009-2010 Governor's Discretionary Grant – Amendment
- 2009-2010 Title I, Part C Summer Migrant Program Allocations – Amendment
- 2009-2010 McKinney-Vento Homeless Students Assistance Grant – Amendment

IX. PUBLIC PARTICIPATION IN STATE BOARD OF EDUCATION MEETING

X. DISCUSSION/ACTION ITEMS

K. Approval of State Board of Education's Recommendations Regarding School Reform/Finance

L. Approval of Letter of Support/Resolution Regarding Michigan's Race To The Top Application

M. State and Federal Legislative Update (Legislative Director – Lisa Hansknecht)

XI. CONSENT AGENDA (Items are on the consent agenda to be voted on as a single item by the Board. Board members may remove items from the consent agenda prior to the vote. Items removed from the consent agenda will be discussed individually.)

Approvals

N. Approval of Presentation on 2009 Public School Academy Legislative Report (Education Improvement and Innovation – Linda Forward)

Appendices to PSA Legislative Report

- List of Public School Academies
- Statewide Profile
- Individual Public School Academy Profiles

A B C D E-G H-L M N-P Q-T U-Z

O. Approval of State Board of Education Expense Report – January – March, 2010

Resolutions

P. Adoption of Resolution Honoring Roberta E. Stanley

XII. COMMENTS BY STATE BOARD OF EDUCATION MEMBERS

XIII. FUTURE MEETING DATES

A. Tuesday, May 18, 2010 (9:30 a.m. – Retreat) **(POSTPONED)**
B. Tuesday, June 15, 2010 (9:30 a.m.)
C. Tuesday, July 13, 2010 (9:30 a.m. – if needed)
D. Tuesday, August 10, 2010 (9:30 a.m.)
E. Tuesday, September 14, 2010

XIV. ADJOURNMENT

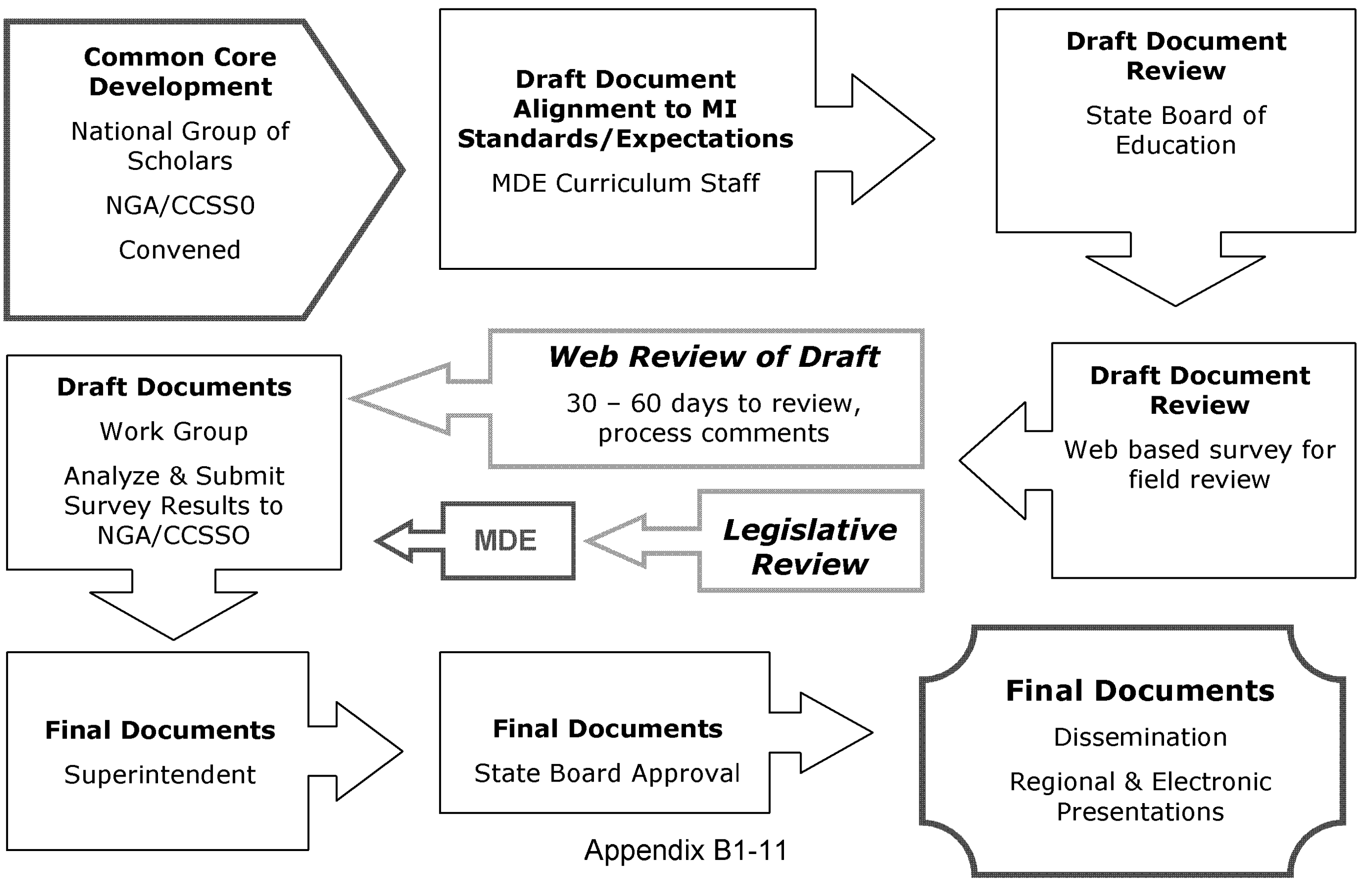
Common Core Standards Adoption Timeline

July 2009	Achieve aligns Michigan's content standards to common core standards
September 2009	College and Career Readiness Standards released for public comment
October 2009	College and Career Readiness Standards submitted to SBE for review
October 2009	MDE attends LPA hosted common core meeting in Chicago
November 2009	First draft of K-12 Common Core State Standards released for state and national organization review
January 2010	College and Career Readiness Standards and alignment to Michigan content expectations submitted with RT3 application
January 2010	Second draft of K-12 Common Core State Standards released for state and national organizations review
February 2010	Third draft of K-12 Common Core State Standards released for state and national review
February 2010	January draft of K-12 Common Core State Standards submitted to SBE with alignment to Michigan content expectations
February 2010	K-12 Common Core State Standards presented to MASCD
February 2010	Common core presentation to OEII ISD Advisory Committee
March 2010	Fourth draft of K-12 Common Core State Standards released for public comment
March 2010	Common Core State Standards provided with link to web survey to leadership in the Michigan Legislature
March 2010	SBE (Austin and McGuire) and Deb Clemmons attend NASBE Common Core Regional Conference
March 2010	K-12 Common Core State Standards presented at the MRA conference
March 2010	K-12 Common Core State Standards presented at the School Improvement Conference
March 2010	Common Core presentation to the ISD School Improvement Facilitators
March 2010	Review alignments of the math common core standards with the Mathematics Coordinators statewide
March 2010	Meeting with MAISA representatives to discuss collaborative rollouts of the common core standards, including appropriate messaging, tools and other resources to help transition to common core standards
April 2010	Preparing alignment analysis, analysis of public comments on the March draft of the common core standards for presentation of standards for SBE adoption consideration at June 2010
May 2010	ISD/MDE team attending LPA regional meeting to discuss transition and implementation of the common core standards
May 2010	Common core standards and alignment to Michigan content expectations submitted with RT3 application – Round 2
June 2010	Final common core standards available for review and alignment to Michigan standards and content expectations
June 2010	**Anticipated SBE Adoption of Common Core State Standards**

Common Core Standards Adoption Timeline

June 2010	Submit amendment to Phase 2 Race to the Top to USDOE on standards adoption
June 2010	Plan regional and electronic dissemination of common core standards to the field
September 2010	Recording podcasts and webinars on common core standards
October 2010	Conduct four regional rollouts on the common core standards

Curriculum Protocol Flowchart for Adoption of Common Core Standards – ELA & Math



Appendix B1-11

THE REVISED SCHOOL CODE (EXCERPT)
Act 451 of 1976

380.1278 Core academic curriculum.

Sec. 1278.

(1) In addition to the requirements for accreditation under section 1280 specified in that section, if the board of a school district wants all of the schools of the school district to be accredited under section 1280, the board shall provide to all pupils attending public school in the district a core academic curriculum in compliance with subsection (3) in each of the curricular areas specified in the state board recommended model core academic curriculum content standards developed under subsection (2). The state board model core academic curriculum content standards shall encompass academic and cognitive instruction only. For purposes of this section, the state board model core academic curriculum content standards shall not include attitudes, beliefs, or value systems that are not essential in the legal, economic, and social structure of our society and to the personal and social responsibility of citizens of our society.

(2) Recommended model core academic curriculum content standards shall be developed and periodically updated by the state board, shall be in the form of knowledge and skill content standards that are recommended as state standards for adoption by public schools in local curriculum formulation and adoption, and shall be distributed to each school district in the state……………………..

380.1278b Award of high school diploma; credit requirements; annual report.

(3) For the purposes of this section and section 1278a, the department shall do all of the following:

(a) Develop subject area content expectations that apply to the credit requirements of the Michigan merit standard that are required under subsection (1)(a) and (b) and section 1278a(1)(a)(i) and (ii) and develop guidelines for the remaining credit requirements of the Michigan merit standard that are required under this section and section 1278a(1)(a), for the online course or learning experience required under section 1278a(1)(b), and for the requirements for a language other than English under section 1278a(2). All of the following apply to these subject area content expectations and guidelines:

(i) All subject area content expectations shall be consistent with the state board recommended model core academic curriculum content standards under section 1278. Subject area content expectations or guidelines shall not include attitudes, beliefs, or value systems that are not essential in the legal, economic, and social structure of our society and to the personal and social responsibility of citizens of our society. The subject area content expectations shall require pupils to demonstrate critical thinking skills.

(ii) The subject area content expectations and the guidelines must be approved by the state board under subsection (4).

(iii) The subject area content expectations shall state in clear and measurable terms what pupils are expected to know upon completion of each credit.

(iv) The department shall complete the development of the subject area content expectations that apply to algebra I and the guidelines for the online course or learning experience under section 1278a(1)(b) not later than August 1, 2006.

(v) The department shall complete development of the subject area content expectations or guidelines that apply to each of the other credits required in the Michigan merit standard under subsection (1) and section 1278a(1)(a) not later than 1 year before the beginning of the school year in which a pupil entering high school in 2007 would normally be expected to complete the credit.

(vi) If the department has not completed development of the subject area content expectations that apply to a particular credit required in the Michigan merit standard under subsection (1) or section 1278a(1)(a) by the date required under this subdivision, a school district or public school academy may align the content of the credit with locally adopted standards.

(vii) Until all of the subject area content expectations and guidelines have been developed by the department and approved by the state board, the department shall submit a report at least every 6 months to the senate and house standing committees responsible for education legislation on the status of the development of the subject area content expectations and guidelines. The report shall detail any failure by the department to meet a deadline established under subparagraph (iv) or (v) and the reasons for that failure.

(b) Develop and implement a process for developing the subject area content expectations and guidelines required under this section. This process shall provide for all of the following:

(i) Soliciting input from all of the following groups:

(A) Recognized experts in the relevant subject areas.

(B) Representatives from 4-year colleges or universities, community colleges, and other postsecondary institutions.

(C) Teachers, administrators, and school personnel who have specialized knowledge of the subject area.

(D) Representatives from the business community.

(E) Representatives from vocational and career and technical education providers.

(F) Government officials, including officials from the legislature.

(G) Parents of public school pupils.

(ii) A review of the subject area content expectations or guidelines by national experts.

(iii) An opportunity for the public to review and provide input on the proposed subject area content expectations or guidelines before they are submitted to the state board for approval. The time period allowed for this review and input shall be at least 15 business days.

(c) Determine the basic level of technology and internet access required for pupils to complete the online course or learning experience requirement of section 1278a(1)(b), and submit that determination to the state board for approval.

(d) Develop and make available material to assist school districts and public school academies in implementing the requirements of this section and section 1278a. This shall include developing guidelines for alternative instructional delivery methods as described in subsection (7).

(4) The state board shall approve subject area content expectations and guidelines developed by the department under subsection (3) before those subject area content expectations and guidelines may take effect. The state board also shall approve the basic level of technology and internet access required for pupils to complete the online course or learning experience requirement of section 1278a(1)(b).

Supporting the Transition to Enhanced Standards and High Quality Assessments Implementation Timeline (Section B)

DATE Starting	Activities/Products	Responsible Parties
May-June 2010	Participate in the development of SMARTER Balanced Response to Race to Top Assessment Competition	Assessment Staff
June 2010	Develop, in collaboration with the Michigan Teachers Network, the TLF website to support teacher professional development, teacher collaboration, and content specialists contribution via online professional learning communities	Curriculum Staff
June 2010	Develop in collaboration with local and intermediate districts and high education institutions rollout plan and materials developed and posted	Curriculum Staff
July 2010	Post rollout materials to the web site	
July 2010	Complete, publish, and rollout Teaching and Learning Framework (TLF)	Curriculum Staff
August 2010	Record of podcasts and webinars on standards implementation	Curriculum Staff
September 2010	Align college entrance and placement requirements and high school exit criteria with the Common Core State Standards	Curriculum Staff and P-20 Council
Summer 2010	Coordinate, align, and support local and intermediate districts efforts with the Individual Professional Development Program (IPDP) piloted this school year (2009-2010)	Curriculum Staff and Teacher Preparation Staff
October 2010	Conduct rollouts on common core standards and status updates on balance assessment development	Curriculum and Assessment staff
October 2010	Issue RFP to LEA/ISD/IHE to develop non-common core balanced assessments	Curriculum Staff
November 2010	Collected information from the rollouts analyzed to inform and improve forthcoming Responsive Instructional Support System (RISS) support	Curriculum Staff
December 2010	MDE develops guidelines for appropriate use of assessment scores for calculating growth on student achievement tests	Assessment Staff
December 2010	Develop OEAA balanced assessment plan for transition to online assessments based on common core standards developed by the SMARTER Balanced Consortium	Assessment Staff
December 2010	Issue RFP to LEA/ISD/IHE to develop instructional survey online system	Curriculum Staff
December 2010	Issue RFP to develop model instructional units consistent with the challenging content, including formative and interim assessments	Curriculum Staff
December 2010-2011	Develop and post repository of state- and locally-generated instructional support material	Department, Intermediate and Local Districts, and Universities
December	Revise State Professional Learning Strategic Plan	Teacher

2010		Preparation Staff
December 2010	Plan, conduct and deliver MDE PD Programs specific to implementing common core standards and assessments as follow-up to fall rollout	Curriculum and Assessment Staff
2010-2011	Implement the IPDP statewide	Teacher Preparation Staff
March 2011	Administer online English Language Proficiency Assessment Pilot	Assessment Staff
May 2011	Develop components of curriculum framework for ELA and mathematics	Assessment Consortium
March 2011	Issue RFP to LEA/ISD/IHE to develop repository of strategies and materials to support formative assessment	Assessment Staff
2014-2015	Implement online assessments developed by the SMARTER Balanced Consortium for math and ELA statewide	Assessment Staff

Core Element	Fundamental Process	Essential Skill	Definition
FOUNDATIONS	Essential Teacher Beliefs	High Expectations	*Communicating an practicing positive and rigorous expectancy for student behavior and academic outcomes based on a genuine belief in the capacity of all students to learn*
		Malleable Intelligence	*Understanding that intelligence is not a fixed entity; people "get smarter" through purposeful effort and practice*
		Student Attitudes and Motivation	*Maintaining positive assumptions about students' ability and/or desire to learn; valuing and harnessing the potential of students' unique life experiences*
		Equity and Anti-Racism	*Confronting and addressing these root causes of academic achievement gaps in order to achieve high educational outcomes for all students*
		Urgency, Relentlessness, and Ownership of Outcomes	*Committing to the hard work of moving all students to achievement; taking responsibility for student educational outcomes*
		Embedding Technology	*embracing the idea that technology in many forms may have useful applications for teaching and learning; working collaboratively with students to enhance classroom instruction by using emerging technology in the classroom*
	Educator Responsibilities	Content Knowledge	*possessing deep knowledge of the subject(s) that one teaches*
		Continuing Professional Development	*seeking out continuous professional learning experiences that will increase personal instructional effectiveness*
		Pedagogical Knowledge	*possessing deep knowledge of the methodology of instruction*
		Reflection	*analyzing practice in light of student outcomes in order to maximize student mastery of learning goals and objectives*
		Professional Collaboration	*working with colleagues to enhance instructional techniques, resources, and problem-solving*
		Embedding Technology	*using technology to expand the number and depth of resources available to educators to develop professional practice*
	Classroom Management	Creating an Environment for Learning	*building and facilitating a learning space that minimizes disruption to the learning process; provides safety, support and encouragement; and values the strengths of all learners*
		Routines to Maximize Instruction	*establishing policies and procedures and making instructional choices that protect learning time from non-instructional disruptions*
		Supportive Personal Relationships with Students	*establishing two-way communication with students to learn about and understand interests, motivations, goals, and life experience in order to personalize and support instruction*
		Embedding Technology	*responsibly using social networking and other technologies to build classroom culture and community*
	Initial and On-Going Instructional Planning	Standards/Objective-Based Planning	*designing lessons and units of instruction aligned to content expectations that identify what students should know or be able to do*
		Backward Planning	*determining how to assess when a student has mastered an objective, then working in reverse to match instructional strategies to intended outcomes*
		Lesson Planning	*using information about students' prior knowledge to design an action plan to facilitate learning and assess mastery of one or more learning objectives*
		Unit Planning	*using information about students' prior knowledge to design an action plan to facilitate learning and assess mastery of a set of interconnected learning objectives*
		Long-Term Planning	*using information about students' prior knowledge to design an action plan to facilitate learning and assess mastery of the content that comprises one grade level and/or course-specific curriculum*
		Embedding Technology	*using technology to plan for instruction*
	Investing Families and the Community	Two-Way Communication	*establishing and maintaining communication between school and home that is based on mutuality of goals for student outcomes; persevering through differences of opinion and logistical challenges to share responsibility for student outcomes*
		Volunteering	*accepting, organizing, encouraging, and supporting the contribution of time and talent to school functions by students' families and other community members*
		Learning at Home	*providing information and resources to assist families in supporting students' learning activities and educational planning while not in school*
		Decision-Making	*developing parent leaders, representatives, and activists to participate in school decision-making activities and functions*
		Collaborating with the Community	*identifying and integrating resources and services with the community to support, supplement, and/or strengthen school programs, curriculum and activities*
		Embedding Technology	*using technology to inform, maintain, and encourage the involvement of students' families and the larger community in all aspects of students' education*

STRATEGIES FOR INSTRUCTION

Engagement and Motivation of All Learners	Cultural Relevance	*recognizing and building on the strengths of students' backgrounds, experiences, cultures, and ethnicities to make instruction relevant and engaging*
	Reinforcing Effort and Providing Recognition	*providing positive reinforcement, targeted praise, and encouragement for students' efforts to meet academic goals*
	Tapping into Student Interest and Expertise	*recognizing and capitalizing on the value of students' knowledge and interests to make instruction relevant and engaging*
	Embedding Technology	*working collaboratively with students to enhance instruction by using emerging technology*
Activation and Extension of Knowledge	Relevance	*teaching content through meaningful contexts to apply and make connection to the real world*
	Making Connections/Deep Knowledge	*weaving students' background knowledge with new content to create an integrated understanding of new ideas and concepts*
	Mnemonic Devices	*using memory aids to enhance acquisition of new knowledge*
	Embedding Technology	*using technology to develop content knowledge*
Differentiation	Academic Strengths and Areas for Growth	*identifying and targeting individual student learning needs; using student academic strengths to support targeted instruction*
	Needs of Diverse Learners	*planning for and reacting responsively to the spectrum of student academic needs within a classroom*
	Learning Preferences	*using knowledge of student preferences, interests, and needs to individualize instructional processes*
	Multiple Intelligences	*using knowledge of individual students' different ways of demonstrating learning to individualize instruction and assessment*
	Embedding Technology	*utilizing many forms of technology to support learning based on individual interests and abilities*
Stimulation of Critical Thinking and Problem-Solving	Generating and Testing Hypotheses	*teaching students how to identify problems, ask relevant questions, and develop testable solutions or new ideas*
	Higher Order Thinking Skills	*pushing students to analyze, synthesize, and evaluate information to create new knowledge*
	Summarizing	*teaching students to develop a brief and comprehensive re-telling of the main points of a specific text, concept, or idea*
	Critical Discussion	*facilitating thoughtful, well-reasoned dialogue about learning topics that demonstrates higher-order thinking skills*
	Nonlinguistic Representation	*using symbols, diagrams, and physical models and movement to represent information and learning*
	Comparing and Contrasting	*Analyzing similarities and differences in complex concepts and relationships*
	Metacognition	*teaching students to be aware of their own thinking processes*
	Embedding Technology	*using various technologies that require students to think critically and problem-solve*
Scaffolding	Graduated Questioning	*using questions to guide and advance students from knowledge recall to critical thinking*
	Direct Instruction	*using a cycle of teacher-led instruction, guided practice, and independent practice to foster student concept mastery*
	Conferring	*using one-on-one conferencing with students to assess, correct, and guide the learning process*
	Spacing Learning Over Time	*extending learning opportunities or lessons on a specific topic or objective over time to promote mastery through practice and feedback*
	Embedding Technology	*using technology to meet targeted needs of students*
Multiple Opportunities for Practice, Mastery, and Assessment	Academic Choice	*providing students opportunities to participate, practice, and/or demonstrate mastery in a self-selected manner*
	Authentic/Alternative Assessment	*assessing student mastery using means other than written tests*
	Formative Assessment	*continuously monitoring student work and providing feedback during the lesson/unit cycle to adjust instruction to help students move toward learning goals*
	Summative Assessment	*assessing student mastery of a defined learning goal at the culmination of a unit, course, or instructional program*
	Homework	*providing meaningful out-of-school experiences connected to classroom instruction to practice academic skills and/or advance student learning*
	Embedding Technology	*using technology to assess learning, master, or proficiency*
Flexible Grouping	Cooperative Grouping	*developing workgroups in which students are mutually responsible for outcomes*
	Whole Group Instruction	*providing simultaneous instruction to all students in the room*
	Homogeneous Grouping	*developing workgroups of students with similar academic readiness/achievement levels*
	Heterogeneous Grouping	*developing workgroups of students with a range of academic readiness/achievement levels*
	Individual Instruction	*providing one-on-one direct or guided instruction*
	Flexibility and Fluidity	*Moving students smoothly from one type of grouping to another as well as move within types of groups based on current levels of achievement*
	Embedding Technology	*using technology to identify student needs and develop student groups*

Appendix B.16

USING DATA	Using Multiple Data Sources	Informal Assessment	*using what happens in the classroom to assess student growth toward intended outcomes*
		Formal Assessment	*designing and using specific assessment tools to assess student growth toward intended outcomes*
		Non-Assessment Data	*collecting, analyzing, and applying information related to student needs, interests, opinions, extracurricular pursuits, behavior, attendance, etc. to inform instruction*
		Embedding Technology	*using student data systems to collect and analyze information necessary for instructional decision-making*
	Instructional Decision-Making	Identifying Instructional Needs	*analyzing data to determine areas for growth within student learning and teacher practice*
		Setting Goals	*using data to determine rigorous, realistic outcomes that can be measured over time*
		Matching Instructional Strategies to Identified Needs	*using student data to plan and design instruction that will most effectively and efficiently move students to proficiency in identified areas of need*
		Progress Monitoring	*measuring and tracking progress toward a stated goal over time and adjusting instruction as necessary to sustain desired growth*
		Providing Feedback	*communicating progress towards a stated goal*
		Embedding Technology	*using technology to collect and analyze information necessary for instructional decision-making*

Appendix B.16

RESETTING THE
STANDARD

(b)(6)

BRINGING FORMATIVE ASSESSMENT STATEWIDE IN MICHIGAN

When learning teams embed formative assessment, as a process, into their practice, they build capacity and a shared understanding of what it means to transform instruction.

Take a look at how the Michigan Department of Education and Measured Progress created a unified, sustainable formative assessment program.

MICHIGAN Department of Education

Measured Progress
It's all about student learning. Period.

Vision

In 2006, as the State of Michigan adopted new rigorous high school graduation requirements, then-director of the Office of Educational Assessment & Accountability, Dr. Edward Roeber, envisioned a more complete assessment system—a balanced assessment system. The Michigan Department of Education knew that it needed to provide specific professional development to help educators learn new content standards and the best way to teach them to students. The MDE's solution was to begin developing ways to bring balance to its K–12 assessment system. Led by the MDE Office of Educational Assessment and Accountability, the agency sought to put in place a program that provided all Michigan teachers with the knowledge and opportunity to bring effective formative assessment practices into the state's classrooms. The MDE's vision was to introduce teachers to "real" formative assessment and corresponding practices, as borne out by prevailing research, rather than "silver bullets"—off-the-shelf products marketed as "formative assessment." In response, the MDE worked with Measured Progress to launch *Developing and Implementing the Formative Assessment Process* in Michigan, which in its second year has scaled to 145 schools within 68 districts in the state.

"The body of research we rely on to help us with 'real' formative assessment, such as Black and Wiliam's 1998 meta-analysis, links to classroom practices that positively influence student motivation and student achievement," said Joseph Martineau, state assessment director, Michigan Office of Educational Assessment and Accountability. "We like Measured Progress's approach to formative assessment because it helps teachers with planning, how to use assessment results, and how to give feedback—as a process."

Kimberly Young, an educator on loan from the Ionia Intermediate School District who has worked with the MDE for the past three years on this project, said a longer-term, comprehensive approach works best.

"In the past, we had provided learning teams with great materials and content, experienced professional development specialists, and then sent teams on their way," she explained. "That really wasn't a helpful way to move them forward. Formative assessment is really a central idea that must be promoted to teachers within the context of classroom assessment literacy, which is how we came to work with Measured Progress."

"Formative assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes."

From the CCSSO FAST SCASS, Attributes of Effective Formative Assessment, 2008

Solution

In 2008, the MDE entered into a partnership with Measured Progress, a New Hampshire–based, not-for-profit assessment company, to lead *The Formative Assessment Process*. Measured Progress, for the past 26 years, has developed customized K–12 student assessments and professional development programs for schools, districts, and states. The company believes that traditional assessment provides only one of many windows into what students know and can do. This is why the company's work doesn't focus solely on classroom and summative assessment; it offers customized professional development programs at the school, district, and state levels to help educators focus instruction in the standards-based classroom.

Measured Progress founder and CEO, Dr. Stuart Kahl, said that federal mandates, accountability requirements, superior content standards, and complex data management systems each play a role in improving student achievement. However, combined they won't make much of a difference if educational systems shortchange the powerful link between student learning and the quality of classroom interactions.

"Clearly, professional development is the best vehicle for changing instruction and moving toward better formative assessment practices," Kahl said. "In order to significantly alter teachers' interactions with students and assure that teachers can successfully apply the principles of assessment for learning or formative assessment, two things have to happen—a change of mind-set and whole-school involvement in the transformation."

Measured Progress's approach to training educators about formative assessment relies on theoretical and conceptual frameworks that rely on the interaction of processes, strategies, and practical tools that teachers and students use as part of daily practice, explained Sara Bryant, professional development specialist with Measured Progress and member of *The Formative Assessment Process* team. "For example, Lorrie Shepard, University of Colorado–Boulder dean and professor argues that formative assessment is synonymous with 'instructional content scaffolding' because of the ways in which teachers need to adjust instruction and give feedback based on levels of student learning," Bryant said (see *Linking Formative Assessment to Scaffolding,* 2005).

Bryant further explains that the "process" of formative assessment is often left behind and trumped by teachers who use isolated strategies and tools. "Michigan requested this model because it helps teachers understand how to use formative strategies within a process. Teachers and students work together to essentially close the gap between a student's current learning and desired 'mastery' of the learning targets through strategies such as self-assessment, peer assessment, goal setting, and the like," Bryant said. "We help teachers see the 'gap-closing' process as the overlay to the familiar formative tools."

The MDE regards the Measured Progress approach as a real-world application of formative assessment that is much closer to the research showing positive impact on student achievement and motivation than many of the products on the market that are labeled as "formative."

"The formative assessment principles outlined in the research are an essential part of a balanced assessment system," said Vince Dean, state assessment manager, Michigan Office of Educational Assessment and Accountability. "Teachers using formative assessment—making decisions, linking assessment to standards, giving feedback—should be at the core of a classroom assessment plan. By 'endorsing' and financially supporting a statewide formative professional development program, we believe we are sending a strong message."

Program Demographics

	2008–2009	2009–2010
Coaches	35	100
Teams	23	65
Learning Team Members	159	420
Total Schools	49	145
Total Districts	24	68
Total ISD/ESD/RESA	12	25

Components of *The Formative Assessment Process*

Measured Progress's *Formative Assessment Process* helps teachers recognize the eight critical components for making formative assessment work in classrooms. These components, described below, are highlighted during face-to-face trainings, through distance learning materials, and within a virtual social network.

Planning. Before instruction begins, teachers make plans to identify which learning targets they will pinpoint, what kind of evidence they will gather, how they will involve students in the assessment process, when they will analyze data to determine the next steps, and how they might offer feedback.

Learning targets. Teachers establish strategies for using learning targets with students and embedding them in daily instruction. Strategies such as introducing student-friendly language and tools such as exemplars and criteria have been effective at keeping students focused on the targets.

Student evidence. Teachers rely on student evidence to determine what students know and can do. This evidence can take the form of paper-pencil tests, essays, oral presentations, teacher observations, student-teacher conferences, reflection papers, and the like. In simple terms, the type of feedback (formative), the effect of the feedback (student use), and teacher decision making (using student evidence to verify or revise instruction) constitute formative uses of student evidence.

Formative assessment strategies. Teachers understand and use formative assessment strategies to involve students in the process by linking the strategies to learning targets, student evidence, and formative assessment tools. Examples of such strategies include self-assessment, peer assessment, goal setting, and assessing for transfer. Both Lorrie Shepard (2005) and Dylan

Wiliam (2007) caution against using formative assessment strategies in isolation, which is echoed in all aspects of Measured Progress trainings and support.

Formative assessment tools. There are hundreds of "tools" in the formative assessment toolbox: thumbs up/down, "after-all" cards, exemplars, peer conferences, etc. It's not these tools that separate *The Formative Assessment Process* as implemented in Michigan from most other approaches, but how well teachers have been trained to use them within the process.

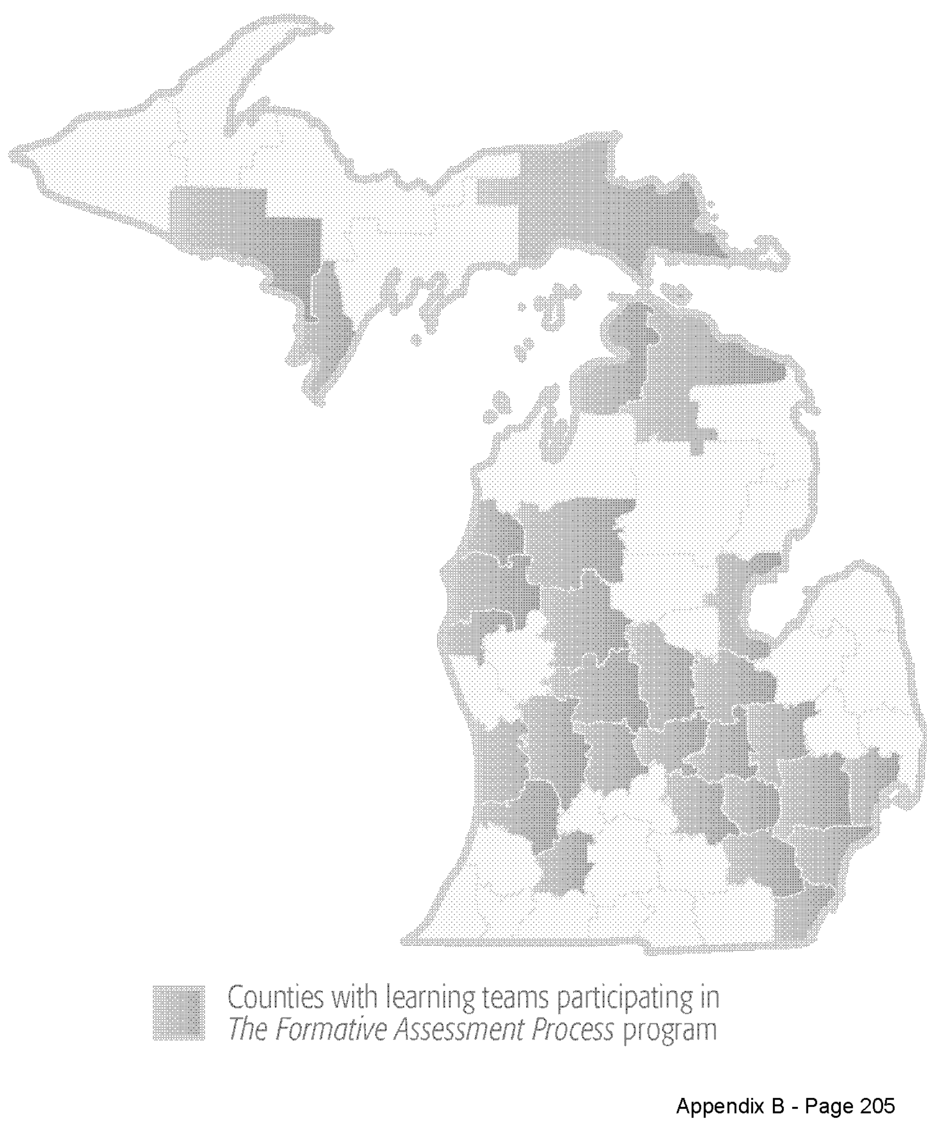
Teacher analysis. *The Formative Assessment Process*'s fundamental purpose is to prepare teachers to use student evidence to analyze student achievement in relationship to the intended learning targets. This enables teachers to make informed decisions about changing instructional plans, determining the most effective feedback, and deciding which strategies and tools to use with students.

Feedback. In *The Formative Assessment Process*, feedback is an essential component of the training. Research indicates that focused feedback is one of the most significant causes of increased student achievement. More descriptive written and verbal formative feedback and less evaluative feedback (i.e., numbers, grades, and "good jobs") typically lead to increased student self-awareness about students' learning and achievement.

"*The Formative Assessment Process* provides teachers with the direction they have been crying out for... I want to be a part of this because it is right for teachers and most importantly it is right for students."

Sheila Larson,
K–12 curriculum director, Fowlerville Community Schools

Formative Assessment in Michigan



Counties with learning teams participating in *The Formative Assessment Process* program

Instructional verification/ revision. Using *The Formative Assessment Process*, teachers have the ability to use student evidence in real time to make instructional revisions or to verify that learning is progressing. Decisions to move on or make instructional revisions are based on teacher analysis of student evidence in relation to learning targets, formative assessment tools, and the effect of feedback.

The Formative Assessment Process Model

	LATE SUMMER	FALL	OCTOBER – APRIL	MAY
Formative Assessment Content	*The Formative Assessment Process*	*The Formative Assessment Process*	Formative Assessment Strategies	No new content
Learning Teams	Recruitment	1-Day Training	Meeting & Practicing Formative Assessment	Reflecting
Coaches	2-Day Training	2-Day Training	Coaching	Reflecting

MDE staff, a small group of Measured Progress professional development practitioners, and faculty from Michigan State University drive *The Formative Assessment Process* program. Now at the end of Year 2 and in preparation for Year 3, the program implementation model remains embedded in educator learning teams, led by coaches in districts throughout the state—the goal is to embed learning in ways that can result in actual changes in teacher practice. Measured Progress provides face-to-face training each fall, virtual support, site visits, and a spring face-to-face reflection day. E-mail and social networking support are also linked to coaches and learning teams' monthly meetings.

Coaches

A key element to the success of *The Formative Assessment Process* includes ongoing training for its cadre of 100 coaches, who will ultimately scale up the model statewide. Most coaches were initially chosen by an advisory group made up of intermediate school districts, administrators, university leadership, and the MDE. Although local district leadership determines the composition of their learning teams, the MDE requires the majority of learning team members to be classroom teachers. Coaches are typically employed by their districts or ISDs and receive local funding for their travel and substitute teacher reimbursement. They meet before or after school and determine how often and how long they meet each time. Young said the MDE did not have any trouble recruiting volunteers to head leadership teams in Years 1 or 2.

- Each year, new coaches participate in a three-day intensive training program that familiarizes them with *The Formative Assessment Process*, recruitment strategies, questioning techniques, protocol use, and resource selection.
- Coaches receive support from Measured Progress specialists in the form of field visits, Webinars, and surveys to help support their learning as they lead their teams through the process.
- Once trained, coaches work with their learning teams for five months.
- Veteran coaches have identified two main skills they deem critical to their success: using effective questioning strategies to move the team forward and providing feedback to keep the team's focus on formative assessment.

"Coaches embed themselves in the learning team, rather than becoming the team's focal point—and this approach is a key to the success of the process," said Young.

Laurie Smith, who has served as a coach for two years and has worked as the educational data consultant for the Ottawa Area Intermediate School District for the past nine years, said that *The Formative Assessment Process* ultimately saves teachers time, focuses instruction, and raises student achievement.

"When you are coaching, you are learning along with your team. Good questioning is important, and it's a commitment, but believing in formative assessment and what it can do is more important than anything," Smith said.

Sheila Larson, a K–12 curriculum director for Fowlerville Community Schools, and a 35-year education veteran, credits *The Formative Assessment Process* program with helping teachers convey standards to their students in an effective way—and with giving them the direction and materials needed to guide and model classroom implementation. Larson, committed to the process for "the long haul," says her coaching experience motivates her to support teachers new to the concept of balanced and formative assessment.

"We like Measured Progress's approach to formative assessment because it helps teachers with planning, how to use assessment results, and how to give feedback–as a process."

Joseph Martineau, state assessment director, Michigan Office of Educational Assessment and Accountability

"[*The Formative Assessment Process*] provides teachers with the direction they have been crying out for," she said. "The term assessment takes on a whole new meaning when teachers infuse the formative process into their classrooms daily. I want to be a part of this because it is right for teachers and most importantly it is right for students."

Young said coaches have been particularly pleased with the support they receive from both their administrators and Measured Progress, which enables them to keep learning teams focused.

"We've had a very close working relationship with Measured Progress, whose specialists would listen to us at the MDE, and to coaches, and teachers, and make changes and adaptations to meet each group where they were," Young said. "If there were questions, concerns, or if coaches needed additional resources, Measured Progress professional development specialists were very responsive."

Learning Teams

Learning teams consist of volunteer teachers and administrators interested in the study and practice of formative assessment. Each year, they participate in a two-day "launch" training session that introduces them to components of *The Formative Assessment Process*. A new "cohort" of teams joins the program annually. Through that training, learning teams are introduced to the eight components of *The Formative Assessment Process*. Young explained that the learning teams are grouped in several different ways—by grade level, grade span, content area, or even across districts. Each learning team includes six to eight teachers and administrators. The learning team structure reflects the research that indicates successful learning: taking place over a period of time; involving teachers in active, collaborative participation; and including practices that are consistent and ingrained within the school culture.

During training, teams establish culture and trust, and develop a plan for monthly meetings back at their schools. Once teams return to their schools and districts, the real work begins as they apply a variety of formative assessment strategies: they share practices, examine samples of student work, and familiarize themselves with academic literature related to formative assessment.

Smith led a high school team in Year 1 and is now leading a middle school team in Year 2. She has witnessed the formative assessment process in action—teachers are posting learning targets on blackboards, engaging students in peer editing and self-reflection, and incorporating other formative assessment strategies into their instruction.

"The teachers can see the plus side of the formative assessment process. It saves time and makes their work easier. It puts more responsibility on the students for their own learning—when teachers correct papers, they see fewer mistakes and have to make fewer comments," she said.

Measured Progress Resources & Support

After the initial training, learning teams use virtual formative assessment strategy "toolboxes" as a basis for team discussion, classroom implementation, and reflection.

- A Measured Progress–developed interactive Web site delivers resources—including these toolboxes, classroom-ready templates, articles and reports, and links to other relevant Web sites.

- Coaches and teams also have access to a social network that includes experts and peers in which to share resources and examples of student work.
- Participants stay in touch through e-mails, video conferences, and telephone conversations. Communication is key, both for feedback and sharing what works.

Measured Progress practitioners make periodic site visits to work in person and virtually with individual teams. These interactions help both the coaches and learning teams adjust their practices, improve classroom instruction, and better meet individual students' learning needs. In addition, the site visits enable practitioners to work within the school environment, instead of limiting interactions to off-site workshops or training sessions.

Michigan educators credit *The Formative Assessment Process* with improvements in their practice. In particular, they praise how much their learning team participation has helped them sustain their work. They view fellow team members as "critical friends," sounding boards, and cheerleaders. Some have reported that if the team structure were absent, they would question their ability to sustain the formative approaches they acquired through their training.

Larson sees clear evidence of formative assessment in the classrooms she's visited.

"Teachers are no longer behind their desks—they are with the students engaging in conversations, listening to small group and peer discussions, asking questions, asking more questions, and challenging the students to think," she said. "For the first time, special education students feel they have a chance of success."

Preparing for Scalability and Sustainability

One of the great advantages of *The Formative Assessment Process* model is that it is embedded with research-based tools that assess its impact. Throughout Years 1 and 2, Measured Progress collected and analyzed survey data from all participants to determine program effectiveness and areas for improvement. Descriptive statistics show the following:

Year 1: 2008–2009 data

- Eighty-three percent said they knew what *The Formative Assessment Process* looks like and had acquired practical formative assessment strategies and tools.
- Eighty-five percent indicated that the learning team structure had a significant and positive impact on their ability to grasp *The Formative Assessment Process.*
- Sixty percent said that the process had "moderate" to "significant" impact on student learning. Team members said students became more responsible for their learning and performed better.

Year 2: 2009–2010, based on mid-year data

- Forty-nine percent analyzed the feedback provided to students.
- Fifty-one percent verbally reflected on their own practices with their team.
- Ninety percent of coaches reported that learning team members were providing supportive, reflective feedback to each other during meetings.

Dean said that moving into Year 3, the MDE plans to ramp-up coaching training through a potential collaboration with *The Center for Cognitive Coaching*SM—a group that delivers foundational training in Cognitive CoachingSM.

In addition, Dean said that the MDE plans to dedicate additional funding to enhance distance learning and delivery modes so that participants do not have to rely on face-to-face training as their only means of program delivery.

"Measured Progress is scaling up a five-year curriculum that will allow opportunities for new teachers and coaches to join each year and for 'veterans' to keep on learning," he said.

Michigan State University continues to build up its robust research agenda to study the effectiveness of formative assessment professional development—which Dean notes is critical to exploring the impact of this work on student achievement.

Measured Progress, in Year 3, plans to train 80 new coaches and teams, in addition to the current coaches and learning teams already participating in *The Formative Assessment Process* program. In an effort to bring the program to scale statewide, Measured Progress is incorporating additional distance learning tools and technology. Teams will be encouraged to use regional coaches to build capacity statewide, Bryant said.

About the Michigan Department of Education

The MDE serves approximately 883 public school districts (including public school academies) that serve about 1.65 million students. The department also serves 820 private schools with reported enrollment of 120,000 students.

The Office of Educational Assessment & Accountability (OEAA) is a division of the Michigan Department of Education. The OEAA designs and manages statewide assessments that help Michigan educators determine what students know and are able to do at key checkpoints during their academic career.

Affiliated with the OEAA, the Michigan Assessment Consortium works to improve student learning and achievement through a system of coherent curriculum, balanced assessment, and effective instruction by:

- promoting assessment knowledge and practice,
- providing professional development, and
- producing and sharing assessment tools and products.

The Michigan Assessment Consortium has been involved in *The Formative Assessment Process* project design and through ISDs across the state; the consortium has deployed several ISD consultants to support this initiative.

For more information on *Developing and Implementing the Formative Assessment Process* in Michigan, contact Kimberly Young at the Office of Educational Assessment & Accountability.

About Measured Progress

Measured Progress's research-based approach to professional development calls for educators to embed proven practices and tools in their classrooms to increase student learning.

Educators can apply strategies and skills across content areas and grade levels to improve student, school, and district performance. Our professional development experts will work in partnership with your team to focus on one or more of these core competencies:

- Assessment literacy: Gain fluency in the understanding and use of assessment.
- Comprehensive assessment: Build a holistic assessment system using all the right tools and practices.
- Examining student work: Use a process to establish and maintain consistent criteria for quality student work across grade levels.
- Formative assessment: Translate assessment theory into great instructional practice by using proven techniques to adjust ongoing teaching and learning.
- Standards-based assessment: Create a learning environment that aligns instruction to standards and assessment.
- Using data: Draw from multiple data sources to guide instructional improvement.

MICHIGAN Department of Education

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Measured Progress

It's all about student learning. Period.

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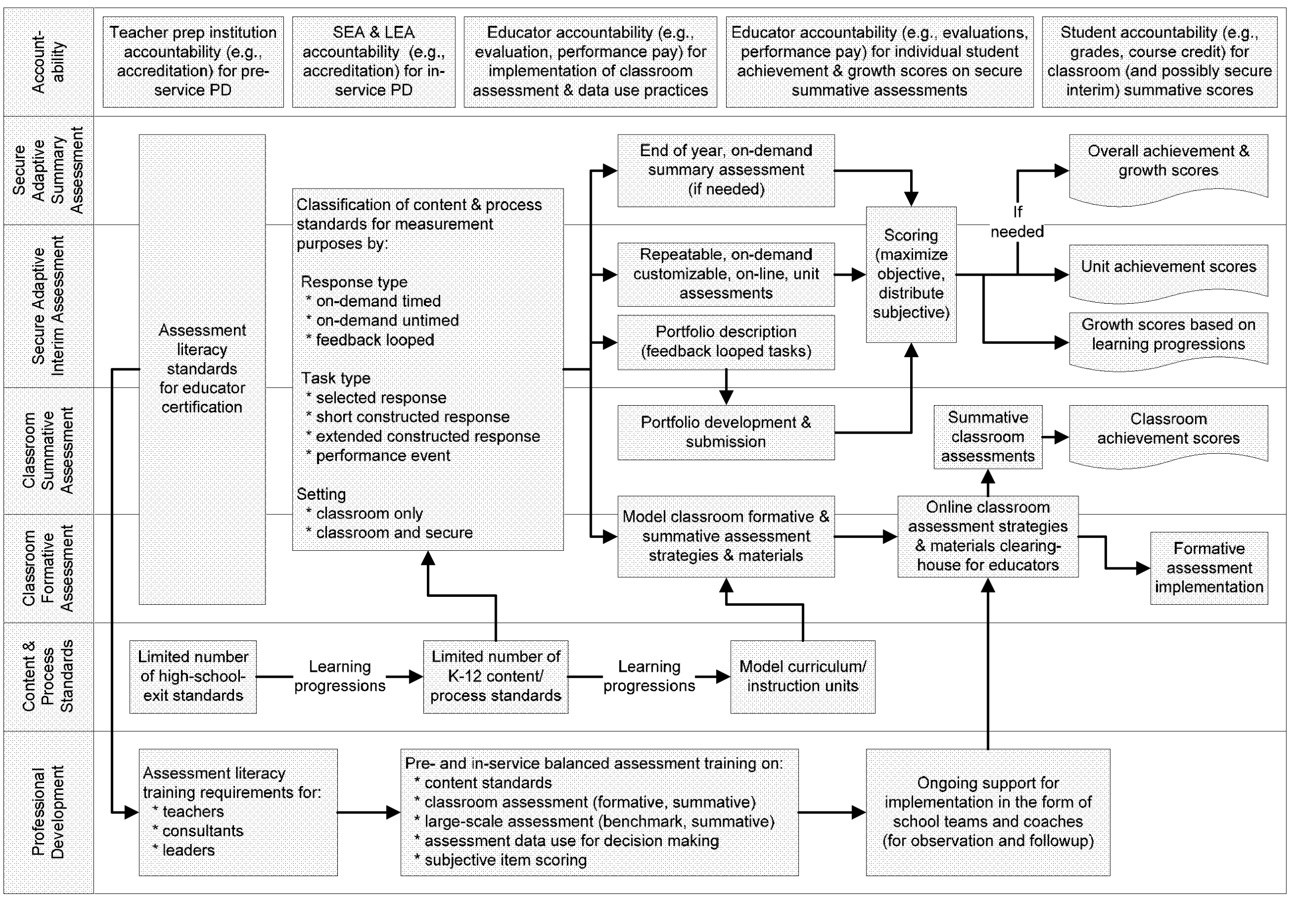
Appendix B.18

Balance Assessment and Accountability System Schematic

A schematic of the different components of a balanced assessment & accountability system and their interconnections is provided in Figure 1. Each component of the balanced system in Figure 1 is represented by a horizontal bar, showing in which aspect each of the individual pieces of the system is carried out. For example, note that the "assessment literacy standards for educator certification" box spans the formative, classroom summative, secure interim, and secure summary components, indicating that those standards must cover all four areas of assessment competence. In addition, Figure 1 is intended to be symbolic in the following ways:

- First, the bedrock of the system is the overarching professional development provided to educators to assure that they are equipped to work within the system.
- Second, the foundation of the system is must be coherent content and process standards, around which curriculum, instruction, and assessment must be developed to assure validity.
- Third, (classroom) formative assessment underlies all of the assessment components of the system—without which the stability and usefulness of the other assessment (and corresponding accountability) components are suspect.
- Fourth, the system is protected by the umbrella of accountability to provide incentives to implement the system as intended, and to minimize unintended consequences for students, educators and schools.
- Fifth, there are only two entry points into the system: a limited number of high school exit goals, and assessment literacy standards for educator certification.
- Sixth, there are only three ultimate outcomes of the system (all of which are measures of student achievement), represented by the symbol .
- Seventh, there are only two other critical goals of the system (implementation of formative assessment, and ongoing support for school teams and coaches) which are intended to support the ultimate outcomes of student achievement.
- Eighth, inherent in the comprehensiveness and individualized nature of many components of the system is the capability to include all students (both students with disabilities and English language learners) in the system.
- Finally, the balanced assessment and accountability system requires a large-scale technical infrastructure for data collection, secure assessment delivery, hosting of a transparent and accessible model materials repository, and a transparent reporting structure capable of facilitating usefulness the entire system.

Balance Assessment and Accountability System Schematic



Overview of the Michigan Consortium for Educational Research (MCER)

A Partnership of the Michigan Department of Education, the University of Michigan, and Michigan State University

Funded by a $5.9 million grant from the U.S. Department of Education, researchers at the University of Michigan and Michigan State University are collaborating with the Michigan Department of Education and the Center for Educational Performance and Information to leverage state data to evaluate the impact of two major statewide reforms—the Michigan Merit Curriculum and the Michigan Promise Scholarship. This project supports two important goals in Michigan education: 1) using high-quality longitudinal data and rigorous quasi-experimental methods to evaluate policy and practice, and 2) creating collaborative working relationships between higher education institutions and the Department of Education to improve student performance and achievement, and to inform policy.

MCER includes seven principal investigators from the three institutions, making this a truly collaborative partnership at all levels. From the University of Michigan, the PIs are Brian A. Jacob, Walter H. Annenberg Professor of Education Policy at, Professor of Economics, and Director of the Center on Local, State and Urban Policy (CLOSUP); and Susan Dynarski, Associate Professor of Public Policy and Associate Professor of Education. At Michigan State University, the PIs include Barbara Schneider, John A. Hannah Distinguished Professor of Education and Professor of Sociology; and Kenneth Frank, Associate Professor, Measurement and Quantitative Methods, and Associate Professor, Fisheries and Wildlife. At the state level, PIs include Joseph Martineau, Director of the Office of Educational Assessment and Accountability, Michigan Department of Education; Thomas Howell, Director of the Center for Educational Performance and Information; and MaryAlice Galloway, Director of the Office of School Improvement, Michigan Department of Education.

To evaluate the impact of the Michigan Merit Curriculum and Michigan Promise Scholarship on student outcomes and postsecondary transitions, longitudinal data from six pre-reform cohorts, as well as all post-reform cohorts, are utilized. These include longitudinal assessment data and student demographic data, as well as data on educational personnel currently collected by the state. Additionally, the study will utilize transcript data, collected via the state's eTranscript initiative. While the transcript data will be complete for all students from 2010 onward, MCER additionally provides funds to collect and code transcripts from a subsample of Michigan high schools going back to 2000. Finally, in order to better understand and document Michigan student transitions and persistence in postsecondary education, MCER is purchasing data from the National Student Clearinghouse (NSC) and is making these data available to the state, as part of the collaborative partnership. In this way, this collaboration provides support to state goals regarding documenting and identifying student postsecondary pathways, and enrollment and persistence of students in postsecondary education.

Both programs were rolled out statewide at their inception, which prevents us from using the gold standard of a randomized trial to evaluate their effects. MCER will use quasi-experimental methods to capture effects for both program including comparative interrupted time-series to evaluate the effect of the Michigan Merit Curriculum, and regression discontinuity to evaluate the impact of the Michigan Promise Scholarship. This work will result in policy and technical reports, academic papers and presentations, and a continuous flow of information to the state regarding the effects of these two reforms. Further, MCER anticipates identifying additional topics of interest, and providing support to the state in the area of building their capacity around rigorous research.

MICHIGAN DEPARTMENT OF EDUCATION

Educational Technology and Data Coordination
Office of Education Improvement and Innovation

2009-2010 American Recovery and Reinvestment Act -
Enhancing Education through Technology Grant
Improving Instruction Through Regional Data Initiatives

INTRODUCTION:

The Michigan Department of Education (MDE) is offering a competitive grant to improve classroom instruction through regional data initiatives. Funding for this program has been awarded to MDE by the U.S. Department of Education under the Elementary and Secondary Education Act of 1965, Title II, Part D program as part of the American Recovery and Reinvestment Act (ARRA) of 2009, **CFDA Number 84.386**. This competitive grant will be known as the Regional Data Initiatives grant.

PURPOSE OF THE GRANT:

The purpose of the grant program is to provide Michigan teachers with real-time access to student data at the classroom level in order to inform instructional decisions. MDE is seeking proposals on how to use best the programs that are currently in place at several intermediate school districts (ISDs). The goal is to provide every educator in Michigan with an opportunity to differentiate and individualize instruction to improve student achievement utilizing state and local student data sets. Proposed projects must address the provision of professional development on the use of data to inform instruction and how to individualize instruction by applying Principles of Universal Design for Learning (UDL).

MDE anticipates awarding between five and ten grants to ISDs for the purpose of establishing and leading consortia of other ISDs and their constituent local educational agencies (LEAs) and public school academies (PSAs) in the adoption and use of existing programs of web-based tools, services, resources, and professional development that identify, connect, and combine diverse educational data elements in meaningful ways. MDE intends for this grant to extend and expand existing implementations of data analysis programs to those ISDs, LEAs, and PSAs that do not currently have access to such programs.

PROJECT DESIGN CRITERIA:

Successful applicants must demonstrate how they have already assembled and implemented a package of tools, services, and professional development that meets the purpose and goals of the grant. Applicants must show how their existing data analysis program already meets the following criteria:

- Identifies, connects, and combines diverse educational data elements (e.g., personnel, financial, crime and safety, schools/facilities, and student data, including assessment information and results) in meaningful ways from various sources and over time so that administrators and educators have access to the information they need to guide student learning.

- Integrates elements of participating ISDs' and districts' student information systems and other statewide data into a package of web-based tools, services, resources, and professional development programs to create a system that lowers sustainability costs and increases the access to data by teachers and administrators.

- Incorporates the above data into tools, services, resources, and professional development programs that assist educators to individualize and differentiate instruction for all students.

Successful proposals must describe or provide evidence of:

- A model of deployment, scalability, and financial sustainability by multiple ISDs and their constituent districts, including the applicant's accomplishments deploying its own program.

- Collaboration with and partnership among other ISDs, LEAs, and PSAs, including agreements on the sharing of tools, services, and professional development programs used in the implementation of this grant program.

PROJECT DESIGN CONSIDERATIONS

The five to ten successful applicants chosen will be required to work in collaboration through a professional learning community (PLC) facilitated by the Michigan Association of Intermediate School Administrators (MAISA). In the budget section of this application, applicants will be directed to set aside 20 percent of the total project budget to achieve the goals of the PLC. The purpose of the professional learning community is to find common solutions to, but not limited to, the following items:

- Interfacing Regional Data Initiatives with the Data for Student Success (D4SS) project to achieve common platforms, processes, and protocols for the release of data to the field.

- Interfacing Regional Data Initiatives with district student information systems to allow a streamlined process for aggregating and analyzing data.

- Developing common professional development programs to ensure coverage of essential topics and leveraging shared resources.

- Recommending a common set of state and national course definitions to which LEAS and PSAs can map their particular course offering with the purpose of improving the transmission of secondary credit information across the K12 system and between K12 and higher education.

- Facilitating research relationships with teacher preparation institutions for the purpose of improving education policy and practice and the preparation of teachers.

- Purchasing and sharing of tools and resources for differentiated instruction.

- Developing a common set of reports to assist schools in identifying those students most at risk of dropping out that will help facilitate schools in addressing and lowering dropout rates based on the early warning sign research (http://www.betterhighschools.org/topics/DropoutWarningSigns.asp).

- Implementing a common set of standards for use in observing and reporting teacher technology skill level.

- Implementing a common set of assessment items for use in determining 8th grade technological literacy.

- Evaluating the impact of Regional Data Initiatives in terms of instructional impact.

ELIGIBLE APPLICANTS:

This grant is targeted to eligible partnerships (i.e., consortia of ISDs) that include at least one high need district (LEA), which can be defined as one that:

> Is among those districts in Michigan with the highest numbers or percentages of children from families with incomes below the poverty line as defined by the TITLE I - PART A, ALLOCATIONS School Year 2008-09 found at: http://www.michigan.gov/documents/mde/MDE-P2_FS_08_T1aAllocListOrig_199917_7.pdf
>
> ***and***
>
> Serves one or more schools identified for improvement or corrective action under section 1116 of the No Child Left Behind (NCLB) Act of 2001.

All Michigan LEAs and PSAs are eligible and encouraged to participate in the Regional Data Initiatives grant through their ISD. However, LEAs and PSAs can only participate in the Regional Data Initiatives project in which their ISD is participating.

Consortium Leader
The applicant ISD will serve as Consortium Leader for the several ISDs that join its proposed project. In addition to serving as the fiscal agent on the grant, each Consortium Leader will be responsible for the successful implementation of the Regional Data Initiatives in each ISD that joins its consortium. Furthermore, all Consortium Leaders will be expected to participate in statewide conversations and collaborations to identify and select common tools, resources, and services, including evaluation services, for the grant program as a whole.

Participating ISDs
The applicant ISD will be asked by the Michigan Electronic Grants System (MEGS) to designate the partner ISDs participating in its consortium. Each individual ISD designated by an applicant will then be asked to confirm their partnership on the grant application in MEGS. This confirmation must be completed by the Regional Data Initiatives grant application deadline set forth in this document.

GRANT RANGE:

MDE anticipates funding five to ten projects in the amount of $250,000 to $2.5 million each. The actual award amounts will depend on the number of participating ISDs and their constituent LEAs and PSAs that join a given consortium. The funding structure creates a financial incentive for more ISDs to partner in a given consortium. To project the appropriate allocations, certain considerations were used to create a per-LEA and -PSA allocation that went into the ISD estimates:

> ***Size of District***
> LEAs and PSAs with more than 101 students were grouped and categorized according to size and assigned corresponding dollar amounts ranging from $2,500 to $150,000.
>
> ***High Poverty Districts***
> LEAs and PSAs with more than 101 students claiming free and reduced lunch were grouped and categorized according to number of students and assigned corresponding dollar amounts, ranging from $2,500 to $25,000.
>
> ***High Priority Schools***

LEAs and PSAs with more than 101 students that have schools not making Adequate Yearly Progress (AYP) were assigned \$5,000 for each non-AYP school with a maximum of four non-AYP schools per district.

Minimum ISD Awards

To support the implementation of Regional Data Initiatives at smaller ISDs, a minimum award was set at approximately \$75,000. 'Per LEA/PSA' allocations were increased proportionally to total \$75,000.

TOTAL FUNDS:

Approximately \$11.6 million of total funding is available in the combined two rounds of competition.

Addenda for Possible Consideration

Applicants are encouraged to submit addenda to their Regional Data Initiatives grant that propose innovative solutions to the four activities listed below. (Addenda should be kept to four double-spaced pages each, using 11 point Verdana font. Addenda do not count against the total page limit of the original proposal. Addenda should include separate budgets that should not be included in the original project budget. Proposed projects will be considered for funding after the total round one budget—comprising the winning consortia—is determined.)

Addendum 1: Education Research Collaborative Partners

Explain how the consortium will include at least one higher education institution, teacher preparation institution, or education research organization as a partner. This would give the consortium the ability to conduct research on the vast amount of formative and summative data shared across the consortium with the goal of improving education policy and practice and the preparation of teachers.

Addendum 2: Personnel Skilled with Technology

Explain how its addendum project will assist the state in providing a common set of standards used in assessing personnel skilled in technology. The addendum should be based on current work underway to increase educator technology skill levels and should include a statewide organization to assist in rolling out the common set of standards.

Addendum 3: 8th Grade Technological Literacy

Explain how its addendum project will assist the state in providing a common set of assessment items use in determining 8th grade student technological literacy measured against the Michigan Educational Technology Standards for Students (METS-S). The addendum should be based on current work underway and should include a statewide organization to assist in rolling out the common set of assessment items.

Addendum 4: Michigan Superintendent of Public Instruction's Dropout Challenge

Explain how its addendum project will support high and middle schools in addressing Michigan's dropout crisis and meet the Dropout Challenge set forth by the Superintendent of Public Instruction, Michael Flanagan.

Collaborative Work / Professional Learning Community

MDE anticipates awarding five to ten Regional Data Initiatives grants. Consortia leaders will be expected to participate in a Professional Learning Community (PLC) comprised of the winning consortia leaders, representatives of the Data for Student Success (D4SS) project, and other stakeholders. The PLC will be administered by MAISA and facilitate the consortia's collaboration, sharing resources, and accomplishing of a common evaluation across all projects. **Applicants should set aside 20 percent of the total project budget for the purpose of collaborating.** Up to 50 percent of the set aside (or 10 percent of the project budget) can be considered "professional development" for the purposes of satisfying the Title IID 25 percent professional development budget requirement.

DATA FOR STUDENT SUCCESS

The State of Michigan has invested significantly in the Data for Student Success (D4SS) project with the goal of providing a common source of compulsory data reported out by the State for use by schools and those organizations supporting school improvement efforts. The Regional Data Initiatives grant program is predicated on aligning regional data systems with D4SS and extending the great work that has been done through D4SS within the context of local initiatives.

There are two areas in which the Regional Data Initiatives should interface with D4SS:

1. For the automated release, transfer, and incorporation of state compulsory data into the package of tools and resources that are central to each Regional Data Initiative. This will allow the state to provide a central or single "data out" platform or "conduit," eliminate redundancy, and reduce the time it takes to return data to our schools.
2. To provide a common set of trainings on data driven decision making that leverage the D4SS professional development. Regional Data Initiatives professional development should look to include critical elements of the D4SS professional development program where they fit.

DISTRICT ASSURANCES:

Final funding amounts will be contingent on assurances provided by participating LEAs and PSAs within consortia ISDs. After the winning consortia are selected, MDE will request, via MEGS, that each LEA and PSA submit assurances certifying full participation in the consortium designated by their ISD. Nonpublic schools will also be invited to submit the same assurances for participation in the consortium designated by their ISD (the requirements of the "Nonpublic School Participation" provision of this application still apply). The assurance process amounts to an "opt in" for LEAs, PSAs, and nonpublic schools indicating their desire to participate. A failure to provide assurances indicates an "opting out" of the Regional Data Initiatives grant program. These assurances will include:

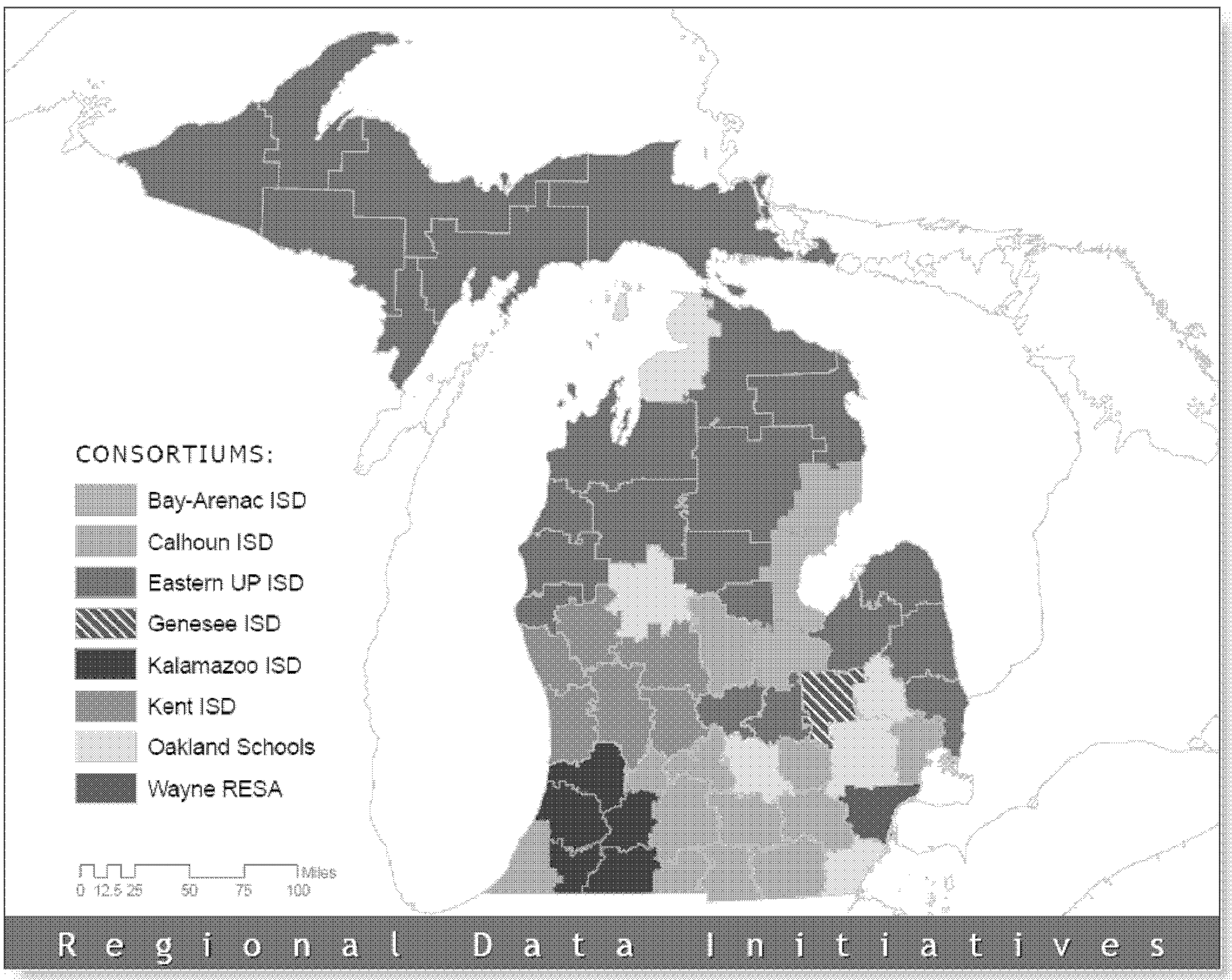
1. District incorporation of the Regional Data Initiatives into the district's educational practices at the classroom level;
2. Interface capability between the Regional Data Initiatives and district student information system to facilitate interchange of data;
3. Dedication of at least four professional development days over two school years for all instructional staff and administrators for professional development related to the Regional Data Initiatives;
4. Participation in the Regional Data Initiatives during the FY2009-10, FY2010-11, and FY2011-12 school years;
5. Full participation in the collective evaluation of the Regional Data Initiatives Title IID grant, including completing surveys and providing additional data to assist MDE in determining the effectiveness of the program in impacting student achievement;
6. Permission for the Regional Data Initiatives to use district data for research purposes of improving education policy and practice and the preparation of teachers;
7. Use of a common set of standards used to determine personnel technology skill level with all instructional staff observed and reported in the Registry of Educational Professionals (REP); and

8. Use of a common set of assessment items used in determining 8th grade technological literacy and reported assessment results in the Michigan Electronic Grants System (MEGS).

Failure to produce assurances may result in reduced funding.

NONPUBLIC SCHOOL PARTICIPATION:

The federal Title II, Part D Enhancing Education Through Technology (EETT) program statute requires applicants to provide meaningful opportunity for the equitable participation of teachers and administrators from nonpublic schools in professional learning and equipment funded under EETT. This opportunity **must occur during the planning stages** of the application so that the proposed initiative and the funding request take into consideration the needs of the nonpublic staff. Grant applicants are required to document the planning activities that occur between public and nonpublic entities and to maintain as documentation items such as copies of letters inviting nonpublic participation. Funds may not be used for nonpublic substitute teacher costs.



Appendix C.3

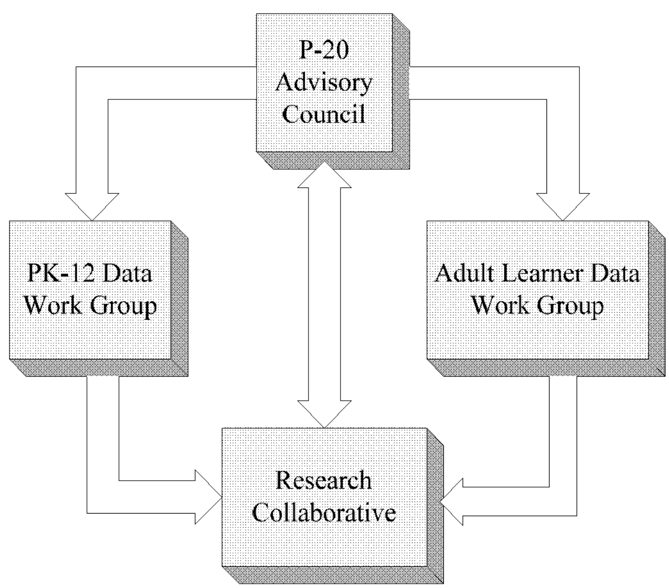
Regional Research Initiative PLC Questions	P-20 Council Alignment
1) In what ways can teachers use interim and summative assessment results to design, monitor and modify instruction that achieve learning gains for students?	• (Task) Build the technical and human capacity to use the data effectively in *local education agencies*, by research audiences, and centrally • (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Analyze formative and interim assessments • (Question) Use local data to target resources to student performance gaps
2) If best practice approaches can be developed from the teaching/learning cycle described in question 1, how can they be taught effectively to pre-service and in-service teachers?	• (Task) Build the technical and human capacity to use the data effectively in local education agencies, by research audiences, and centrally • (Task) Make appropriate research results available to the public through the state's education data portal
3) Can a common set of items and interim assessments be designed and shared across the RDI partners and given to students so that results across the collaborative data set might be analyzed, validated and shared statewide?	• (Task) Ensure that student, school and system performance are measured meaningfully. • (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Perform validity and reliability studies of new assessment system. • (Question) Analyze formative and interim assessments
4) Assuming that local formative and interim assessment data are combined with summative state student assessment data, what combination of independent and dependent variables accurately measure and predict student performance and growth, school and system performance? Which independent variables are most easily changed through intervention of practices, strategies and programs?	• (Task) Ensure that student, school and system performance are measured meaningfully. • (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Explore student growth models and combinations of other indicators for performance evaluation systems. • (Question) Analyze formative and interim assessments • (Question) Use local data to target resources to student performance gaps
5) In what ways do professional learning communities impact student and school performance on important indicators, and how can those indicators be defined and measured?	• (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Evaluate implementation and impact of learning communities
6) In what ways do local and regional student assessments provide valid evidence for inclusion in student growth models?	• (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Use local and regional assessments for additional data on student growth

Regional Research Initiative PLC Questions	P-20 Council Alignment
7) What data elements (including assessment data such as ACT Plan and Explore MME, SCAS or other common end-of-course exams, and postsecondary placement exams) are needed to provide a more complete picture of students' performance in high schools and how prepared they are to enter post-secondary education and careers?	• (Task) Ensure that student, school and system performance are measured meaningfully. • (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Create a common set of state-level indicators for policy makers and education leaders to describe system progress in meeting student needs
8) In what ways does providing teachers and administrators with access to student and school performance data have an impact on student achievement and school performance?	• (Task) Build the technical and human capacity to use the data effectively in local education agencies, by research audiences, and centrally • (Task) Make appropriate research results available to the public through the state's education data portal • (Question) Evaluate implementation and impact of learning communities

The Center for Educational Performance and Information (CEPI) is statutorily authorized by the Michigan Legislature to coordinate the management, collection, and reporting of all education data, including the electronic exchange of student records between preschool, K–12, and postsecondary education, in a manner that reduces the administrative burden on reporting entities, ensures student privacy, and provides data and reports to state and local policymakers and the citizens of Michigan. CEPI works closely with the Michigan Department of Education (MDE) on managing interagency projects and stakeholder activities.

Over time, CEPI and MDE have found it useful to have an overarching policy-level group of partners, as well as advisory groups of partners who are much closer to the actual data from which to gain practical insights for implementation issues. In addition, CEPI and MDE are implementing a research collaborative to ensure that state data facilitate research to identify student academic achievement gaps and leaks in the educational pipeline, improve education and training programs, and identify transition issues. The figure below displays the model of P–20 governance.

Hierarchy of SLDS Governance Structure



P–20 Advisory Council

The P–20 Advisory Council will consist of representatives from the preschool, K–12, postsecondary, and other adult learner education communities, as well as the workforce and overall system support. State agencies and associations will be solicited for membership nominations. Preschool representation will be solicited from the Michigan Department of Education (MDE) and the Early Childhood Investment Corporation, a nonprofit agency charged with coordinating Michigan's early childhood initiatives. K–12 representatives will be nominated from MDE and associations representing teacher unions, school boards, school administrators, secondary principals, and public school academies (charter schools). The postsecondary and workforce communities will be represented by the Department of Energy, Labor and Economic Growth (DELEG), which has responsibility for state workforce development system and adult education; the Department of Treasury, which has responsibility for student financial aid programs; the Presidents' Council, State Universities of Michigan; the Michigan Community College Association; and the Michigan Association of Independent Colleges and Universities. The overall PK–20 system would be represented by members from the Governor's Office, CEPI, State Budget Office, Education and House and Senate fiscal agencies.

The P–20 Advisory Council would be responsible for making policy recommendations to CEPI and MDE for full implementation of the P–20 system. Examples of systemic policymaking needs include model agreements or memorandums of understanding for storing unique student identifiers and matching student-level data in postsecondary data systems, the reporting of student-level remedial coursework from postsecondary institutions to high schools, the connection of individual teacher data to teacher preparation colleges, and student privacy policies. In addition, the council will work with the Research Collaborative to develop a state research agenda. Finally, the P–20 Advisory Council will serve as a body to resolve implementation issues escalated to it from either the PK–12 or the Adult Learner Data Work Groups.

PK–12 Data Work Group

This group will be made up of state agency and education providers who are program and data managers. Along with representation from appropriate MDE program areas, intermediate and local school district data users and managers will be solicited, as well as members of the Michigan School Business Officers association. CEPI will provide technical assistance and staffing for this group, and the Department of Information Technology (DIT) will provide state IT expertise.

The role of this group will be to discuss implementation issues surrounding the creation of the state education data portal, the linking of teachers to student data, and the tracking of untested students. Technical expertise also will be garnered related to the interoperability of the system, including the implementation of standard ETL processes and data structures, formats, and definitions.

Adult Learner Data Work Group

This group will be made up of state agencies and postsecondary education providers, including program and data managers from DELEG units focused on workforce development systems and adult education; Treasury department personnel focused on student financial aid programs and data; DELEG-nominated personnel from Michigan Works! agencies and adult education providers; and associations representing college admission directors, college registrars, college financial aid offices, and high school counselors. CEPI will provide technical assistance and staffing to this group, and DIT will provide state IT expertise.

Similar to the PK–12 Data Work Group, this group will be focused on resolving implementation issues such as storing unique student identifiers in higher education databases, the possible need to pick up at least some portion of students' Social Security numbers in order to match PK–12 and postsecondary data with workforce data, as well as ensuring interoperability by using standard data structures, formats, and definitions.

Research Collaborative

The creation of this group is one of the strategies for providing stronger analytics for Michigan. This group will comprise institutional researchers from four-year universities and community colleges as well as state agency stakeholders. The research collaborative will provide assistance in determining the usefulness and appropriateness of individual research requests; assist the state in determining what policy questions should be answered through the data; and ultimately provide independent research support related to policy issues posed by the P–20 Advisory Council.

State education agencies often lack the time, capacity, and the political positioning to guide the use of longitudinal data systems. A state-level research collaborative operated by a neutral party can effectively bring together the research capacity of complementary (sometimes competing) institutions to dramatically enhance the state's analytic capacity. Based on the district-level model of the Consortium on Chicago School Research, Michigan's state-level research collaborative will assemble researchers from across the state and the Midwest region to collaborate on and contribute to the development of a research agenda targeting needs recommended by the P–20 Council to the state superintendent rather than by individual researcher interests. As demonstrated in the Chicago model, this neutral territory will allow the MDE to avoid political entanglements between researchers and institutions while at the same time enabling the organization of a broad research capacity to address state education policy questions in a more coherent fashion.

This state-level research collaborative will oversee several key data tasks:

- Work with the P–20 Council to set and prioritize a state research agenda.
- Ensure that student, school, and system performance are measured meaningfully.
- Build the technical and human capacity to use the data effectively in local education agencies, by research audiences, and centrally.
- Review research proposals requiring state data regardless of funding source.
- Establish guidelines and standards for proposal submission with data requests.
- Make appropriate research results available to the public through the state's education data portal.

The research collaborative will conduct ongoing conversations with the state education agency, the legislature, and other agencies dealing with children to ensure that the aforementioned tasks meet stakeholder needs.

The formation of a state-level research collaborative alongside the development of Regional Data Initiatives provides opportunity for broader research collaboration for this network of consortia. Although the primary purpose of the state-level research collaborative will be to address a state research agenda, this organization also will convene meetings between and among the ISD consortia, with the goal of standardizing data collection on core data elements across consortia and building organizational capacity in the analysis of longitudinal data.

A critical concern is the governance structure of the research collaborative. Key constituents must have strong roles, but no single constituency should dominate. The structure will keep a focus of at least one or two years into the future, not on the day-to-day operational needs of MDE. Initially, an outside agency will help the state and its in-state research and advocacy partners to establish a set of working relationships and model the kinds of collaborative, mutually beneficial research efforts that will pay off for all in the long run.

To that end, a neutral external agency will assemble and support an initial leadership team, institute a process to develop a long-term agreement on working relationships (a "constitution," so to speak), lead the development of an initial research agenda, and guide the experience of collaborative research across agencies of various kinds and at various levels. An early task will be to devise a process to identify, appoint, and support a strong leader for the research collaborative. As the Michigan research collaborative attains some stability, this neutral external fostering agency could begin to step away or become just one of the partners in the collaborative enterprise.

MICHIGAN DEPARTMENT OF EDUCATION

NCLB TEACHER EQUITY PLAN

September 2006
(Revised November 2009)

ENSURING EXCELLENT EDUCATORS

Michigan, like many other states, has been working with local districts, teacher unions, educational associations, teachers, colleges and universities to disseminate information about and implementation of the Highly Qualified teacher provisions of No Child Left Behind (NCLB). As a leader of teacher preparation, Michigan has 32 approved teacher preparation institutions and produces approximately 8,000 new teachers annually. Michigan has 552 local K-12 school districts, 57 Intermediate School Districts (ISDs) and 227 Public School Academies (PSAs) that employ approximately 98,000 teachers. All new teachers and those certificated since the implementation of the Michigan Test for Teacher Certification (MTTC, 1992) will meet NCLB Highly Qualified requirements because they must pass the MTTC basic skills test (reading, writing and mathematics) and content examination(s) prior to certification. The Michigan Department of Education (MDE) has been working with teachers and districts to address the needs of veteran and out-of-field teachers to meet the Highly Qualified requirements through a variety of mechanisms and activities.

As a part of a comprehensive State Board of Education (SBE) assessment of the education environment, a Task Force on Ensuring Excellent Educators was organized and met throughout 2001-02 to discuss the current state of teacher quality in Michigan. Research clearly points to the power of quality teaching in improving student academic achievement. Issues examined by the task force included attraction of quality teacher candidates, preparation, credentialing and certification, induction and retention, with consideration to morale, career paths, and job satisfaction. Given Michigan’s depth and commitment in educating educators, it was no surprise that participants in the Task Force were clear in their consensus on the need for change. They agreed with recent research showing that teacher quality is the most critical ingredient in improving student achievement. They were painfully aware that too many of the best new teachers are exiting the profession, as it impacts them personally and professionally. They saw first-hand the gaps in teacher quality across Michigan, particularly in schools with chronically underachieving students.

The importance of teacher quality is one aspect of education reform where the research confirms the perception of the public. A Louis Harris poll of 2,500 Americans conducted in 1998 and 2000 asked the public to assess the importance of a wide variety of measures for lifting student achievement (The Essential Profession: American Education at the Crossroads, 2001). Respondents placed well-qualified teachers as second to only to making schools safe from violence, by one percentage point. When asked what had the greatest influence on learning-teachers or standards/tests, teacher quality came first in both polls—rising five percentage points in importance in two years. Poll results also consistently show that the public is willing to invest in teacher quality to improve education.

Since the enactment of NCLB, Michigan has focused on strengthening its student achievement and Registry of Educational Personnel (REP) accountability system to meet the various mandates of NCLB and improve teaching and learning for all students and ensure that 100% of all core academic classes are taught by Highly Qualified teachers. The MDE has worked collaboratively with the Center for Educational Performance and Information (CEPI) and the Department of Information Technology (DIT) to collect meaningful and relevant data about student achievement, teacher assignments and overall school performance.

Michigan has also paid particular attention to improving teacher quality by reviewing state policies, laws and administrative rules. New laws have been passed to strengthen reading requirements for both elementary and secondary teachers, "The Administrative Rules Governing Teacher Certification" have undergone extensive revision ~~over the past three years~~ to address teacher quality issues raised by the Education Week's Quality Counts Annual Survey. In addition, Mike Flanagan, Superintendent of Public Instruction, ~~has~~ formed a Teacher Preparation Policy Study Group comprised of a diverse group of stakeholders to review the periodic review/program approval process for teacher preparation institutions. The Study Group ~~will spend the next six months researching~~ *researched* **(Updated 11/2009)** state policies, current literature and best practices to form recommendations about how institutions are approved and reviewed for alignment with state standards and needs around teacher quality and teacher effectiveness.

Michigan's educational accountability system is accessible to the general public via the MDE website (www.mi.gov/mde) and links to various sources of data.

ASSURING EQUITABLE DISTRIBUTION OF TEACHERS

It is a reality that there are serious achievement gaps between minority students and their white counterparts, as well as low-income and more affluent students. As stated earlier in this document, research confirms that the quality of the teacher is the single biggest influence on student achievement. The question of how to assure the equitable distribution of high quality teachers is difficult at best. Many of the schools where the best and brightest teachers are needed tend to be in Michigan's largest urban districts with high minority populations such as Detroit, Flint, Pontiac, Lansing, Grand Rapids, Muskegon, Muskegon Heights, Battle Creek and Benton Harbor and very small rural areas such as the northern lower peninsula of Michigan and the Upper Peninsula. Working conditions in these districts may mean that good new teachers are often given the most difficult teaching assignments, or are given multiple assignments with unrealistic demands on their time, or are not adequately prepared to deal appropriately with classroom management issues. Further exacerbating the equitable distribution of teachers are long-standing bargaining contracts that allow veteran or more experienced teachers to use seniority to select the "best" classroom assignments, leaving more difficult assignments to be filled by new, less experienced teachers. If provided a quality induction and mentoring experience these new teachers can be highly effective classroom teachers and are more likely to be retained in the profession.

Michigan's teacher equity plan has been developed based on the teacher equity template provided to states by the Council of Chief State School Officers (CCSSO). The plan includes information, outcomes and strategies around the following eight elements:

1. Data Reporting Systems
2. Teacher Preparation
3. Out-of-Field Teaching
4. Recruitment and Retention
5. Professional Development
6. Specialized Knowledge and Skills
7. Working Conditions
8. Policy Coherence

The success of the equity plan is supported by the SBE/MDE Strategic Plan for 2005-2010 (http://www.michigan.gov/documents/MDE_2005_Strategic_ Plan_129469_7.pdf) and the Michigan Professional Learning Strategic Plan (http://www.michigan.gov/documents/Item_X157096_7.pdf). The School Improvement Framework also provides a mechanism for implementing other strategies related to how Title I and Title II funds are allocated to support quality teaching as described in requirement 2 of the Revised State Plan. In addition, Michigan's 57 ISDs have worked with the MDE to develop the "Michigan Partnership for Delivery of Services" (http://www.michigan.gov/documents/Item_B_166183_7.pdf) to identify their role in implementing and supporting MDE's initiatives in the following policy areas:

1. Teaching and Learning
2. Specialized Student Services
3. Early childhood/Great Start
4. Administrative Services
5. Partnership Development
6. Technology Services
7. ISD/RESA Customized Services

The MDE/ISD partnership is a comprehensive approach to provide instruction and services to Michigan's children. The MDE recognizes its limitations with regard to human resources and the need to have solid collaboration with ISDs as equal partners to assure a quality education for all Michigan children. The ISDs will assist MDE with monitoring the Highly Qualified status of teachers and identifying needs and providing high quality professional development for teachers and administrators. The following pages provide specific information on the various strategies for assuring the equitable distribution of Highly Qualified teachers.

ELEMENT 1: DATA AND REPORTING SYSTEMS

Outcome: Develop the teacher data and reporting systems needed to identify and correct inequities in the distribution of quality teachers in high-poverty/high-minority schools vs. low-poverty/low-minority schools.

When Michigan initially began implementing the NCLB Highly Qualified teacher requirements, data on teachers was collected via the REP based on FTE counts as opposed to the number of classes taught by Highly Qualified teachers. In 2004-05 about 95% of Michigan teachers were reported as Highly Qualified. After Michigan's field review by the United States Department of Education (USDOE) in 2005, it was clarified that the REP data needed to be revised to include classes taught by Highly Qualified teachers. As a result, a supplemental data collection was done in Fall 2005 and the process was continued during the June 2006 REP data collection. The June 2006 data indicate that 96% of core academic classes are being taught by Highly Qualified teachers. ~~Even so, this~~ *Michigan continues to* fall~~s~~ **(Updated 11/2009)** short of the goal of 100% Highly Qualified teachers. The MDE has continued to stress the 100% goal to all local districts, Intermediate School Districts (ISDs) and Public School Academies (PSAs). The MDE provides a number of opportunities for veteran teachers of core academic subjects to meet the NCLB Highly Qualified teacher requirements including passage of the MTTC content examinations, completion of a portfolio, online professional development opportunities, and completion of additional college coursework.

The following REP table shows the state summary of the number and percentage of classes taught by Highly Qualified teachers (June 2006).

Table 1

Core Academic Subjects	Total Number of Classes Taught	Number of Classes Taught by Non-HQTs	Percent of Classes Taught by Non-HQTs
Elementary	32,428	243	0.75%
Language Arts	12,068	570	2.01%
Math	7,902	326	4.10%
Science	8,481	451	5.31%
Social Studies	3,347	255	7.62%
History	2,300	117	5.09%
Geography	429	65	15.15%
Economics	407	54	13.27%
Political Science	591	79	13.37%
Arts	5,846	166	2.83%
Foreign Languages	2,471	66	2.67%
Special Education	9,118	670	7.30%

While many of the current initiatives to improve instruction focus on mathematics and science, we now know that social studies teachers are not meeting the Highly Qualified requirements in greater percentages. New efforts will be made to assure that social studies teachers are being appropriately assigned to teach in the subjects for which they are Highly Qualified.

The distribution of Highly Qualified teachers among high poverty/low poverty school districts and districts with high minority/low minority student populations by AYP status is presented in Table 2. The current data indicates that on a statewide basis there is no significant statistical difference between the percentage of classes taught by Highly Qualified and non-Highly Qualified teachers across school districts. Statewide, more than 96% of all classes are taught by Highly Qualified teachers. The MDE does recognize that there are districts in which the strategies outlined in this equity plan would be more applicable. The MDE's efforts will be targeted on those districts/schools where the equitable distribution of Highly Qualified teachers is an issue.

Table 2

JUNE 2006	AYP Met				AYP Not Met			
POVERTY STATUS	HQ Classes	NonHQ Classes	Classes Taught	% HQ	HQ Classes	NonHQ Classes	Classes Taught	% HQ
High Poverty	15,049	420	15,469	97.28	13,858	545	14,403	96.22
Low Poverty	61,291	1,514	62,805	97.59	6,564	154	6,718	97.71
Not High/Low Poverty	68,384	2,131	70,515	96.98	12,231	416	12,647	96.71
Not Determined*	5,274	271	5,545	95.11	7,092	125	7,217	98.27
All	149,998	4,336	154,334	97.19	39,745	1,240	40,985	96.97
MINORITY STATUS	HQ Classes	NonHQ Classes	Classes Taught	% HQ	HQ Classes	NonHQ Classes	Classes Taught	% HQ
High Minority	21,016	523	21,539	97.57	24,442	700	25,142	97.22
Low Minority	38,068	1,178	39,246	97.00	5,071	162	5,233	96.90
Not High/Low Minority	90,914	2,635	93,549	97.18	10,232	378	10,610	96.44
All	149,998	4,336	154,334	97.19	39,745	1,240	40,985	96.97

The Center for Educational Performance and Information (CEPI) has developed a report on teacher supply and demand of secondary teachers in response to the new Michigan Merit High School Curriculum. The Michigan Merit Curriculum is scheduled to be phased in beginning with the 2007 high school freshman class of students. It is important to identify possible teacher shortages in the core curriculum areas in order for Michigan and its local districts to target its recruitment efforts. The following data and supporting tables provide a snapshot of Michigan's ~~current~~ secondary teaching force *as of September 2006* **(Updated 11/2009).**

Profile of Michigan Secondary Teachers

Statewide 7-12 secondary teacher highlights (September 2006):

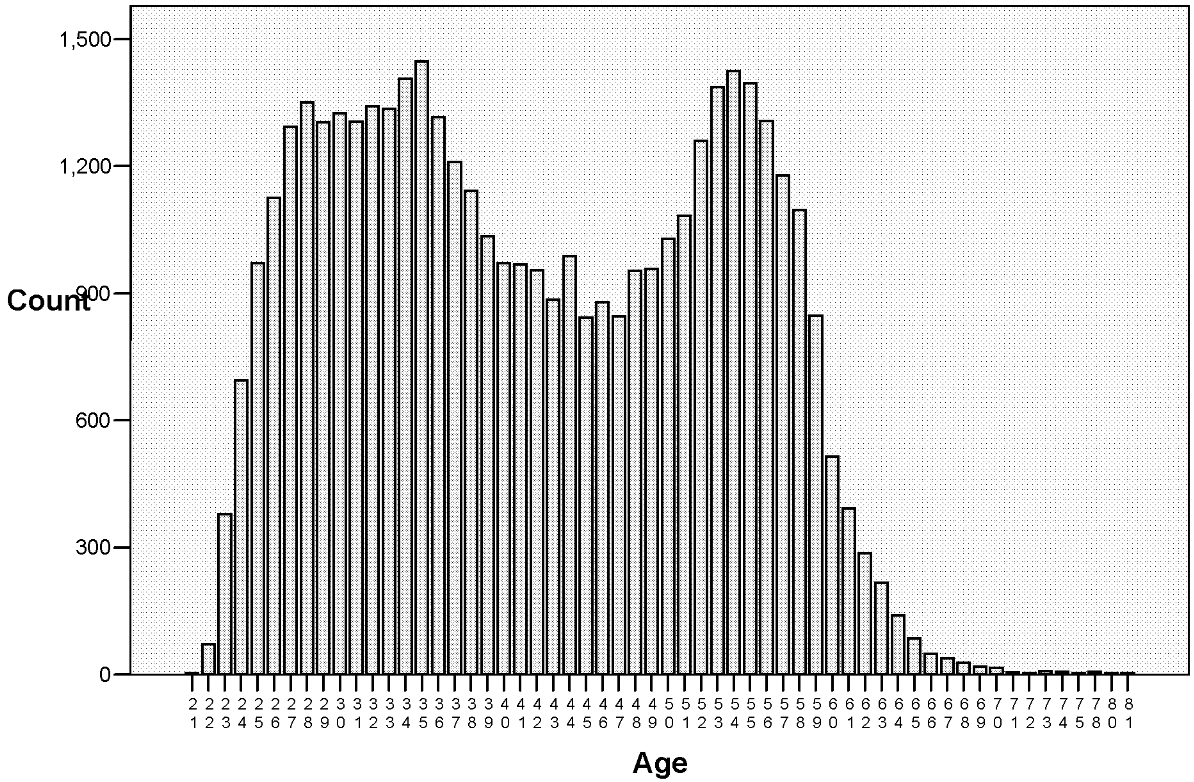
- There are 43,179 teachers assigned by districts to teach secondary courses
- Eighty-four of the 43,179 teachers were teaching in two or more districts
- Average age of teachers is 42
- 31% are over the age of fifty (Table 3)
- 60% are female (Table 4)
- 36% have been employed by the same district for five or fewer years (Table 5)
- 27% have been employed by the same district for more than fifteen years (Table 5)
- 51% have a Master's degree (Table 6)
- 88% are White; 9% are African American; all others are less than 1% each (Table 7) (state population is 81% white, 14% African American)
- 89% were assigned to teach mainly general education
- 90% were full-time teachers

The average age of teachers was forty-two. The youngest teacher reported was twenty-one while the oldest was eighty-one years of age. A quarter of the teachers were thirty-one years of age or younger and a quarter of the teachers were fifty-one years of age or older. Displayed in Table 3 are the results of grouping the teacher's ages into five groups. Following Table 3 is Chart 1, which is a graphic illustration of the number of teachers by age. It is evident from the chart that there is a bimodal distribution of age of teachers. This suggests that some teachers may leave the field for an extended period of time and then return to complete their teaching careers. The challenge to local districts and Michigan is to develop strategies that will assure that at the building level that the age distribution is flatter. Such a distribution at the building level may, over time, show improved retention which could then be used to determine the effect on student achievement.

Table 3
Age Distribution of Michigan Teachers 2006

Age Group	Count	Percent
21 to 30	8,511	19. 7
31 to 40	12,507	29.0
41 to 50	9,297	21.6
51 to 60	11,490	26.7
Older than 60	1,290	3.0
Total	43,095	100.0

Graph 1
Distribution of Teacher Age



The majority of teachers in Michigan's secondary schools are female. Displayed in Table 4 are the number of females and males and the percent they each comprise of the total.

Table 4
Gender of Michigan Teachers 2006

Gender	Count	Percent
F	25,995	60.3
M	17,100	39.7
Total	43,095	100.0

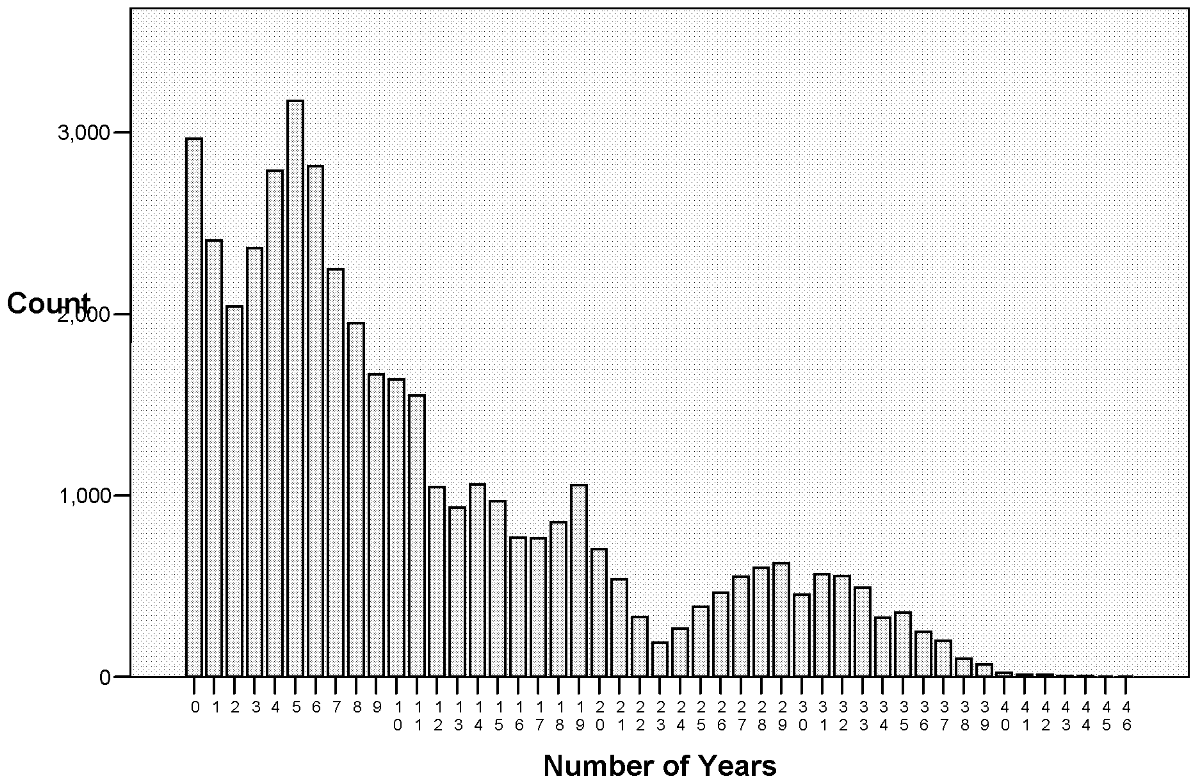
Teacher retention cannot be measured directly; however one can get a good idea of teacher retention by looking at the length of time a teacher has been in any given school district. The average time that a teacher stayed in a district was eleven years; the least amount of time was less than a year and the most was forty-six years. Thirty-six percent of the teachers were in the same district for five or fewer years while twenty-six percent of the teachers had been in the same district for sixteen or more years. Table 5 presents the distribution of teachers, grouped by the amount of time a teacher had been in the same district.

Table 5
Local District Teacher Retention 2006

Time in district	Count	Percent
<= 3	9,771	22.7
>3 & <= 5 yrs	5,960	13.8
>5 & <=10 yrs	10,311	23.9
>10 & <=15 yrs	5,557	12.9
>15 & <=20 yrs	4,142	9.6
>20 & <=25 yrs	1,703	4.0
>25 & <=30 yrs	2,693	6.2
>30 & <=35 yrs	2,288	5.3
> 35 yrs	670	1.6
Total	43,095	100.0

When the length of service within a district of these secondary teachers is graphically presented (Graph 2) it can be seen that a large percentage of teachers have been in the same district for six years or less. The next phase of data analysis (2007) will include an analysis of the retention of teachers in high-poverty, high-minority districts. Districts will be given technical assistance on how to conduct this type of analysis to determine where there are correlations between teacher retention and student achievement.

Graph 2
Number of Continuous Years in the Same District



Presented in Table 6 is the number of teachers that were assigned to teach in one or more of the Michigan Merit Curriculum content areas.

Table 6
Number of Teachers Teaching Michigan Merit Courses
Grades 7 thru 12 (2006)

Michigan Merit Courses	Count*	Percent
Mathematics	6,821	15.8
English/Language Arts	8,618	20.0
Social Studies	7,250	16.8
Science	7,373	17.1
The denominator for calculating the percent was 43,095		
*Counts include duplicates due to multiple assignments across content areas.		

Element 1: Michigan's Data and Reporting Systems Sub-Strategies

1.1 Continue to work with CEPI to report the number and percentage of classes taught by Highly Qualified teachers in high-poverty/high-minority districts vs. low poverty/low minority school districts and publicly report the data on the MDE website. For reporting purposes, high-poverty is based on highest and lowest poverty quartiles and high minority is based on the highest and lowest minority quartiles.
1.2 Work with CEPI and the Michigan Educational Assessment Program (MEAP) office to develop a data system that will link teachers with student achievement data.
1.3 Post the MDE report on Highly Qualified teachers on the website. Staff makes periodic reports/updates on teacher quality *and equitable distribution* to the SBE at one of its regular public meetings. All reports presented to the SBE are publicly accessible via the MDE website. ~~The next report is scheduled to be presented at the October or November 2006 SBE meeting~~ **(Updated 11/2009)**.
1.4 Public access to teaching credentials is available via the MDE website's Teacher Certification Verification link (https://mdoe.state.mi.us/teachercert/). Parents and others can use this site to verify the type of teaching certificate and endorsements held by classroom teachers. The site is searchable by entering the teacher's name.
1.5 Each school/district ~~is~~ *was* required to submit a plan by November 15, 2006 for assuring that 100% of their teachers are Highly Qualified for their assignments and the strategies they will use to achieve this objective. The plan must include a plan for the equitable distribution of teachers with clearly defined strategies to accomplish the objective. Attachment 1 is the template for this plan which was referenced in requirement 3 of the revised state plan. *These assurances are on file with MDE and referenced as a part of the Michigan Technical Assistance Project (MiTAP)* **(Updated 11/2009)**.

1.6 Monitor districts with *disproportionate numbers of* inexperienced teachers to assure compliance with new teacher induction and mentoring legislation. **(Updated 11/2009)** Require such districts to use their Title II-A funds to support induction activities. The Field Services staff will monitor this as part of their on-site monitoring and review of districts consolidated plans, which includes the school improvement framework.
1.7 Notify ISDs of districts identified for technical assistance to provide training for mentors and novice teachers.

HIGHLIGHTS

- The Michigan Department of Education's "Teacher Certification Verification" website provides public access to the teaching qualification of Michigan teachers. Local districts use this website to verify the certification status of teachers to assist in the appropriate assignment of teachers. The Center for Educational Performance and Information has worked closely with MDE staff to establish a link between the REP data collection system and the License 2000 (L2K) teacher certification database system to conduct audits of teacher assignments against teacher qualifications. Local districts are notified of identified discrepancies and directed to take corrective action.
- *MDE continues to provide technical assistance through the MiTAP to schools/districts not reaching the 100% Highly Qualified teachers, in order to work one-on-one with district staff responsible for data input on the REP*. **(Updated 11/2009)**

ELEMENT 2: Teacher Preparation

Outcome: Build a pipeline of prospective teachers for high-poverty, low performing schools.

Entry-Level Standards for Michigan Teachers (ELSMT) were originally adopted by the SBE in August 1993. ~~The standards have been revised over the years to address issues around diversity, universal education and technology.~~ **Updated (11/2009):** MDE has revised the ELSMT, originally adopted by the SBE in August 1993. The new Professional Standards for Michigan Teachers (PSMT) were adopted by the SBE in May 2008. Upon entry into an approved teacher preparation program in Michigan, teacher candidates experience ongoing professional development. These research-based standards provide a framework of rigorous subject matter knowledge from general and liberal education, relevant pedagogical knowledge for optimal student learning, achievement, and participation in a global society. Information regarding these standards is available at: http://www.michigan.gov/documents/mde/SBE_ approved_PSMT_May_13_2008+ coverpg_258601_7.doc

Teacher preparation programs must include early field placements in diverse settings with diverse groups of learners. These experiences are designed to give teacher candidates the confidence and skills needed to work in high poverty or high minority schools. The ~~ELSMT~~ *PSMT* **(Updated 11/2009)** are aligned with entry-level teaching standards developed by the Interstate New Teacher Assessment and Support Consortium (INSTASC). The ~~ELSMT~~ *PSMT* **(Updated 11/2009)** are currently under revision and it has been proposed that they be revised as the Professional Standards for Michigan Teachers.

A pilot project is currently underway to use the ~~ELSMT~~ *PSMT* **(Updated 11/2009)** to develop a performance review rubric of the directed teaching experience as well as for observation and review of effective classroom teacher performance. This would assure more consistent assessment of teacher performance and instructional effectiveness.

The Superintendent of Public Instruction ~~has~~ established a Teacher Preparation Policy Study Group to research, and review Michigan's teacher preparation program in light of best practices and how the state will assure that teachers are prepared to teach the new rigorous high school merit curriculum. The Study Group ~~will~~ examine*d* and ~~make~~ *made* recommendations on how to improve Michigan's accountability for teacher preparation institutions with particular attention to the periodic review process, alignment of K-12 content standards and content expectations with preparation program standards as well as other policy issues around teacher testing and the Higher Education Act Title II reporting on program effectiveness. **(Updated 11/2009)**

ELEMENT 2: Teacher Preparation Strategies

2.1 Work with the Legislature to identify funds to establish loan forgiveness programs that target hard to staff core academic content areas such as special education, bilingual education, and math and science. The MDE currently uses the United States Department of Education's (USDOE) formula for identifying teacher shortage areas for federal loan forgiveness programs. These shortage areas are posted on the MDE website.

2.2 Expand the implementation of the Limited License to Instruct (LLI) alternative preparation project to more high priority and high poverty districts. The MDE worked in collaboration with Wayne State University and Detroit Public Schools to train post-baccalaureate teacher candidates to work in DPS and reduce and eliminate their reliance on teachers hired under emergency permits. The LLI has been expanded to include Central Michigan University, Grand Valley State University, Ferris State University, and Saginaw Valley State University.

2.3 Annually report data on the MDE website on the "Teacher Preparation Institution Performance Score" (report card) that is required by Title II of the Higher Education Act that includes information on the institutions approved programs, Michigan Test for Teacher Certification (MTTC) test scores, program completion rates, and program satisfaction. Analyze the data to see if institutions are recruiting teachers to meet state needs.

2.4 The Superintendent of Public Instruction ~~has~~ established a "Teacher Preparation Policy Study Group to review and assess the current policies related to program/institution approval, periodic review, teacher testing and other issues identified by the group. The MDE will implement recommendations on revising teacher preparation policies, and the periodic review of teacher preparation institutions from the Teacher Preparation Policy Study Group.

2.5 Revise the administrative rules governing teacher certification to align with the ~~ELSMT~~ *PSMT* **(Updated 11/2009)** that address issues of diversity, classroom management, and technology.

2.6 Require that approval standards for teacher preparation programs are consistent with NCLB requirements and that they incorporate the concepts presented in the Grade Level Content Expectations and High School Course Content Expectations as instructional tools and resources to ensure that all students are instructed to the same high standard.

2.7 Require teacher preparation programs to strengthen preparation in cultural competence in their programs to help new teachers understand and appreciate the students, families, and communities that they serve. Teacher preparation programs need to offer teacher candidates opportunities to gain experience in working with diverse populations of students.

HIGHLIGHTS

- **Updated (11/2009):** MDE has revised the ELSMT, originally adopted by the SBE in August 1993. The new Professional Standards for Michigan Teachers (PSMT) were adopted by the SBE in May 2008. Upon entry into an approved teacher preparation program in Michigan, teacher candidates experience ongoing professional development. These research-based standards provide a framework of rigorous subject matter knowledge from general and liberal education, relevant pedagogical knowledge for optimal student learning, achievement, and participation in a global society. Information regarding these standards is available at: http://www.michigan.gov/documents/mde/SBE_approved_PSMT_May_13_2008+ coverpg_258601_7.doc

- The State Board of Education approved the "Teacher Preparation Performance Score" in June 2006. This rubric will assess the effectiveness of teacher preparation programs on criteria related to program approval, MTTC scores, program completion rates, program satisfaction, and recruitment of minority teachers and high needs content areas. All data related to the performance score will be publicly shared via the MDE website.

- The Teacher Preparation Policy Study Group established by the Superintendent ~~will~~ plays a major role in improving the process for approving and reviewing teacher preparation programs. Study group members represent stakeholders from both private and public teacher preparation institutions, business and industry, the global community, teacher associations, and the colleges of arts and sciences. **(Updated 11/2009)**

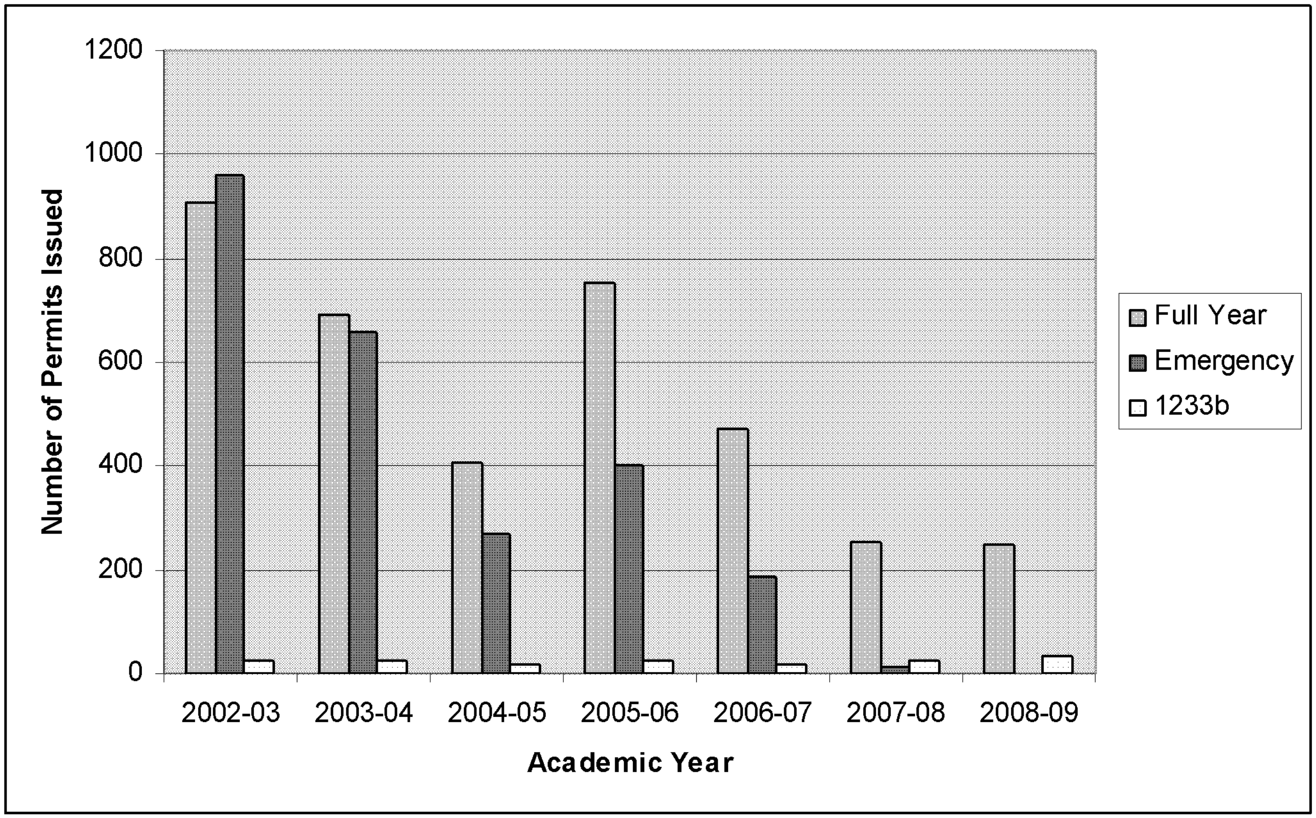
ELEMENT 3: Out-of-Field Teaching

Outcome: Reduce the incidence of out-of-field teaching in mathematics, science, social studies, and special education in high poverty, low-performing schools.

William Sanders has examined the link between teacher quality and student achievement in Tennessee and has attempted to separate teacher effects from racial and socioeconomic effects. All children were found to make virtually identical gains or losses in a given year when assigned to teachers of equal quality. This analysis was true regardless of race, family economic level, or parental support for learning. Students assigned to high quality teachers consistently reached higher levels of achievement than students assigned to low quality teachers (Sanders & Horn, 1998). A rigorous study in Dallas corroborates Sanders' findings: students assigned to high quality teachers for three consecutive years were found to have reading scores that were 35 percentile points above those assigned to ineffective teachers for three consecutive years (Haycock, 1998). A similar study of math achievement found an even larger gap, 50% points at the end of three years (Haycock, 1998). The impact of teacher quality is also evident in national comparisons as well. Weglinsky (2000) found a strong relationship between teacher quality and grade 8 mathematics and science scores on the NAEP.

Michigan law requires teachers to be appropriately certificated for the grade level and subject area to which they are assigned to teach. In some instances the qualifications of the teachers do not match their teaching assignments. The MDE is now monitoring teacher assignments through the REP and districts are being notified of inappropriate teacher assignments and their obligations under the law. Districts that fail to comply with this requirements can be assessed a state aid penalty and an administrator that knowingly employs or continues to employ an inappropriately certificated or non-certificated teacher can be held personally liable and fined up to $1,500 for each instance. In order to discourage out-of-field teaching and teaching by non-certificated teachers the MDE has been reducing the number of emergency permits issued by 33% each year since 2001 as demonstrated by Table 7. Emergency permits will not be issued after 2006-07 *in core subject areas as defined by NCLB* **(Updated 11/2009)**.

TABLE 7
Gradual Decrease in Emergency Permits Issued
(Updated November 2009)



ELEMENT 3: Out-of-Field Teaching Sub-Strategies

3.1 Continue to audit teacher qualifications by comparing the assignment reported in the REP with the teaching credential record in the L2K certification database and recommend state aid penalties when appropriate.

3.2 Expand the LLI project to high priority and high poverty, and high minority schools to work with teacher preparation institutions to offer alternative preparation programs in high needs areas.

3.3 Advocate partnerships with high priority districts and teacher preparation institutions, community colleges, career pathways, teacher associations, and Young Education Scholars (YES) to establish "grow your own" teacher programs and form future teacher associations to recruit college preparation students into teaching in subject areas and school districts where they are most needed.

3.4 ~~The MDE has established the Michigan Educator Talent Bank (METB) which is an online teacher recruitment website (www.mi.gov/metb) that matches teacher applicants with school district openings. Local districts can post job openings for free and review resumes posted on the site by subject area specialties. Local districts that apply for full-year permit or emergency permit (will not be issued after 2006-07) approvals are required to use METB to recruit certified and Highly Qualified teachers to fill open positions.~~

3.5 Revise the administrative rules to require non-certificated teachers to hold at least a bachelor's degree in the subject area content or pass the MTTC subject area test to demonstrate competency prior to the full-year permit approval and that they be enrolled in a teacher preparation program. Under NCLB such teacher candidates would have three years to complete their teacher preparation program. The rules have been revised and are expected to be ratified in October 2006. **Updated (11/2009):** The Michigan Administrative Rules Governing Teacher Certification have been revised to require non-certificated teachers to hold at least a bachelor's degree in the subject area content or pass the MTTC subject area test to demonstrate competency prior to a Full-Year Permit approval and that they be enrolled in a teacher preparation program. Under NCLB such teacher candidates would have three years to complete their teacher preparation program. The revision of the rules also included language that minimized the use of Emergency Permits, only authorizing their use for non-core subject areas as defined by NCLB. The rules were ratified in January 2007. These revisions can be found at: http://www.state.mi.us/orr/emi/admincode.asp?AdminCode=Single&Admin_Num=39001101&Dpt=ED&RngHigh=

3.6 Widely distribute information on loan forgiveness programs and the various alternative preparation programs to reduce out-of-field teaching. Information on loan forgiveness is posted on the MDE website. The MDE staff has developed a searchable database of alternative preparation programs being offered by teacher preparation institutions.

3.7 Direct local districts that are below the 100% Highly Qualified teacher requirement to use a portion of their Title I and Title II funds to support their teachers in becoming Highly Qualified in their content. The Field Services staff are monitoring local district consolidated applications to assure that funds are being used to support teachers to meet the Highly Qualified requirements.

HIGHLIGHTS

- The "Administrative Rules Governing Teacher Certification" have been revised to reflect the many changes in state and federal legislation over the past five years. ~~It is expected that the rules will be approved by the Joint Committee on Rules by November 2006~~. **(Updated 11/2009)**
- *MDE continues to provide technical assistance through the MiTAP to schools/districts not reaching the 100% Highly Qualified teachers, in order to work one-on-one with district staff responsible for staffing and eliminate out-of-field placements.* **(Updated 11/2009)**

ELEMENT 4: Recruitment and Retention of Experienced Teachers

Outcome: Build a critical mass of qualified, experienced teachers willing to work in hard to-staff schools

Because teaching is a profession that requires unending, multifaceted demands, teacher retention is an issue of concern—approximately one-quarter of all beginning teachers leave teaching within four years (Benner, 2000; Rowan et al, 2002). Add to this issue that in the classrooms most beginning teachers will enter, at least 25% of students live in poverty and many of them lack basic food, shelter, and health care; from 10% to 20% have identified learning differences; 15% speak a language other than English as their primary language (many more in urban settings); and about 40% are members of racial/ethnic minority groups, many of them recent immigrants from countries with different educational systems and cultural traditions (Darling-Hammond, 2006). These statistics speak to the need for a more culturally aware and broadly experienced classroom teacher.

While experienced highly effective teachers may be the ideal for staffing high-poverty, high-minority schools the reality is that these teachers, because of their bargaining agreements and seniority rights are not likely to choose these assignments. Novice teachers, if given the right kind of support through quality induction and mentoring programs, can be highly effective in the hard-to-staff classroom. Induction and mentoring for new teachers will be needed. New Teacher education relationships with schools will also be needed (Darling-Hammond & J. Bransford, 2005). In order to provide teacher education programs that are responsive to all the high-needs of K-12 public schools, three elements are needed: a) stronger and more effective teacher education programs that provide a cohesive integration between and among course work and clinical experiences; b) extensive and intensely supervised clinical work using pedagogies that link theory and practice; and c) closer relationships with schools that serve diverse learners (Darling-Hammond, 2006). High quality induction programs have been found to significantly decrease the turnover rates of new, inexperienced teachers. Ingersoll found that while approximately 16% of teachers leave schools, the rate is nearly twice that in high need schools (Ingersoll, R., 2001). Similar results were found by the Alliance for Excellent Education (2004), identifying the rate of attrition to be 50% higher in high poverty versus low poverty districts. As teachers gain experience, their knowledge and skills as a teacher improve. Where turnover is high students are continuously confronted with being taught by inexperienced teachers and therefore are less likely to succeed academically. The research demonstrates that high quality mentoring and induction can reduce teacher turnover by as much as one-half (Alliance for Excellent Education, 2004).

ELEMENT 4: Recruitment and Retention of Experienced Teachers Sub-Strategies

4.1 Continue to identify master teachers and train them as high priority coaches to mentor and work with their peers in failing schools. The Office of School Improvement uses Title II funds to train the high priority coaches and districts are directed to use their Title II funds to provide professional development to their teachers.

4.2 Restructure teacher preparation programs to require field placements in diverse schools and communities and possible overseas study to gain a more global view of educational systems.

4.3 Michigan's Teacher Retirement Act has been amended to allow retired teachers to return and teach full-time in shortage areas without the earnings limitation cap. Letters are mailed to all local districts regarding the shortage areas and the retirement act. Information is available on the MDE website as well as the teacher retirement office website. **Updated (11/2009):** http://www.michigan.gov/mde/0,1607,7-140-6530_5683_14795-158732--,00.html

4.4 Encourage high priority districts to recruit highly effective retired teachers to fill vacancies.

4.5 Monitor high priority schools to assure that they are providing quality mentoring and induction programs to novice teachers. Direct the use of some of the districts Title II funds to train mentors and use the ASSIST training and online professional development modules and resources.

HIGHLIGHTS

- The revised "Teacher Retirement Act" has been helpful in offering local districts the option of hiring retired, experienced and effective teachers without the constraint of an earnings limitation cap. The Teacher Retirement Office and the MDE have posted information on their websites to inform teachers and schools of this option.

- The MDE used its Teacher Quality Enhancement Grant funds to establish a collaborative partnership with Michigan State University, University of Michigan-Ann Arbor, Wayne State University, and professional association to develop the "Advocating Strong Standards-based Induction Support for Teachers (ASSIST) website modules and resources for educators. MDE and MSU have conducted ASSIST training sessions throughout the state and more than 1,000 web-based tools are available for use by educators throughout the state.

ELEMENT 5: Professional Development

Outcome: Build a critical mass of qualified, experienced teachers willing to work in hard to-staff schools

A team of Michigan educators has developed the Professional Learning Strategic Plan to guide the work of the Michigan Department of Education (MDE) from 2006-2010. The primary goals of this plan are:

- To support the State Board's Strategic Goal: *Attain substantial and meaningful improvement in academic achievement for all students/children with primary emphasis on high priority schools and students*.
- To accomplish Objective #3 of the Michigan State Board of Education (SBE)/MDE's Strategic Plan 2005-2010: *Demonstrate that Michigan classrooms are staffed with Highly Qualified teachers and paraprofessionals under the direction of administrators who are committed to instructional excellence.*
- To provide leadership and support for excellence and equity in education by identifying the structures and activities needed to support other State Board of Education's vision, mission and goal.

The purpose of the plan is to create, support and sustain Michigan educators as they work to change the culture of teaching and learning in the classroom. It is proposed that this be accomplished through four broad outcomes.

- Broad-based Understanding and Commitment to the SBE's Vision & Standards of High Quality Professional Learning.
- Professional Learning Based on Data.
- A System That Supports and Implements Effective Professional Learning.
- Resources to Support and Provide Effective Professional Learning

Professional development targeted to the needs of teachers and building administrators has been shown to result in improved student achievement. The researchers Darling-Hammond and McLaughlin (1995) found that effective professional development goes beyond the one-shot workshop and results in improving the teacher's teaching skills. These new skills lead to a change in the professional culture of the school with more emphasis on continuous improvement.

ELEMENT 5: Professional Development Sub-Strategies

5.1 Continue to train high priority coaches.

5.2 Target $400,000 of the Title II –A(3) competitive higher education grant funds for projects that provide quality professional development programs that are aligned with Michigan's Professional Development Standards for teachers in high priority/high poverty schools and high needs content areas. Also, allocate funds from grants for a comprehensive evaluation by an external evaluator to determine the effectiveness of professional development programs. **Updated (11/2009):** MDE continues to administer the Title IIA(3) grant program for Improving Teacher Quality. Funding is provided to partnerships which design professional development to enhance preparation of teachers in high-need content areas in high priority/high poverty LEAs. At least $400,000 is designated to serve teachers of small or rural LEAs, as long as they meet the high poverty requirement.

5.3 Provide free online professional development modules for educators through the Michigan Virtual University's (MVU) Learnport PD portal. The Michigan Legislature has allocated funding to MVU to develop 200 hours of free online professional development for teachers. Also, disseminate information on the USDOE's Teacher-to-Teacher online resources. **Updated (11/2009):** Michigan continues to provide free online professional development modules for educators through the Michigan Virtual University's Learnport professional development portal.

5.4 Work with Learning Point Associates/Great Lakes East Comprehensive Center to implement the Professional Learning Strategic Plan including statewide implementation of an Individualized Professional Development Plan (IPDP) for teachers linked to data that show the areas of need.

5.5 Support National Board certification by providing stipends to pay up to one-half of the cost through $100,000 allocated by the legislature for this purpose. Also, widely disseminate information on National Board certification opportunities to teachers. **Updated (11/2009):** MDE assisted with funding 166 candidates for the National Board for Professional Teaching Standards certification process during the 2008-2009 cycle.

5.6 Implement the MDE/ISD Partnership for the Delivery of Services as a state regional technical support system that provides targeted assistance to high priority schools and districts.

5.7 Implement the "Reach and Teach for Learning 2006" project. Reach and Teach for Learning is a state-wide initiative to improve learning results for students that are hard for teachers to reach and hard for them to teach. The year-long initiative is a collaborative effort of several state educational associations, teacher organizations, and the MDE. The initial set of 17 school teams represent the middle level, high schools, public school academies and career technical centers.

HIGHLIGHTS

- Reinstatement of the $100,000 to support National Board certification by the Legislature gives Michigan teachers an opportunity to further demonstrate their skills as highly qualified teachers. These funds will be combined with federal stipends to pay 100% of the NB certification fee for approximately 80 teachers.
- Reach and Teach for Learning is a state-wide initiative to improve learning results for students that are hard for teachers to reach and hard for them to teach. The year-long initiative is a collaborative effort of several state educational associations, teacher organizations, and the MDE. The initial set of 17 school teams represent the middle level, high schools, public school academies and career technical centers.
- Implement the MDE/ISD Partnership for the Delivery of Services as a state regional technical support system that provides targeted assistance to high priority schools and districts. The MDE/ISD partnership is critical to successfully reaching the goal of 100% highly qualified teachers and improving instruction and student achievement.

ELEMENT 6: Specialized Knowledge and Skills

Outcome: Ensure that teachers have the specialized skills they need to be effective with the populations of students typically served in high-poverty, low-performing schools (including Native American students, English Language Learners, and other students at risk).

Perhaps one of the most disturbing statements that one can make to a professional educator is “Anyone can teach”. Given the rise of alternative certification initiatives, often “preparation” is not stressed in these programs. The emphasis is on a “quick fix” way to obtain a teaching certificate. According to Linda Darling-Hammond (1998):

"Teachers must have a deep understanding of the subject matter content to be effective in teaching students. The teacher needs to be able to connect ideas. To do this the teacher must be able to employ a variety of strategies and continuously evaluate student understanding. Teachers need to be presented with opportunities to hone their craft."

The ~~ELSMT~~ *PSMT* establish the basic foundations for what Michigan teachers need to know and be able to do. **Updated (11/2009):** *The Professional Standards for Michigan Teachers (PSMT) were adopted by the SBE in May 2008. These research-based standards provide a framework of rigorous subject matter knowledge from general and liberal education, relevant pedagogical knowledge for optimal student learning, achievement, and participation in a global society.* ~~These standards cover instructional areas including the integration of technology in instruction, working with diverse learners, and classroom management.~~ Not only do teachers need those skills that are developed in their preparation programs, they also need on-going quality professional development to assure that students in our neediest schools have access to highly effective instruction. Alternative certification programs must also include preparation in classroom management, use of effective instructional methods and strategies, working with diverse student populations, and instructional technology. The implementation of the various components of Michigan's "Professional Learning Strategic Plan" will support the identification of quality professional learning for teachers and administrators.

ELEMENT 6: Specialized Knowledge and Skills Sub-Strategies

6.1 Encourage field placements in a variety of settings to give teacher candidates exposure to working with diverse student populations including ethic diversity, and special needs students.

6.2 Develop a Performance-based assessment of practice teaching based on the ~~ELSMT~~ *PSMT*. **(Updated 11/2009)**

6.3 Revise the MTTC content tests on a regular basis to assure alignment with current content standards. **Updated (11/2009):** OPPS is currently aligning the math portion of the MTTC Basic Skills to the Michigan Content Expectations for student graduation requirements. This ensures that students graduating from Michigan high schools will be provided with a Basic Skills – mathematics assessment that is commensurate with their proficiency level. Revision and alignment of the Elementary Education MTTC is currently underway to match the elementary education certification standards recently approved (January 2008). OPPS is updating and revising the Early Childhood Education test based upon the early childhood standards and is in the process of implementing several foreign language tests, including Arabic (Modern Standard), Russian, and Latin

ELEMENT 7: Working Conditions

Outcome: Improve the conditions of hard-to-staff schools that contribute to excessively high rates of teacher turnover.

Understanding the impact that building culture and climate have on teacher retention is beginning to emerge as an important area of research. Positive leadership at the building level that acknowledges and rewards effective teaching has been shown to increase teacher satisfaction and retention, which helps to lead to improvement in student achievement. Recently, the SBE adopted the Positive Behavior Support (PBS) policy for Michigan schools. The vision of the SBE is to create learning environments that prepare students to be successful in the 21st Century. The elements of a school-wide positive behavior support system are essential prerequisites for creating schools that promote safe, orderly, and respectful learning environments. PBS systems are proven to improve academic achievement, attendance, and graduation rates.

Positive behavior support is an application of a behaviorally-based system approach to enhance the capacity of schools, families, and communities to design effective environments that improve the fit or link between research-validated practices and the environments in which teaching and learning occurs. Attention is focused on creating and sustaining school environments that improve lifestyle results (personal, health, social, family, work, recreation) for all children and youth by making problem behavior less effective, efficient and relevant, and desired behavior more functional. PBS aligns with many SBE current policies and initiatives, among them: Universal Education, Keeping Kids in School, Anti-Bullying, and Michigan's Integrated Behavior and Learning Support-Initiative (MiBLSi).

In addition to implementing the PBS the Mi-Plan assessment of school culture uses embedded surveys to measure achievement and perceptions. A school can add its own cultural audit data to Mi-Plan's bank of surveys as additional information to be analyzed when developing the school's improvement plan.

ELEMENT 7: Working Conditions Sub-Strategies

7.1 Strengthen leadership in low-performing schools. Michigan's Legislature recently passed legislation to reinstate administrator certification on a voluntary basis. The MDE has developed administrator preparation standards for school principals that include standards for data-driven decision-making.
7.2 Support the Principal's academy to train school leaders from low-performing schools.
7.3 Continue the per pupil foundation allowance that assures equitable funding distribution to all local districts. Currently, the minimum per pupil allowance is *$7,151 as of November 2009.*
7.4 Encourage local districts to explore and implement merit pay or pay-for-performance systems that award effective teachers for improving student achievement.

ELEMENT 8: Policy Coherence

Outcome: Improve internal process or revise state policies that may inadvertently contribute to local staffing inequities.

The following excerpts from the SBE/MDE Strategic Plan express our beliefs, vision, and mission with regard to education in Michigan:

BELIEFS

The State Board of Education and Michigan Department of Education believe that:

- All children can learn at high levels, and that
- A complete education helps all of our children become participating citizens who are creative, caring, and critical thinkers, and to accomplish this
- The State Board of Education and Michigan Department of Education must work in collaboration with the Governor, the Legislature, and the community of stakeholders to achieve the Vision.

VISION STATEMENT

The State Board of Education and Department of Education, with their partners, are the driving forces to create learning environments that prepare students to be successful in the 21st Century knowledge economy.

MISSION STATEMENT

Provide leadership and support for excellence and equity in education.

ELEMENT 8: Policy Coherence Sub-Strategies

8.1 Use the implementation of the revised School Improvement Framework to align professional development with school needs based on data about student achievement and staff needs.

8.2 Redesign the License 2000 (L2K) teacher certification database to better interact with REP data to more effectively audit teacher qualifications. Redesign of the L2K database is scheduled to begin Fall 2006. **Updated (11/2009):** Michigan Legislature approved an increase in teacher certification fees effective January 1, 2008 in order to financially assist with the redesign of the current teacher certification database (License 2000/L2K). This redesign will better interact with REP data so as to more effectively audit teacher qualifications. The redesign of the L2K database is currently underway

8.3 Be proactive in pursuing legislation that will improve education for all students.

8.4 Use the Teacher Preparation Policy Study Group (TPPSG) report to identify and repair any policy discrepancies.
8.5 Continue to build and nurture partnerships like the National Governors Association (NGA) grant and the TPPSG that promote policy coherence and strategic alignment.

PRACTICAL IMPLEMENTATION STRATEGIES

The outcomes and strategies outlined above are very comprehensive in nature and many are more long-term and need to be phased in. In order to implement these strategies many resources are needed. The MDE is using some of its state level Title II funds to employ contractors to implement the Professional Learning Strategic Plan. Learning Point Associates/Great Lakes East Comprehensive Assistance Center have provided additional consultative resources, technical support and funding for the development and implementation of the Individualized Professional Development Plan. This development and implementation phase will occur during the 2007 fiscal year.

In addition, staff will take the following actions in the short-term to assure that the Teacher Equity Plan is successfully implemented:

The Office of Professional Preparation Services staff will work closely with the School Improvement Office to continue to identify high priority schools and schools not making AYP to determine whether they are meeting the 100% Highly Qualified teacher requirement and the equitable distribution of their teachers.

Conduct on-site monitoring visits and/or conference calls to districts that do not meet the requirement and require them to use a greater percentage of their Title I or Title II funds to assist teachers in becoming Highly Qualified by the end of the 2006-07 school year and inform them that the district will be assessed state penalties for failure to comply with Michigan law that requires teachers to be appropriately certificated for their grade level and subject area assignment.

Work with the School Improvement Office and its Field Services staff to monitor and assure that districts/schools that must hire new or inexperienced teachers in schools that are identified with high poverty and high minority populations provide a quality mentoring and induction program for such teachers.

Include Highly Qualified teacher status as part of the special education monitoring protocol.

Attached are the “MDE Timeline of NCLB Activities” and the “Corrective Action Plan” for accomplishing the various activities listed in the revised state plan. These activities support or reinforce the MDE’s implementation of the various requirements of NCLB.

Michigan Local Education Agency (LEA) Highly Qualified Teacher Report
2006-2007 School Year

MICHIGAN Department of Education

LEA/DISTRICT NAME	SUPERINTENDENT NAME (PRINT OR TYPE)	SUPERINTENDENT SIGNATURE/ DATE
POINT-OF-CONTACT NAME	CONTACT PERSON'S TELEPHONE NUMBER	CONTACT PERSON'S EMAIL ADDRESS

Part 1- ENTER LEA LEVEL DATA FOR THE 2006-2007 SCHOOL YEAR:

Total Number of Core Academic Subject Teachers in the District			
Number and Percentage of Core Academic Subject *Teachers* Who Are **NOT** Highly Qualified	Number	Percentage	Comments
Number and Percentage of Core Academic Subject *Classes* Taught By Teachers Who Are **NOT** Highly Qualified	Number	Percentage	Comments
Number and Percentage of Core Academic Subject Teachers Who Did **NOT** Receive High-Quality Professional Development During the Previous School Year	Number	Percentage	Comments

Add any other data, from the LEA/School District, that establishes needs related to ensuring that all core academic subject area classes are taught by Highly Qualified Teachers.

Highly Qualified Teacher Report - PAGE 2

MICHIGAN Department of Education

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LEA/DISTRICT NAME

Part 2- CURRENT PRACTICE AS IDENTIFIED BY DISTRICT NEEDS ASSSESSMENT

Review the district's REP report regarding the number and percent of teachers who are and are not Highly Qualified (HQ). Consider which core academic subjects and grade levels have teachers, if any, who are not HQ. Use this information in responding to the questions below.

1. Describe how teachers are presently being supported by the district in meeting the NCLB HQ Teacher requirements.	
2. What issues or conditions are preventing the district from having 100% of the teachers HQ?	

Highly Qualified Teacher Report - PAGE 3

MICHIGAN Department of Education

LEA/DISTRICT NAME

Part 3- DISTRICT ACTIONS TO ENSURE EQUITABLE DISTRIBUTION OF HIGHLY QUALIFIED TEACHERS:

List and describe district actions to ensure that poor and minority students and those in schools identified for improvement are not taught by inexperienced, unqualified, or out-of-field teachers at higher rates than other students. Complete Resources column as appropriate. Refer to district report card data and REP report to keep local needs in mind.

District Strategies	Person Responsible	Resources (Fund Source/$$)	How Will Progress be Monitored

Highly Qualified Teacher Report - PAGE 4

MICHIGAN Department of Education

LEA/DISTRICT NAME

Part 4- DISTRICT ACTIONS TO ENSURE HIRING ONLY HIGHLY QUALIFIED TEACHERS:

Indicate the district procedures or actions for recruiting and hiring Highly Qualified teachers, ie. signing bonuses. Complete the Resources column as appropriate. (Expand the table to include other actions, as needed.)

District Strategies	Person Responsible	Resources (Fund Source/$$)	Comments / Notes
*The district will retain documentation related to announcing the position, efforts to recruit Highly Qualified candidates for the position, applications and resumes received, and notes from interviewing and selecting the teacher for employment.			
*The district will keep on file a mutually agreed upon plan from the teacher to fulfill requirements to achieve Highly Qualified status, using the most expedient option.			
*The district will ensure that the teacher receives support and assistance necessary to achieve the Highly Qualified designation as expediently as possible.			

*These actions should be taken if a Highly Qualified teacher is unavailable and a non-Highly Qualified teacher is hired.

Highly Qualified Teacher Report - PAGE 5

MICHIGAN Department of Education

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LEA/DISTRICT NAME

Part 5- DISTRICT ACTIONS TO RETAIN HIGHLY QUALIFIED TEACHERS:

List and describe district actions to retain Highly Qualified teachers. Complete Resources column as appropriate. Refer to district report card data and REP report to keep local needs in mind.

District Strategies	Person Responsible	Resources (Fund Source/$$)	How Will Progress be Monitored

Highly Qualified Teacher Report - PAGE 6

MICHIGAN Department of Education

LEA/DISTRICT NAME

Part 6- DISTRICT ASSURANCES RELATED TO HIGHLY QUALIFIED TEACHERS:

Place a check in front of each assurance to indicate that LEA administrators are aware of the compliance issue and that the LEA is in full compliance. Please note that the LEA Superintendent's signature is required at the bottom of this document.

☐ All teachers will be assigned to teach a grade level(s) and subject(s) for which the teacher holds proper Michigan certification and for which the teacher has been deemed Highly Qualified.

☐ LEA has established procedures for developing individual teacher plans that provide clear and direct communication between the LEA and individual teachers.

☐ The LEA has incorporated Michigan's School Improvement Framework and will fully implement the procedures outlined in the document.

☐ The LEA will notify, annually at the beginning of the school year, parents of each student attending each school that receives Title I, Part A funds that the parents may request and the LEA will provide in a timely manner, information regarding the professional qualifications of the student's teachers in accordance with Section 1111(h)(6)(A).

☐ The LEA will ensure that each school that receives Title I, Part A funds provides to each parent timely notice that the student has been assigned, or has been taught for four or more consecutive weeks by, a teacher who is not Highly Qualified. [See Section 1111 (h)(6)(B)(ii)] (NOTE: Letters must be sent when the student is assigned to a non-Highly Qualified teacher. If a teacher change during the school year results in a student's class being taught by a non-Highly Qualified teacher, parents of each student in the class must be notified not later than the date by which students have been taught for four consecutive weeks.)

☐ The LEA has policies and procedures to prohibit use of Title I, Part A funds to pay the salary of any paraprofessionals not meeting NCLB requirements except under limited cases as described in Section 2141(c)(2).

☐ The LEA has policies and procedures to prohibit the use of Title II, Part A funds to pay the salary of any teacher who does not meet the NCLB and state definitions of a Highly Qualified teacher.

SUPERINTENDENT'S NAME - PRINTED   SUPERINTENDENT'S SIGNATURE   DATE

Attachment 2

NCLB TIMELINE OF ACTIVITIES

2001	2002	2003	2004	2005	2006	2007	2008
• SBE Task force on "Ensuring Excellent Educators"	• NCLB Reauthorizes ESEA	• Awareness TA Sessions for Administrators	Grade level content expectations completed	• Revise Teacher Admin. Rules	• 96% HQ teachers in every classroom • Revised State Plan • Equity Plan	• Monitoring district equitable distribution	• 98% HQ teachers
• MTTC; Program approval standards; regional update meetings	• MDE State Level Title II Planning Committee formed	• Info Mtgs & TA for teachers	• Title II 2/3 of Funds transferred to MVU	• Implement METB (Michigan Educator Talent Bank)	• Created Teacher Quality Coordinator position within MDE	• Begin development of Student Longitudinal Data System	
• Limited License to Instruct pilot project initiated	• Referent group on Highly Qualified teachers organized & began meeting	• SBE approved MI HQ teacher Definition	• MDE MOU w/ MVU to include online PD via Learn Port	• GLCE Training	• CEPI implemented REP submission reports for districts to review (data quality)	• MSU research project on teacher supply & demand	
	• MDE receives Teacher Quality Enhancement Grant	• PD standards approved and Training Provided	• Targeted PD to high priority schools via Title II subpart 3A PD grant Program	• ASSIST Training			
		• Reading First Grants	• PD standards implemented	• Teacher Observation Performance Review Training	• Begin technical assistance for HQ (MiTAP)		
		• Decrease Emergency Permits	• CEPI adds HQ Field to REP	• Begin monitoring district HQ data			
		• Induction & Mentoring standards approved	• Teacher-to-Teacher on demand PD website Available	• $400,000 Title II, subpart 3A PD funds targeted for Small and rural Schools			
			• Draft of SBE/ MDE Strategic Plan				

Attachment 3

CORRECTIVE ACTIONS WORK PLAN

Date of Implementation	Activity	Lead Person	Outcome	Milestones
August 2006	CEP releases June 2006 REP Report to OPPS.	Flora L. Jenkins OPPS	REP report data disaggregated by district and HQT.	
August-September 2006	OPPS identifies LEAs with less than 100% HQT. Information disseminated inside MDE.	Flora L. Jenkins OPPS	Information shared w/ Field Services and Charter Schools Offices.	
September 2006	OPPS contacts identified LEAs to request a current update on teacher status.	Frank Ciloski OPPS	Districts respond by verifying teacher status.	
				Districts receive Report and respond back to MDE.
September-October 2006	OPPS revises data on HQT Statewide.	Frank Ciloski OPPS	OPPS revises the data.	
				Data set is revised based on information received.
	Field Services consultants contact LEAs to verify information and provide	Margaret Madigan Field Services	Regional consultants contact LEAs with less with less than 100% HQT.	

technical assistance.

Date of Implementation	Activity	Lead Person	Outcome	Milestones
October-November 2006	Field Services regional consultants review consolidated applications of LEAs with less than 100% HQT for corrective action plan.	Margaret Madigan Field Services	Identified LEAs submit a corrective action plan.	
	OPPS will conduct regional meetings for identified LEAs to provide technical assistance.	Frank Ciloski OPPS	Regional meetings are conducted.	Regional meetings conducted to provide technical assistance.
	Districts/schools not at 100% Required to submit an action plan to MDE	Flora L. Jenkins OPPS Margaret Madigan Field Services	District plans are received by MDE	
November 2006	Field Services regional consultants and OPPS staff will review corrective action plans and direct use of Title II, Part A funds as needed and Verify implementation of plan.	Flora L. Jenkins Margaret Madigan Field Services	Corrective action plans are approved.	OPPS and FSU review corrective action plans.
	OPPS staff present updated data on teacher quality to the SBE.	Flora L. Jenkins OPPS	Presentation made to SBE on teacher quality in Michigan.	
December 2006	CEPI releases December 2006 REP Report to OPPS.	Flora L. Jenkins OPPS	REP report data disaggregated by district HQT.	

Date of Implementation	Activity	Lead Person	Outcome	Milestones
January-February 2007	OPPS identifies LEAs with less than 100% HQT. Information disseminated inside MDE.	Flora L. Jenkins OPPS	Information shared with Field Services and Charter Schools Office.	
February 2007	Begin Round 1 of MiTAP visits to district/school	Flora L. Jenkins OPPS	Data quality & technical assistance	
	OPPS collaborates with Field Services to provide technical assistance To districts not yet at 100% HQT.	Flora L. Jenkins OPPS Margaret Madigan FSU	Each district is contacted to verify current status HQT.	Significant drop in districts/schools not meeting goal.
March-June 2007	Regional consultants and OPPS will collaborate to continue to monitor LEA progress in ensuring 100% HQT by end of school year.	Flora L. Jenkins OPPS Margaret Madigan FSU	MDE places high priority on district's HQT status.	
June 2007	CEPI releases June 2007 REP Report to MDE.	Flora L. Jenkins OPPS	REP report data disaggregated by district & HQT	
July 2007	MDE identifies any district/ school failing to meet 100% HQT.	Flora L. Jenkins OPPS	MDE notifies districts of their status.	
	Begin Round 2 of MiTAP visits to districst/schools	Flora L. Jenkins OPPS	Data quality & technical assistance	

July 2007	Regional consultants and OPPS institute financial sanctions on districts failing to meet 100% HQT.	Flora L. Jenkins OPPS Margaret Madigan FSU	MDE withholds funds.	
Date of Implementation	Activity	Lead Person	Outcome	Milestones
October 2007	Begin Round 3 of MiTAP visits to districts/schools; some re-visits to those needing additional technical assistance	Flora L. Jenkins OPPS	Data quality & technical assistance	
March 2008	Begin Round 4 of MiTAP visits to districts/schoosl	Flora L. Jenkins OPPS	Data quality & technical assistance	Continuous improve-ment of data quality
September 2008	Begin Round 5 of MiTAP visits to districts/schools; completion of all district/school visits, except new	Flora L. Jenkins OPPS	Data quality & technical assistance	
March 2009	Begin Round 6 of MiTAP visits to new district/school and re-visits to those needing additional technical assistance	Flora L. Jenkins OPPS	Data quality & technical assistance	
October 2009	Begin Round 7 of MiTAP visits to new district/school and re-visits to those needing additional technical assistance	Flora L. Jenkins OPPS	Data quality & technical assistance	

Bibliography

Alliance for Excellent Education (2004). Tapping the Potential: Retaining and Developing High-Quality New Teachers. Washington, D.C.

Darling-Hammond, L. (2002). Research and Rhetoric on Teacher Certification: A response to "Teacher Certification Reconsidered". Education Policy Analysis Archives, 10(36).

Darling-Hammond, L. and McLaughlin M.W. (1995). "Policies that Support Professional Development in an Era of Reform". Phi Delta Kappan, 76(8) 597-604.

Ingersoll, R. (2001). "Teacher Turnover and Teacher Shortages: an organization analysis", American Educational Research Journal, 38 (3), 499-534.

Keller, B. "Critical Study of NBPTS Spurs State Advisory Group to Act", Education Week, May 15, 2002.

Keller, B. "NBPTS Upgrades Profession, Most Agree, Despite Test-Score Letdown". Education Week, June 14, 2006.

Kennedy Mango, K. "Arizona Study Sees Benefits in National Board Certification", Education Week, September 15, 2004.

Peske, Heather and Haycock, Kati (2006). Teaching Inequality: How Poor and Minority Students are Shortchanged on Teacher Quality, a Report and Recommendations by the Education Trust, The Education Trust, Washington, D.C.

Smith, T. and Ingersoll, R. (2004). "What Are the Effects of Induction and Mentoring on Beginning Teacher turnover?" American Educational Research Journal, 41(2).

Villar, A. (2004). Measuring the Benefits and Costs of Mentoring-Based Induction: A Value-Added Assessment of New Teacher Effectiveness Linked to Student Achievement. Santa Cruz, CA: New Teacher Center.

Walsh-Sarnecki, P. (2006). "Schools Tie Bonuses to Test Scores". Detroit Free Press, July 3, 2006, 1A.

Number of Classes Taught by Highly Qualified (HQ) Status for New and Experienced Teachers Based on the Schools' Poverty and Minority Status

Poverty Level	Minority Level	Experienced Teachers				New Teacher				Total	
		HQ		Not HQ		HQ		Not HQ			
		Number of Classes	Percent	Number of Classes	Percent	Number of Classes	Percent	Number of Classes	Percent	Number of Classes	Percent
HI	HI	26,799	82.89%	402	1.24%	5,079	15.71%	50	0.15%	32,330	100.00%
HI	IN	6,031	82.89%	38	0.52%	1,202	16.52%	5	0.07%	7,276	100.00%
HI	LO	2,510	84.63%	22	0.74%	419	14.13%	15	0.51%	2,966	100.00%
IN	HI	13,056	83.12%	211	1.34%	2,415	15.37%	26	0.17%	15,708	100.00%
IN	IN	52,423	87.93%	876	1.47%	6,201	10.40%	122	0.20%	59,622	100.00%
IN	LO	25,613	88.82%	381	1.32%	2,792	9.68%	52	0.18%	28,838	100.00%
LO	HI	2,028	85.21%	26	1.09%	320	13.45%	6	0.25%	2,380	100.00%
LO	IN	40,913	87.34%	649	1.39%	5,140	10.97%	140	0.30%	46,842	100.00%
LO	LO	12,606	86.60%	116	0.80%	1,799	12.36%	35	0.24%	14,556	100.00%
Poverty	HI	35,340	83.01%	462	1.09%	6,700	15.74%	70	0.16%	42,572	100.00%
	IN	91,092	87.45%	1,468	1.41%	11,408	10.95%	200	0.19%	104,168	100.00%
	LO	55,547	87.09%	791	1.24%	7,259	11.38%	181	0.28%	63,778	100.00%
Minority	HI	41,883	83.07%	639	1.27%	7,814	15.50%	82	0.16%	50,418	100.00%
	IN	99,367	87.36%	1,563	1.37%	12,543	11.03%	267	0.23%	113,740	100.00%
	LO	40,729	87.85%	519	1.12%	5,010	10.81%	102	0.22%	46,360	100.00%
Total		181,979	86.44%	2,721	1.29%	25,367	12.05%	451	0.21%	210,518	100.00%

This report is based on data submitted by Michigan school districts through the Fall 2007 Registry of Educational Personnel Collection and the Fall 2007 Single Record Student Database.

"New" teachers are those staff members who were submitted with an employment status indicating a teacher in the first three years of the profession. "Experienced" are all other staff members.

Poverty Levels are derived by calculating the poverty rates (the percentage of students eligible for free and reduced lunch) for each entity to which teachers were assigned. These were then ranked for elementary and secondary schools and then the top quarter and bottom quarter were labeled high and low, respectively.

The minority levels were determined similarly to the poverty, identifying all non-white students as minority students.

"HI" identifies the educational entities in the top category, "LO" identifies the bottom category, "IN" identifies those in-between.

Number of Classes Taught by Highly Qualified (HQ) Status Based on the Schools' Poverty and Minority Status

Poverty Level	Minority Level	HQ Teachers		Not HQ Teachers		Total	
		Number of Classes	Percent	Number of Classes	Percent	Number of Classes	Percent
HI	HI	31,878	98.60%	452	1.40%	32,330	100.00%
HI	IN	7,233	99.41%	43	0.59%	7,276	100.00%
HI	LO	2,929	98.75%	37	1.25%	2,966	100.00%
IN	HI	15,471	98.49%	237	1.51%	15,708	100.00%
IN	IN	58,624	98.33%	998	1.67%	59,622	100.00%
IN	LO	28,405	98.50%	433	1.50%	28,838	100.00%
LO	HI	2,348	98.66%	32	1.34%	2,380	100.00%
LO	IN	46,053	98.32%	789	1.68%	46,842	100.00%
LO	LO	14,405	98.96%	151	1.04%	14,556	100.00%
Poverty	HI	42,040	98.75%	532	1.25%	42,572	100.00%
	IN	102,500	98.40%	1,668	1.60%	104,168	100.00%
	LO	62,806	98.48%	972	1.52%	63,778	100.00%
Minority	HI	49,697	98.57%	721	1.43%	50,418	100.00%
	IN	111,910	98.39%	1,830	1.61%	113,740	100.00%
	LO	45,739	98.66%	621	1.34%	46,360	100.00%
Total	Total	207,346	98.49%	3,172	1.51%	210,518	100.00%

This report is based on data submitted by Michigan school districts through the Fall 2007 Registry of Educational Personnel Collection and the Fall 2007 Single Record Student Database.

"New" teachers are those staff members who were submitted with an employment status indicating a teacher in the first three years of the profession. "Experienced" are all other staff members.

Poverty Levels are derived by calculating the poverty rates (the percentage of students eligible for free and reduced lunch) for each entity to which teachers were assigned. These were then ranked for elementary and secondary schools and then the top quarter and bottom quarter were labeled high and low, respectively.

The minority levels were determined similarly to the poverty, identifying all non-white students as minority students.

"HI" identifies the educational entities in the top category, "LO" identifies the bottom category, "IN" identifies those in-between.

Number of Classes Taught by New vs. Experienced Teachers Based on the Schools' Poverty and Minority Status

Poverty	Minority	Total Experienced Teachers		Total New Teachers		Total	
		Number of Classes	Percent	Number of Classes	Percent	Number of Classes	Percent
HI	HI	27,201	84.14%	5,129	15.86%	32,330	100.00%
HI	IN	6,069	83.41%	1,207	16.59%	7,276	100.00%
HI	LO	2,532	85.37%	434	14.63%	2,966	100.00%
IN	HI	13,267	84.46%	2,441	15.54%	15,708	100.00%
IN	IN	53,299	89.39%	6,323	10.61%	59,622	100.00%
IN	LO	25,994	90.14%	2,844	9.86%	28,838	100.00%
LO	HI	2,054	86.30%	326	13.70%	2,380	100.00%
LO	IN	41,562	88.73%	5,280	11.27%	46,842	100.00%
LO	LO	12,722	87.40%	1,834	12.60%	14,556	100.00%
Poverty	HI	35,802	84.10%	6,770	15.90%	42,572	100.00%
	IN	92,560	88.86%	11,608	11.14%	104,168	100.00%
	LO	56,338	88.33%	7,440	11.67%	63,778	100.00%
Minority	HI	42,522	84.34%	7,896	15.66%	50,418	100.00%
	IN	100,930	88.74%	12,810	11.26%	113,740	100.00%
	LO	41,248	88.97%	5,112	11.03%	46,360	100.00%
Total		184,700	87.74%	25,818	12.26%	210,518	100.00%

This report is based on data submitted by Michigan school districts through the Fall 2007 Registry of Educational Personnel Collection and the Fall 2007 Single Record Student Database.

"New" teachers are those staff members who were submitted with an employment status indicating a teacher in the first three years of the profession. "Experienced" are all other staff members.

Poverty Levels are derived by calculating the poverty rates (the percentage of students eligible for free and reduced lunch) for each entity to which teachers were assigned. These were then ranked for elementary and secondary schools and then the top quarter and bottom quarter were labeled high and low, respectively.

The minority levels were determined similarly to the poverty, identifying all non-white students as minority students.

"HI" identifies the educational entities in the top category, "LO" identifies the bottom category, "IN" identifies those in-between.

A Framework for Michigan Educator Evaluations

(*Under the New School Reform Law*
2009 PA 205 Section 1249)

A Joint Proposal from
American Federation of Teachers-Michigan
Michigan Education Association
Michigan Association of Secondary School Principals
Michigan Elementary and Middle School Principals Association

New state legislation requiring annual performance evaluations of all educators offers challenges and opportunities. Meaningful evaluations that are completed in timely, transparent, and efficient ways are the goals of this suggested framework. This framework represents a set of agreed upon principles. Plenty of room has been left for local districts to incorporate previous best practices, as well as to design improvements to current performance evaluation processes.

Specifically the new law requires:

- Involvement of teachers and school administrators, the board of a school district or intermediate school district or board of directors of a public school academy
- Rigorous, transparent, and fair performance evaluation systems
- Evaluation based on multiple rating categories
- Evaluation with student growth as determined by multiple measures of student learning, including national, state or local assessments or other objective criteria as a significant factor
- Evaluations to inform decisions regarding:
    - Individual professional learning opportunities with ample time for improvement
    - Promotion, retention, and professional development opportunities, including coaching, and instruction support
    - Tenure and/or certification decisions based on rigorous, streamlined, transparent and fair procedures.
    - Removal of ineffective teachers and administrators after ample opportunities to improve have been deemed unsuccessful based on decisions made by use of rigorous, streamlined, transparent and fair procedures.

This framework addresses all the requirements above. The framework is applicable for probationary and tenured teaching staff as well as building and district administrators (NOTE: Probationary teachers will have additional evaluation procedures to meet the requirements of the Tenure Act). It connects several school mandates, such as the required School Improvement Plan, and integrates several district-reporting requirements into one streamlined process. The framework seeks to eliminate duplication, as well as remain cost effective with reasonable expectations to build capacity by those who must do the work.

Foundational Principles

This framework is based on our vision of collective capacity building, in which all levels of the educational system work together toward the common goal of increased student achievement. It is built on the premise that student performance improves when all educators at all levels work diligently towards this common goal. Individual educators improve students' academic progress when they work in collaborative environments while being accountable for student achievement. In this framework, the term "educators" refers to individuals working at any level, including teachers and other professional ancillary staff, principals, superintendents, central office administrators, state Department of Education staff and the Superintendent of Public Instruction to assure that evaluations for all educators at all levels are based on an integrated system that provides incentives for educators to support each other in attaining their goals.

To be successful in implementing this evaluation framework, each entity must establish common internal:

- Goals
- Language
- Understandings
- Professional training/learning

Common professional training is essential to assure that evaluators and staff are thoroughly trained in all aspects of the evaluation process being used in the district. For example: how to create individual and team goals based on data; how to correctly identify reasonable and valid measures of those goals; how to evaluate achievement of the goals; and how to identify quality professional development in order to improve professional practice.

These principles are grounded in 21st Century life where people work in groups, share common goals, and design individual goals. In these situations, improved professional practice is measured against the attainment of both individual and common goals. In addition, it is understood that the evaluation process must not only be embedded in the district and team's improvement goals, but also must be composed of multiple measures. Therefore, districts should modify systems that rely exclusively on classroom observations.

The Framework Overview

The Individual Professional Growth Plan (IPGP) is the foundation of an annual evaluation. It is the common evaluation measurement for all educators. Educators will be evaluated annually based on their performance in meeting the goals in the IPGP. The common goals in the IPGP will be developed in conjunction with professional teams established in the building or district, with the input of supervisors, and include data on individual student growth.

The district and/or building School Improvement Plan, and particularly the findings of the Comprehensive Needs Assessment that is required by law, will serve as the common foundation from which both the professional team and individual educator goals will be developed. All goals for the professional team and the individual educator must be based in significant part on student growth data, and must include professional development regarding the valid use of student achievement to inform educational decision-making.

Suggested Content of the Professional Team and Individual Growth Plan Goals

- School Improvement Plan goals
- Student Growth Improvement goals
- Professional development plan to meet goals that is job-embedded and provides time for professional collaboration
- Indicators/Evidence of Success for meeting goals
- Monitoring Process and Timelines for assessing goals attainment
- Evaluation tools to be used for assessing goals attainment

Development of Goals

In order to develop team and individual goals that support the purpose of improving student achievement and closing achievement gaps by improving instructional practice at all levels of the system, the framework provides the following guidelines for goal development:

- All goals at all levels need to be based on School Improvement Plans (SIP) and comprehensive needs assessments (CNA), as well as district improvement plans and those of their constituent entities where applicable.
- Measures of goal attainment should include data on student achievement/growth, which should be based on local, state and/or national achievement/growth measures depending on availability and appropriateness.
- All goals must have *clear measures* attached based on *identified outcomes*.
- Team goals are developed and approved by the team in collaboration with the immediate supervisor.
- Goals for leaders need to include the provision of resources and support to their employees to achieve those goals. Goals should define clearly which resources and supports will be provided and should be agreed upon by both parties.

The Framework is divided into a three-part PGP development process

Part One: The Professional Team (e.g. Professional Learning Communities such as subject area departments, learning groups, interdisciplinary teams, etc.).

Professional teams (PTs) will develop their goals based on the school improvement plan goals and student performance data for the group.

All educators are part of various PTs. The PTs will determine their team's goals that must be tied to the district's goals (school improvement plan) and include criteria for determining success developed from student growth data. Team goals shall also include a delineation of responsibilities and practices needed to meet the goals and suggested timelines for meeting the goals. PTs will provide data and information to their supervisor on the goals and progress towards meeting their goals.

Following is a list of evaluation tools that PGPs might use, but this list is not exhaustive:

Surveys (360, Parent, Student, etc)
Observation Rubrics
Portfolio based on Rubrics
Presentation/Demonstration/Exhibition Rubrics
Assessment/Other Student Data
Curriculum/Coursework
Case Studies
Action Research Projects

Professional teams should be given common planning and collaboration time for examining student work for successful implementation of the evaluation framework.

Part Two: The Individual Professional Growth Plan (IPGP)

An IPGP that includes, in significant part, the use of student growth goals based on current student performance data will be developed to reinforce or change the educator's instructional practices. * Each Individual's goals must be consistent with the school improvement plan and his/her professional team goals, and should also be based on student data and standards of professional practice. The IPGP will be developed in collaboration with the educator's supervisor and will include the applicable components of the professional team's goals. The IPGP shall include goals, a delineation of resources, responsibilities and practices needed to meet the goals, and suggested timelines for attaining the goals.

*The Michigan Department of Education has taken the position that the assessments of students who have not been present in the classroom or the school during the majority of the school year (as determined locally) shall not be included in determining student growth data.

Part Three: Paths to Improvement

This Framework is designed to address both the requirements of Section 1249 (teacher evaluations) as well as Section 1250 (the use of student achievement in teacher pay).

Paths to Improvement

- Exceeds Goals
- Meets Goals
- Progressing Toward Goals
- Not Progressing Towards Goals

It is our belief that every educator seeks continuous improvement of his/her professional practice. Many educators are successful in buildings that are struggling and do stellar work, yet the building or district continues to flounder. Rather than continue with the environment of isolated pockets of excellence, the professional team process, which can be implemented throughout the system, offers our educators holistic performance growth opportunities for their professional practice.

Although student achievement is heavily influenced by educators, it is also affected by many other factors. Given this reality, any use of student achievement/growth data in high-stakes evaluation decisions should be done with great care. Such use of achievement/growth data should be strictly formative for a minimum of three years in which an educator is being evaluated in a particular evaluation system. If low student achievement/growth data for an educator are included in an evaluation, those data should not be used for high-stakes decisions unless: 1) the educator has been evaluated using a locally bargained process consistent with this framework for multiple years; 2) the educator has been offered targeted professional development based on the needs identified in the evaluations, and 3) the data continue to show low achievement growth even after formative evaluation and professional development.

Collective Bargaining

In this framework all aspects of the proposal including the evaluation processes, timelines, instruments and tools, level of proficiency, significant student growth measures, and the professional team composition and processes are subject to collective bargaining at the local level.

Summary

This three-part Professional Growth Plan Framework has much potential. Many educators are already making great strides in student achievement using the collaborative team approach. This proposed framework is meaningful, manageable for all, connects many school initiatives, and is flexible enough to fit the needs of any district, any educator, non-tenured or tenured teacher, building administrator, central office, ISD, or state department of education educator.

MICHIGAN DEPARTMENT OF EDUCATION
GROWTH MODEL PILOT APPLICATION
FOR ADEQUATE YEARLY PROGRESS DETERMINATIONS UNDER THE NO CHILD LEFT BEHIND ACT

Submitted to the U. S. Department of Education
May, 2008

Introduction

Michigan's assessment system includes the following components:

- The general assessment for grades 3-8 is the Michigan Educational Assessment Program (MEAP);
- The high school general assessment, administered to all students in grade 11, is the Michigan Merit Examination (MME);
- The alternate assessments for students with disabilities, named MI-Access, include several assessments which are called Functional Independence, Supported Independence and Participation. These alternate assessments are for students with mild, moderate, and severe cognitive impairment, respectively. Students that use alternate assessments are students with the most significant cognitive disabilities.

Michigan has a long history of support for the assessment program and for instructional use of assessment data. The MEAP and MI-Access were expanded to grades 3-8 beginning in 2005-06. With assessment data for the 2007-08 school year, Michigan now has assessment data for three school years at adjacent grades in both English language arts and in mathematics.

In addition, Michigan has a student data system, called the Single Record Student Database (SRSD), which has been used for allocation of State School Aid, and for all pupil accounting and student data reporting since 2002-03. Michigan's system uses a Unique Identification Code (UIC) to track student enrollment between SRSD submissions. The UIC tracks students independent of the student's name. The use of UICs supported by a rigorous and highly accurate UIC resolution process ensure a high degree of reliability in matching scores between assessment administrations. These are important qualities because Michigan's proposed growth model includes matched data on the general assessment (MEAP) and on the alternate assessments, the MI-Access Functional Independence (FI), Supported Independence (SI), and Participation (P) assessments.

The high school level assessments are excluded from Michigan's proposed growth model.as the rationale behind this decision is that the high school measurement (at grade 11) is too far removed from the previous measurement occasion (grade 8) to provide useful growth data. Michigan's proposed growth model also does not include data from the alternate assessments for students with severe and moderate cognitive impairment. Those assessments employ considerably different psychometric and scaling methods. As a result, they do not have the degree of precision present in the other assessments included in the growth model proposal.

Michigan's Rationale for Using a Growth Model

Michigan has developed a growth model for reporting student achievement in grades 3-8 to be used for its state school accreditation program. Michigan proposes to adapt the state school accreditation model for use in determining whether schools and school districts are making adequate yearly progress (AYP) under the No Child Left Behind Act of 2001 (NCLB). Use of the proposed model will begin with the 2007-08 school year and be carried forward.

If adopted, the proposed growth model will add to the current status and safe harbor system that is used under Section 1111 of the Elementary and Secondary Education Act, as amended by NCLB. The Michigan Department of Education (MDE) is prepared to cooperate fully with the United States Department of Education (USED) in evaluating the growth model.

Michigan educators have expressed frustration with the assessment information that forms the foundation of the AYP decision because the current AYP decision is based on assessment data that classifies a student as proficient or not proficient at a single point in time (i.e. classification based on status). Teachers often work with low-scoring students and make improvements in the achievement of individual students, but despite considerable gains, those students may not make it all the way to proficient. Unfortunately, status models alone do not allow student improvement, which may be attributable to teacher intervention, to be tracked in the current system. Michigan's Growth Model would give credit in the AYP decision for growth from year-to-year by demonstrating that improvement in the student's achievement is on a trajectory such that the student is expected to attain proficiency within the next three years.

Michigan is in a unique position to participate in the U.S. Department of Education's Growth Model Pilot because:

- Michigan meets the US Department of Education's New Equation for NCLB Flexibility;
- Michigan has all the essential elements in place to implement a Growth Model for the 2007-08 school year; and
- Michigan is already reporting growth data (currently referred to as performance level change) and is prepared to use growth data for AYP determinations for school year 2007-08.

The baseline for Michigan's Growth Model is the 2006-07 school year. Michigan reported preliminary growth data to schools in 2006-07, using 2005-06 as a baseline. This initial reporting was critical to help Michigan educators to understand the nature of the growth data, and to develop standards for reporting growth data. Additionally, those data informed the decisions made in the formulation of the proposed model.

Match Rates

Michigan's Single Record Student Database forms the foundation of the growth model. Because of Michigan's racial/ethnic and socioeconomic diversity, it is important that the matching of student scores be high enough for all measured AYP subgroups. The match rates presented in the following tables represent only student scores that have matched data meeting the following criteria:

- The student had valid scores in the same content area in both fall 2005 and fall 2006;
- The student had valid scores in the same assessment, MEAP or the same MI-Access assessment (FI, SI, or P), for both years;
- The student's scores were based on assessments administered in grade x in fall 2005 and in grade x + 1 in fall 2006.

Some student scores are therefore excluded from growth reporting if they fall into any one of the following categories:

- The student moved into or out of Michigan public schools between the fall 2005 and 2006 tests
- The student missed school during the testing window in either 2005 or 2006
- The student did not have a score in 2005 or 2006 for some other reason
- The student took one assessment (e.g. MEAP, MI-Access FI, MI-Access SI, or MI-Access P) one year and a different assessment the next
- The student was retained in grade
- The student was promoted more than one grade

In addition, Michigan's growth model proposal would exclude any students from the growth model portion of the AYP calculations if they are excluded from the achievement status calculations based on Full Academic Year (FAY) status.

Data for student score match rates is presented in Table 1 based on matches meeting the above criteria from fall 2005 to fall 2006.

Table 1. Student Score Match Rates.

Michigan Growth Model Score Matching Fall 2005 to Fall 2006						
Student Group	**English Language Arts**			**Mathematics**		
	Number Tested	**Number Matched**	**Percent Matched**	**Number Tested**	**Number Matched**	**Percent Matched**
All Students	629,998	573,796	92.9%	628,274	580,654	93.8%
American Indian	6,135	5,404	89.4%	6,104	5,423	90.1%
Asian-American	15,507	13,282	86.5%	15,551	13,620	88.5%
Black	128,715	109,289	86.6%	129,463	110,513	87.2%
Hispanic	28,281	24,354	87.3%	28,347	24,748	88.5%
White	445,071	418,220	95.2%	445,523	419,847	95.4%
Limited English Proficient	20,302	16,501	82.7%	20,089	17,780	89.1%
Students With Disabilities	85,975	71,787	92.3%	86,335	72,214	92.7%
Economically Disadvantaged	235,897	217,907	94.1%	236,715	215,143	94.8%

The data presented in Table 1 show very high levels of matching in both content areas. The match rates are slightly higher in mathematics than in English language arts, but the difference between the content areas in less than one percentage point. Also of note, is the relatively high match rates obtained in the critical AYP subgroups. The following observations can be made in analyzing the match rates:

- The overall match rate is above 92% in both English language arts and in mathematics;
- The match rates for American Indian, Asian-American, Black, and Hispanic student groups is lower than the overall match rate;
- The lowest match rate among racial-ethnic groups is 86.5% among Asian-Americans in English language arts;
- The match rates for students with disabilities and for economically disadvantaged students are above 92% in both content areas; and

- The match rates for limited English proficient students are lower in English language arts (ELA).

Michigan is investigating the lower match rates for limited English proficient students. This may be due to student mobility across state and national lines for migrant students or otherwise mobile students. It may also be attributable to the flexibility allowed for LEP students not to be assessed in ELA during their first year in the country. These students are excused from the general ELA assessment if they have taken an approved English Language Proficiency Assessment.

Michigan has developed a reporting system that provides schools and school districts with access to growth data on several levels of assessment reports, including individual student reports, parent reports, school and district summary reports, and on student data files. The school and district assessment administrators have access to both baseline year and current year data for all students. The Michigan Department of Education has alerted local school personnel to review reports to ensure appropriate score matching from year-to-year. Despite the robust nature of the student tracking system, there will be a very small number of student scores that are matched incorrectly, or where a match that should have taken place was not made. MDE is prepared to investigate these situations, and to correct data as necessary. With these procedural safeguards in place, the Michigan Department of Education believes that the high match rates demonstrate a high degree of accuracy in the student tracking system.

Michigan's Growth Model
Michigan's system is a comprehensive model of alignment that provides a foundation for meaningful reporting of students' academic progress over time. The model includes both horizontal and vertical alignment as integral parts of the development of content standards, test blueprints, items, item pools, instruments, performance level descriptors, and performance standards. It also explains why comprehensively integrating alignment into development processes results in procedural efficiencies and gains in validity evidence for the measurement of student progress. Cautions against reducing focus on content in favor of alignment are given. All parts of the comprehensive alignment model have been or soon will be implemented in Michigan's assessment program. The processes used for comprehensive alignment in Michigan are described fully in Martineau, Paek, Keene, & Hirsch (2007), a copy of which is attached to this proposal. In addition, the full set of considerations Michigan deliberated in designing its proposed growth model are presented in Attachment A. A summary of those goals is given here:

1. Implement a system that is capable of capturing significant differences in student progress while at the same time minimizing the effect of measurement error on the evaluation of student progress.
2. Implement a system that sets rigorous expectations for student progress that can be met and that, if met, result in identifying students that have demonstrated enough growth to designate their score changes as on track to reach proficiency within the next three years.
3. Integrate MEAP (general assessment) and MI-Access (alternate assessment) scores into a single system that reports growth for all students.

Very briefly, the Growth Model was developed by dividing each of the MEAP performance levels (not proficient, partially proficient, proficient, and advanced) into three sub-levels (low, middle, and high), and tracking students transitions from one year to the next (e.g. from the middle of the not proficient category in grade 3 to the top of the partially proficient category the next year in grade 4). The tracking mechanism is called a transition value table. A parallel task was carried out for MI-Access. Because the MI-Access Functional Independence assessment is shorter (and therefore has less precision), it is divided into fewer performance levels and sub-levels. The top and bottom performance levels (emerging and surpassed) were each divided into three sub-levels (low, mid, and high), while the narrower middle performance level (attained) was divided into only two sub-levels (low and high).

Because the MI-Access Supported Independence and Participation assessments are still shorter, the performance levels on those assessments are not further subdivided. In addition, because there is only one non-proficient category (Emerging) on these assessments, any move upward would qualify a student as both proficient in the second year, and as on trajectory toward proficiency.

The performance levels were divided into sub-levels in the following manner. First, the conditional standard errors of measurement were graphed for each subject and grade level. For example, for grade 3 mathematics, figure 1 was produced.

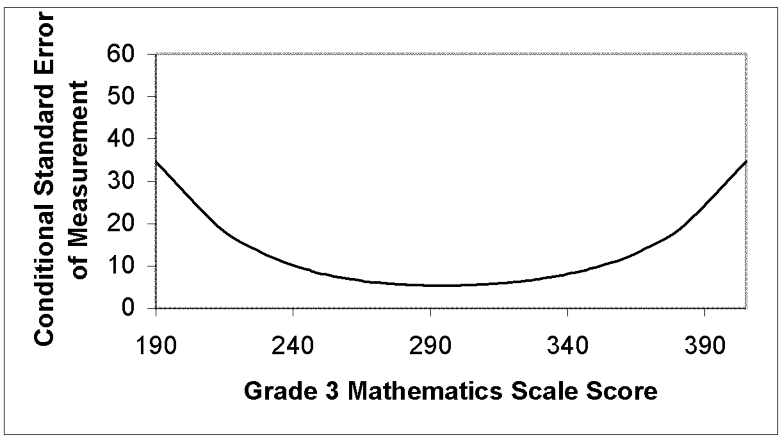


Figure 1. Conditional Standard Error of Measurement (SCEM).

The cut scores were then superimposed on the graph, identifying the scale score range of each performance level as shown in Figure 2.

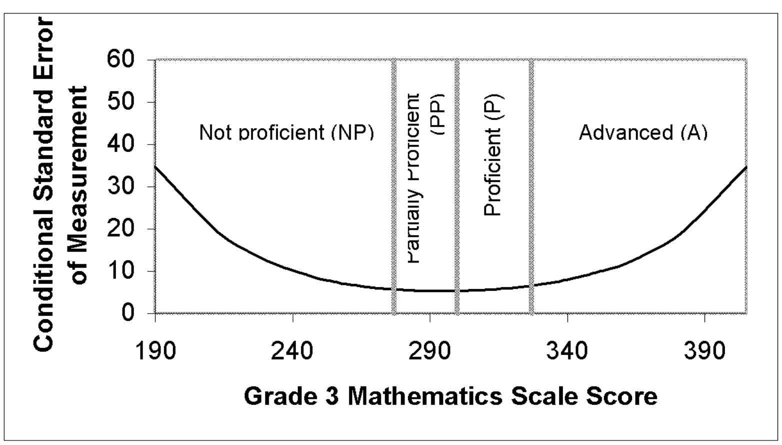


Figure 2. CSEM with Performance Level Cut Scores Superimposed.

5

Each of the four performance levels was further divided into two (MI-Access) or three (MEAP and MI-Access) sub-levels as demonstrated in Figure 3, in conjunction with a check for the appropriateness of the width as described below. These two simultaneous procedures are presented separately here for clarity.

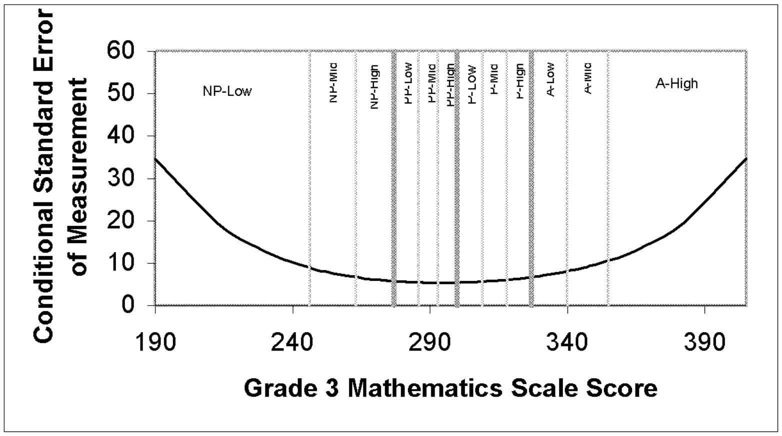


Figure 3. Performance Levels Divided into Sub-Levels.

The check for appropriateness of the widths was conducted as follows: the widths of these sub-levels were superimposed on the graph to confirm that the sub-levels were as wide or wider than the standard error of measurement across the sub-levels. This was done to ensure that the sub-levels were small enough to assure that significant student growth within a performance level could be captured, but large enough that movement across categories is not likely to be attributable to measurement error. In addition, the consideration of measurement error in the creation of sub-levels, as well as the extra wide sub-levels on the extremes minimizes the effect that regression to the mean can have on the transitions identified for individual students. Figure 4 demonstrates this check.

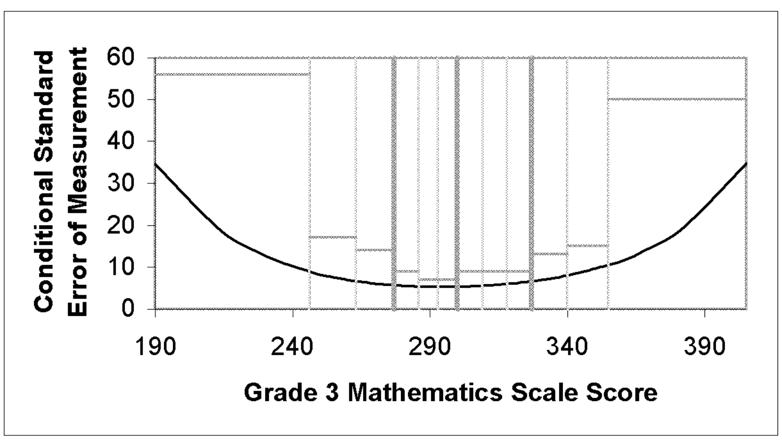


Figure 4. Check for Sufficient Sub-Level Width.

In Figure 4, the height of the horizontal bars indicates the width of the sub-levels, and in every case, the width of the sub-levels is greater than the conditional standard error of measurement at any location in the sub-level. This check was performed for all grades and subjects in both MEAP and MI-Access. There were a very small number of sub-levels where the conditional standard error of measurement was slightly larger than the width of the sub-levels. These minor deviations were tolerated in order to assure that the system remains transparent by having the same number of sub-performance levels in every grade.

In other states where this type of activity has been carried out, it was decided beforehand that there would be only one evaluation table that would be the same for all grades and subjects within the regular assessment. Michigan investigated having different tables for each grade and subject, and found that stakeholder panelists were unable to identify content-based or policy-based reasons to have different tables by grade or subject; and recommended that a single table be used for all grades and subjects. Therefore, there is only one progress evaluation table for MEAP (for all grades and subjects), and a parallel table to evaluate progress for the MI-Access Functional Independence assessment.

In addition, a value table (such as that submitted by Delaware) was originally intended to be a part of Michigan's proposed growth model. However, after discussion with stakeholder panelists and with educational organizations from around the State, it became clear that the value judgments necessary to create a growth model had already been carried out in the original standard setting for achievement. The cut scores were set based on Performance Level Descriptors (PLDs), the PLDs were vertically articulated for content, and the cut scores themselves were also vertically articulated. This foundation of vertical articulation makes clear the ultimate target (proficiency now or at some defined point in the future). Leveraging the existing vertically articulated standards allows for growth targets to be developed analytically based on achievement standards rather than being determined subjectively in another standard setting exercise for determining growth targets. This analytical approach is explained in further detail below.

As a foundation for the analytical identification of growth targets, a descriptive transition table was created that contained no additional value judgments. The tables instead describe the transitions individual students make with respect to increasing expectations for student achievement across grades. In other words, the transition tables indicate whether students are declining over time relative to increasing expectations, whether they are exhibiting no change over time relative to increasing expectations, or whether they are improving their standing over time relative to increasing expectations. Students' change in performance level is classified into five categories (significant decline, decline, no change, improvement, significant improvement) with accompanying abbreviations (SD, D, N, I, SI, respectively).

These transitions could have been labeled evaluatively. For example, the five categories could be labeled Excellent, Good, Minimally Acceptable, Fair, and Poor. By classifying the transitions descriptively instead of evaluatively, the original value judgments made in achievement standard setting are explicitly honored, and an additional layer of complexity is removed from the model.

The single descriptive transition table for MEAP assessments is given in Table 2, and the table for MI-Access Functional Independence assessments is given in Table 3. No tables are presented for the Supported Independence (SI) and Participation (P) assessments. These assessments are also included in the model, but have no substantial impact, as moving upward a category in the SI and P assessments automatically qualifies a student as *both* proficient *and* on trajectory toward proficiency.

The goal was not only to classify each type of progress in the same way, but to also ensure that classifications are as consistent as possible with the meaning of the labels. Furthermore, the proposed method should yield valid inferences of classification comparisons. As presented, these tables evaluate the amount of progress made by individual students. Currently, the tables are being used in the following manners:

1. For reporting individual student progress to students, parents/guardians, and educators;
2. For reporting aggregate progress of students at the school, district, ISD, and State levels, when there are sufficient numbers of students; and
3. For incorporation into the Education YES! state school accreditation system.

Table 2. MEAP Transition Value Table

Grade *X* MEAP Achievement		Grade *X+1* MEAP Achievement											
		Not Proficient			Partially Proficient			Proficient			Advanced		
		Low	**Mid**	**High**	**Low**	**Mid**	**High**	**Low**	**Mid**	**High**	**Low**	**Mid**	**High**
Not Proficient	**Low**	NC	I	I	SI	SI	SI	SI	SI	SI	SI	SI	SI
	Mid	D	NC	I	I	SI	SI	SI	SI	SI	SI	SI	SI
	High	D	D	NC	I	I	SI	SI	SI	SI	SI	SI	SI
Partially Proficient	**Low**	SD	D	D	NC	I	I	SI	SI	SI	SI	SI	SI
	Mid	SD	SD	D	D	NC	I	I	SI	SI	SI	SI	SI
	High	SD	SD	SD	D	D	NC	I	I	SI	SI	SI	SI
Proficient	**Low**	SD	SD	SD	SD	D	D	NC	I	I	SI	SI	SI
	Mid	SD	SD	SD	SD	SD	D	D	NC	I	I	SI	SI
	High	SD	SD	SD	SD	SD	SD	D	D	NC	I	I	SI
Advanced	**Low**	SD	SD	SD	SD	SD	SD	SD	D	D	NC	I	I
	Mid	SD	SD	SD	SD	SD	SD	SD	SD	D	D	NC	I
	High	SD	SD	SD	SD	SD	SD	SD	SD	SD	D	D	NC

NOTE: SI = Significant Improvement, I = Improvement, NC = No Change, D = Decline, SD = Significant Decline

Table 3. MI-Access Functional Independence Transition Value Table

Grade *X* MI-Access FI Achievement		Grade *X+1* MI-Access FI Achievement							
		Emerging			Attained		Surpassed		
		Low	**Mid**	**High**	**Low**	**High**	**Low**	**Mid**	**High**
Emerging	**Low**	NC	I	I	SI	SI	SI	SI	SI
	Mid	D	NC	I	I	SI	SI	SI	SI
	High	D	D	NC	I	I	SI	SI	SI
Attained	**Low**	SD	D	D	NC	I	I	SI	SI
	High	SD	SD	D	D	NC	I	I	SI
Surpassed	**Low**	SD	SD	SD	D	D	NC	I	I
	Mid	SD	SD	SD	SD	D	D	NC	I
	High	SD	SD	SD	SD	SD	D	D	NC

SI = Significant Improvement, I = Improvement,
NC = No Change, D = Decline, SD = Significant Decline

Transitions on Trajectory toward Proficiency

Given the descriptive nature of the transition tables, a simple analytical method can be used to identify which transitions are on a trajectory to proficiency. To identify these transitions, the following logic was used:

- For each sub-level below proficient, identify the number of sub-levels between that sub-level and the low end of the "Proficient" cut score.

- Divide that number by the number of years over which proficiency may be achieved.
- Round the result to the nearest whole number (with a minimum of 1).
- Use the result as the target number of sub-levels of improvement for students starting at a specific sub-level below proficient.
- Count as "on trajectory to proficiency" those not-yet-proficient students achieving at least the target number of sub-levels of improvement over the last year.

Table 4 presents the calculations for MEAP and MI-Access for each sub-level below proficiency:

Table 4. Improvement Target Calculations.

Assessment	Previous Performance		Number of Sub-Levels Improvement Needed to Achieve Proficiency	Number of Years to Achieve Proficiency	Improvement Target	
	Level	Sub-Level			Unrounded	Rounded
MEAP	Not Proficient	Low	6	3	2.00	2
		Mid	5	3	1.67	2
		High	4	3	1.33	2
	Partially Proficient	Low	3	3	1.00	1
		Mid	2	3	0.67	1
		High	1	3	0.33	1
MI-Access Functional Independence	Emerging	Low	3	3	1.00	1
		Mid	2	3	0.67	1
		High	1	3	0.33	1
MI-Access Participation & Supported Independence	Emerging	No Sub Divisions	1	3	.33	1

These targets translate into the shaded transitions in the Tables 5 and 6 counting as "on trajectory toward proficiency" within the next three years. Again, note that no table is presented for Supported Independence (SI) and Participation (P) MI-Access assessments, as any move upward on those assessments constitutes *both* being proficient *and* being on track to proficient, resulting in no substantial impact on AYP results.

Note that the logic employed provides a conservative designation of which transitions to designate as on trajectory to proficiency, since the width of the sub-levels increases the further one goes below the proficiency cut score. This means that students previously achieving at very low levels have improvement targets that appear to be much larger than those at higher levels. We believe this is appropriate in that increasing the achievement of very low performing students should be a strong priority.

Finally, *Michigan will count a student's transition as being on trajectory toward proficiency only the first time that the student's achievement rises to a given level.* For example, consider the following scenario:

- A student improves from mid *not proficient* to high *not proficient* from grade 3 to 4
- The student declines back down to mid *not proficient* in grade 5
- The student again improves to *high* not proficient in grade 6

This student would be counted on trajectory only for the transition between grades 3 and 4, but not for the transition from grade 5 to 6, since it is not the first time that improvement to that level was observed for that student

Table 5. MEAP Trajectory toward Proficiency

Grade X MEAP achievement		Grade X+1 MEAP Achievement											
		Not Proficient			Partially Proficient			Proficient			Advanced		
		Low	Mid	High	Low	Mid	High	Low	Mid	High	Low	Mid	High
Not proficient	Low												
	Mid												
	High												
Partially Proficient	Low												
	Mid												
	High												
Proficient	Low												
	Mid												
	High												
Advanced	Low												
	Mid												
	High												

Table 6. MI-Access Functional Independence Trajectory toward Proficiency

Grade X MI-Access achievement		Grade X+1 MI-Access Achievement							
		Emerging			Attained		Surpassed		
		Low	Mid	High	Low	High	Low	Mid	High
Emerging	Low								
	Mid								
	High								
Attained	Low								
	High								
Surpassed	Low								
	Mid								
	High								

Michigan's Confidence Interval – Reliability for AYP Decisions

Beginning with the 2004-05 school year, Michigan has used a confidence interval to account for measurement error when making AYP determinations for schools and school districts. The measurement error is based on two conditional standard errors of measurement (SEM) below and above each student's score. Accounting for error makes decisions about schools not making AYP more reliable and gives Michigan more confidence in these decisions. When a student scores near the cut point on an assessment, there is a greater chance of error in designating a student as either proficient or not proficient. Placing a confidence interval of two conditional standard errors of measure around the student scores allows Michigan to give specific data to schools, teachers and parents about the student's performance and to give a confident "yes" or "no" to the AYP measure. Students whose scores fall within the confidence interval are counted as "provisionally proficient" and are included in the numerator for AYP proficiency calculations.

Under the proposed growth model, some students could be counted as both "provisionally proficient" and as "on trajectory to proficiency." Michigan proposes to identify students as "on trajectory" first, and only if students do not qualify as "on trajectory," to determine whether they qualify as "provisionally proficient" using the confidence interval calculation.

Proposed Use of Growth Data in AYP Calculations
Michigan proposes to use the following formula for determining whether districts, schools, and subgroups within districts and schools meet the AYP proficiency targets

$$100 * \left(nProficient + nOnTrajectory + nProvisional \right) / nValidAssessments$$

where *nProficient* is the number of proficient students, *nOnTrajectory* is the number of students on trajectory to proficiency within the next three years, *nProvisional* is the number of provisionally proficient students, and *nValidAssessments* is the number of students receiving valid scores on the assessment (non-valid scores cannot count toward participation rates and are not used in proficiency rate calculations). This would be the only revision to the AYP calculations made by Michigan based upon the growth model. All other subgroup identifications and other AYP considerations would remain unchanged.

Michigan also proposes to display for each calculation rate each of the values presented in the above formula to assure that stakeholders understand the reason that each school or district makes or does not make AYP. Displaying this data should result in increased transparency of the process and provide assurance to Michigan educators that their feedback was incorporated in the development of the proposed model.

Impact Data – Fall 2005 to Fall 2006
Tables 7-10 present impact data on individual students who would be considered "on trajectory" for MEAP and MI-Access English Language Arts and Mathematics across all grades. The tables are color coded to identify significant decline (red), decline (light red), no change (yellow), improvement (light green), and significant improvement (green) in performance level. The transitions that would count as "on trajectory" are highlighted to identify them as such.

Table 7. MEAP Mathematics Impact Data.

Grade 3-7 Fall 2005 MEAP Mathematics Achievement		Matched Fall 2006 MEAP Mathematics Achievement											
		Not Proficient			Partially Proficient			Proficient			Advanced		
		Low	Mid	High	Low	Mid	High	Low	Mid	High	Low	Mid	High
Not proficient	Low	1	4	**59**	**32**	**26**	**10**	10	7	3	3	0	0
	Mid	7	18	764	**448**	**217**	**116**	69	19	12	12	3	3
	High	39	306	10,449	8,395	**5,275**	**3,001**	1,902	517	218	162	20	3
Partially Proficient	Low	22	133	6,153	7,117	**6,258**	**4,772**	3,717	1,064	424	249	29	11
	Mid	21	104	4,236	6,318	7,199	**6,990**	6,813	2,510	945	530	42	15
	High	17	58	2,981	5,596	7,850	9,531	12,035	5,723	2,602	1,427	78	15
Proficient	Low	11	27	1,982	4,122	7,658	12,315	21,120	13,995	8,096	5,349	292	37
	Mid	6	20	711	1,661	3,292	7,125	17,360	17,378	13,586	12,097	896	87
	High	4	8	296	622	1,315	3,241	10,795	16,036	17,561	23,103	2,759	242
Advanced	Low	4	15	215	365	674	1,496	5,678	12,437	20,306	55,161	17,397	2,922
	Mid	1	1	35	46	91	159	726	2,233	5,788	21,218	16,818	6,667
	High	0	0	17	13	17	34	154	511	1,994	8,281	10,253	9,460

Table 8. MI-Access Mathematics Impact Data

Grade 3-7 Fall 2005 MI-Access Mathematics Achievement		Matched Fall 2006 MI-Access Mathematics Achievement							
		Emerging			Attained		Surpassed		
		Low	Mid	High	Low	High	Low	Mid	High
Emerging	Low	24	**53**	**43**	30	10	11	9	4
	Mid	35	168	**176**	109	63	36	24	9
	High	25	156	197	209	134	92	53	24
Attained	Low	15	162	218	277	244	216	120	56
	High	9	62	113	177	183	186	146	66
Surpassed	Low	6	52	135	235	313	395	423	234
	Mid	6	36	57	113	169	341	457	401
	High	8	23	25	47	89	228	445	755

Table 9. MEAP ELA Impact Data.

Grade 3-7 Fall 2005 MEAP ELA Achievement		Matched Fall 2006 MEAP ELA Achievement											
		Not Proficient			Partially Proficient			Proficient			Advanced		
		Low	Mid	High	Low	Mid	High	Low	Mid	High	Low	Mid	High
Not proficient	Low	21	126	**412**	**232**	**180**	**113**	114	33	13	6	2	0
	Mid	127	654	1129	**521**	**272**	**150**	108	33	6	1	0	0
	High	260	2021	5,972	3,758	**2,738**	**1,817**	1,398	312	72	15	2	0
Partially Proficient	Low	111	993	4,676	4,606	**4,636**	**3,996**	3,722	872	158	18	3	0
	Mid	59	587	3,892	5,043	6,207	**6,635**	8,146	2,355	462	57	7	0
	High	47	377	2,878	4,405	7,309	9,912	16,894	6,970	1,486	217	16	1
Proficient	Low	44	263	2,253	4,110	8,472	15,723	46,499	35,609	13,626	2,659	215	34
	Mid	14	61	450	880	2,166	5,566	30,593	50,458	37,554	13,508	2023	351
	High	8	13	78	133	360	967	8,271	26,498	38,603	24,102	5,980	1603
Advanced	Low	2	5	13	29	56	123	1,013	5,558	16,075	17,626	6,173	2,596
	Mid	0	1	1	0	4	10	45	291	1,443	2,763	1,408	846
	High	0	0	0	1	0	1	5	32	153	452	318	244

Table 10. MI-Access ELA Impact Data.

Grade 3-7 Fall 2005 MI-Access ELA Achievement		Matched Fall 2006 MI-Access ELA Achievement							
		Emerging			Attained		Surpassed		
		Low	Mid	High	Low	High	Low	Mid	High
Emerging	Low	6	**38**	**55**	21	6	19	11	11
	Mid	19	118	**131**	74	51	66	48	34
	High	16	92	177	162	96	110	91	59
Attained	Low	15	73	138	149	145	168	146	68
	High	4	30	63	99	126	196	154	96
Surpassed	Low	9	46	89	128	185	369	422	307
	Mid	14	40	69	104	167	406	616	661
	High	8	25	56	83	119	341	748	1756

To assess the statewide impact on the total number of students counted in the sum of the three categories (proficient, provisionally proficient, and on trajectory to proficient) compared to previous calculations (proficient and provisionally proficient only), an analysis was performed on the baseline data (fall 2005 to fall 2006) to determine how many more students would be included in this sum total (using the three categories) rather than in previous calculations (using the two categories). The results are shown in Table 11.

Table 11 shows that the increase in the numerator of the proficiency rate calculations attributable to adding the "on trajectory" category of students is minimal (from four to eight thousand students across grades 4-8. This represents approximately 0.7 to 1.3 percent of students since Michigan assesses between 110,000 and 120,000 per grade for a total of approximately 575,000 in grades 4-8.

A final note on the characteristics of the proposed growth model is that this is not a projection model. This model does not attempt to predict whether based on past performance, students have at least a fifty percent probability of becoming proficient (the implicit definition of being on trajectory to proficiency in a projection model). Because of the volatility of such prediction models and because of the questionable nature of some of the assumptions required by such models, this model instead bases student growth classifications upon the change in performance level actually observed over the previous year.

Using Michigan's proposed model, a student may indeed achieve a significant improvement in performance level during one year, and a decline in the next and these year-to-year differences are not smoothed in the model. Rather than treating those differing pieces of information as deviations from an individualized regression line based only upon a few data points (a questionable projection model assumption), Michigan's proposed model treats this information as real changes in student achievement.

Specifically, Michigan's proposed model asks the following question: "Over the last year, did this not-yet-proficient student move toward proficiency at an acceptable rate?" rather than "After smoothing through regression, is the regression line on target?" The question refers to the past year only. Therefore, it is not necessary to incorporate more than two years of data at any time to apply the model.

This treatment is supported by the incorporation of measurement error in the definition of the sub-levels. This treatment also recognizes that with different teachers and with different schools, real differences in students' performance level change are to be expected from year to year, and incorporates this inherently sensible expectation into the model. Finally, this treatment reduces the data matching requirements and the attrition rates by requiring only two data points per student rather than three or more.

Table 11. Statewide Net Impact over Previous AYP Calculations.

	Students Tested	Proficient	Provisionally Proficient	On Trajectory to Proficiency	Students Both Provisional and On Trajectory
English Language Arts					
MEAP	924,558	586,608	79,746	22,957	22,830
MI-Access FI	37,508	6,238		224	0
Total ELA	962,066	592,846	79,746	23,181	22,830
Mathematics					
MEAP	933,108	560,380	159,390	27,972	28,574
MI-Access FI	34,300	5,383		272	0
Total Math	967,408	565,763	159,390	28,244	28,574

Alignment with the Core Principles
Michigan's proposal aligns with all of the core principles for the growth model pilot as demonstrated below:

1. Goal of All Students Proficient by 2013-14; Closing the Achievement Gap.

   Michigan's proposal meets this expectation in that all students are expected to become proficient by 2013-14 or are expected to be on trajectory to proficiency within three years by 2013-2014

2. Growth expectations will not be moderated based on group or school characteristics.

   Michigan's proposal meets this expectation in that performance level change targets are not affected by group or school characteristics, but are based solely on achieving over the past year the target performance level change that if maintained over the next three years will result in the student becoming proficient.

3. Separate Accountability Determinations Based on English Language Arts and Mathematics.

   Michigan's proposal meets this expectation in that separate performance level change designations are made and evaluated for English Language Arts and Mathematics.

4. Inclusion of All Students, Schools and Districts; Accountability for Subgroup Performance.

   Michigan's proposal meets this expectation in that individual students (regardless of subgroup) can be identified as either meeting proficiency targets or being on trajectory to meeting those targets. In addition, Michigan's proposed model includes the vast majority of students with disabilities, excluding only those with the most severe cognitive disabilities, and then only because the scales used for those students are not currently precise enough to include in growth calculations. Options are currently being explored for increasing the level of precision for these students as well to allow for them to be included in the performance level change calculations.

5. Two Years of Annual Assessments (Peer-Approved) in English Language Arts and Mathematics in Grades 3-8.

   Michigan's proposal meets this expectation in that Michigan' regular and alternate English Language Arts and Mathematics assessments in grades 3-8 have been fully approved under the USED peer review process.

6. Michigan' Data System and Proposed Growth Model will Track Individual Students.

   Michigan's proposal meets this expectation in that the use of Unique Identifier Codes (UICs) and a robust UIC resolution process provides highly accurate matching of students across multiple assessment cycles.

7. Student Participation Rates and Achievement on an Additional Academic Indicator.

   Michigan will continue to require schools and districts to meet the participation requirements related to all students in the tested grades. Michigan will continue to use the other academic indicators of attendance rates for elementary and middle schools and graduation rates for high schools as required elements of AYP.

Responses to Additional Questions
Michigan has responses to each of the additional questions raised in the USED peer review guidance, as follows:

- Michigan will continue to use **uniform averaging** across grades in making AYP determinations, but will not average across years for purposes of the growth model. In using the growth model, we will consider only one year of data in determining whether a student is showing adequate growth for AYP purposes.

- Michigan's **minimum group size** will not change under this proposal. Michigan's existing minimum group size policy will be applied in each of the accountability models, including the proposed growth model. Students with disabilities and limited English proficient students are treated the same as all other groups for purposes of minimum group size.

- Michigan applies a limited **confidence interval** in determining AYP status. However, Michigan will not apply a confidence internal with regard to its growth model.

- As indicated above, the issue of **different assessments** will not prevent appropriate implementation of the growth model. There is only one alternate assessment and it applies only to students with significant cognitive disabilities. Very few students with the most significant cognitive disabilities who are assessed against alternate achievement standards switch to regular assessments.

- The growth model includes measurement of the growth of students who are proficient but the growth of students already proficient does not impact AYP decisions.

- Michigan will continue its current **reporting** policies. Transparent reporting to our districts, schools, parents, and the public is a core priority for MDE. Individual score reports will be provided to parents, and summary score reports by school and subgroup will be provided on the report card published in print and on MDE's website. Parents will be given information on student performance with reference both to status and growth. Reporting formats have already been developed and will be modified for improvement with experience.

Conclusion
Michigan appreciates the opportunity to submit this growth model proposal to USED. We believe strongly that it will help Michigan further the underlying purposes of NCLB, as well as meeting state law requirements. In particular, use of a growth model in conjunction with the current statutory models of AYP accountability will provide significant incentives for schools that educate substantial populations of at-risk students to do a better job in enhancing the academic achievement of these students. As noted above, we also believe that addition of a growth model will enhance the understanding and respect of educators, parents, and the public for our accountability system. By addressing how well a district and school are doing in improving the achievement of the individual students they educate, the growth model will be perceived as enhancing the fairness and integrity of NCLB's accountability system.

Attachment A

Desired Characteristics of the Progress-Based Value-Added Model

This attachment describes some desired characteristics of the model, and indicates how the chosen model fulfills those desired characteristics. The desired characteristics are taken from Rigney & Martineau (2006):

1. Consistency with policy goals of proficiency for all students, while:
   a. Holding high expectations for all students regardless of current achievement
   b. Balancing fairness toward students with fairness toward educators by setting targets based upon observable transitions
2. Freely available for scientific scrutiny to enhance and validate the model
3. Maximal transparency *and* validity
4. Based on alignment to content standard and performance standards
5. Integrate MEAP and MI-Access Functional Independence results into a single system
6. Adaptable for monitoring the progress of different groups of children (e.g. SWD and ELL)
7. Appropriate statistical model for the MEAP and MI-Access scales

Each of these desired characteristics is explained individually below:

1. Consistency with policy goals of proficiency for all students, while:
   a. Holding high expectations for all students regardless of current achievement
   b. Balancing fairness toward students with fairness toward educators by setting targets based upon observable transitions

One of the reasons for implementing a progress-based value-added model is to ameliorate some of the adverse effects of status models.

Status models are seen as focusing solely on equity toward students—that is that no student is expected to perform lower than any other student simply because of their ethnicity, family income, or other demographic characteristics. Status models (such as the No Child Left Behind—NCLB—model for adequate yearly progress) provide exactly the same expectations for all students.

Status models are also seen as being unfair toward educators because all students (and therefore educators) are held to the same achievement standard. This means that educators are held to different standards for fostering student learning depending upon the incoming achievement level of the students they teach, which is often strongly related to demographics.

Value-added models are seen as more fair toward educators in that all educators are held to exactly the same standard for fostering student learning. One of the mantras of value-added modeling is "one year of growth for one year of instruction."

The problem is that with value-added models, if all students are held to the same progress standards, existing achievement gaps may remain unabated. This is not fair toward students in that students belonging to historically lower achieving groups will be expected to remain lower achieving.

One of the desired characteristics of the model is to balance fairness toward educators with fairness toward students.

The approach that this model takes to that dilemma is to set rigorous standards for student progress, particularly those who are not yet proficient, but to set those progress standards in a reasonable way such that the progress targets can be attained. This means that the targets for progress may not take students all the way to proficient in one year, but that rigorous targets are set to move students toward proficiency, beyond proficiency, or to maintaining proficiency.

Although the AYP application of the model is by USED guidance limited to use in identifying not-yet-proficient students as on trajectory to becoming proficient, that does not limit the State accountability system from also identifying schools where high performing students' performance levels are declining or improving. By describing and summarizing students performance level change, a second dimension (change) can be added to the primary dimension (achievement) for *all* schools, regardless of proficiency rates.

A stakeholder workgroup is currently working with the Michigan Department of Education to identify how these data can be used for additional reporting and accountability measures for all schools, including both low and high performers.

2. Freely available for scientific scrutiny to enhance and validate the model

There are some value added models with components that are proprietary and cannot be validated even by qualified statisticians. Michigan has chosen to use only methods that reside in the public domain for this model.

3. Maximal transparency and validity

Most value added models are highly complicated statistical models understood only by a few. One of the reasons cited for the complexity is maintaining the validity of the system. However, this raises questions about how well the results of the model can be explained and accepted when the evaluation methods are not accessible to those being evaluated.

Michigan's approach to resolving this conflict between validity and transparency is to use a transition table approach (adapted from Hill, 2005 and Betebenner, 2005) that follows children from one portion of an achievement scale in one grade to another portion in another grade. By setting up the model in this way, individual students, teachers, and administrators can replicate the results of the model for themselves if desired.

In addition, Michigan has taken the approach of reporting change in performance level in a manner analogous to the reports of student achievement—providing a change in performance level designation for each student, and aggregating to the school level in the same manner as for achievement.

4. Based on alignment to content standard and performance standards

Most value added models are norm-referenced, meaning that the results indicate which schools are above or below average in terms of the progress their students make. While normative interpretations can be useful, they do not tell whether students in any given school made enough progress to ultimately achieve proficiency, move beyond proficiency, or maintain proficiency.

Michigan's approach to this problem was to leverage existing vertically articulated value judgments about what level of achievement is acceptable to evaluate the different types of progress individual students can make toward proficiency, beyond proficiency, and in maintaining proficiency.

Note that the already-approved academic achievement standards are not to be replaced by the performance level change designations. The performance level change designations provide information about how students are progressing across grades in relation to the existing academic achievement standards.

5. Integrate MEAP and MI-Access Functional Independence results into a single system

Most value added models assume that all students' scores are on the same scale, making it impossible to integrate regular and alternate assessments into the same system.

The system created by Michigan resolves this issue by rating student progress on both the MEAP and MI-Access into the same categories by including cross-assessment discussions in the stakeholder activities in which multiple stakeholders identified, discussed, and validated any differences across assessments.

6. Adaptable for monitoring the progress of different groups of children (e.g. SWD and ELL)

Most value added models have this capacity, and Michigan felt it was important to maintain that capacity by creating a model whose outcomes could become the focus of statistical models identifying the relationships between demographic groups and the progress they make.

7. Appropriate statistical model for the MEAP and MI-Access scales

Almost all value added models assume that the achievement scales they analyze have highly unrealistic psychometric properties, namely that the scales are interval-level scales, linear, and measure only one type of achievement from the bottom of the lowest grade to the top of the highest grade (see Martineau, 2006; Martineau, Subedi, et al., 2007; Reckase, 2004; Schmidt et al., 2005, for explanations of why this is highly problematic).

Michigan has determined to resolve this technical psychometric issue by treating the scales as ordinal, non-linear, and measuring several different types of achievement, depending upon what is being taught in each grade. A detailed description of how this was accomplished is given by Martineau, Paek, et al. (2007) and Martineau (2007).

References

Betebenner, D. W. (2005, June). *Performance Standards in Measures of Educational Effectiveness.* Paper presented at the 25th Annual Conference on Large Scale Assessment of the Council of Chief State School Officers, San Antonio, TX.

Hill, R. (2005, June). *Measuring Student Growth Through Value Tables.* Paper presented at the 25th Annual Conference on Large Scale Assessment of the Council of Chief State School Officers, San Antonio, TX.

Martineau, J. A. (2006). Distorting Value Added: The Use of Longitudinal, Vertically Scaled Student Achievement Data for Growth-Based Value-Added Accountability. *Journal of Educational and Behavioral Statistics, 31*(1), 35-62.

Martineau, J.A. (2007). *Designing a Valid and Transparent Progress-Based Value-Added Accountability Model*. Paper presented at the Annual Conference of the American Educational Research Association (AERA), Chicago, IL.

Martineau, J. A., Subedi, D., Ward, K., Li, T., Diao, Q., Drake, S., Kao, S.-C., Li, X., Lu, Y., Pang, F.-H., Song, T., Zheng, Y. (2007). Non-Linear Trajectories through Multidimensional Content Spaces: An Examination of Common Psychometric Claims of Unidimensionality, Linearity, and Interval-Level Measurement. In Lissitz R.W. (Ed.). *Assessing and Modeling Cognitive Development in School: Intellectual Growth and Standard Setting*. JAM Press, Maple Grove, MN.

Martineau, J. A., Paek, P., Keene, J., & Hirsch, T. (2007). Integrated, Comprehensive Alignment as a Foundation for Measuring Student Progress. *Educational Measurement: Issues & Practice, 26*(1), 28-35.

Reckase, M. D. (2004). The Real World Is More Complicated Than We Would Like. *Journal of Educational and Behavioral Statistics, 29*(1), 117-120.

Rigney, S. L., & Martineau, J. A. (2006). NCLB and Growth Models: In Conflict or in Concert? In R. L. Lissitz (Ed.), *Longitudinal and Value Added Models of Student Performance* (pp. 47-81). Maple Grove, MN: JAM Press.

Schmidt, W. H., Houang, R. T., & McKnight, C. C. (2005). Value-Added Research: Right Idea but Wrong Solution? In R. Lissitz (Ed.), *Value Added Models in Education: Theory and Applications* (pp. 145-164). Maple Grove, MN: JAM Press.

THE CENTER
FOR
CHARTER SCHOOLS
CENTRAL MICHIGAN UNIVERSITY

DERIVATION OF COLLEGE-READINESS BENCHMARKS

The Center for Charter Schools at Central Michigan University
May 3, 2010

THE CENTER FOR CHARTER SCHOOLS
CENTRAL MICHIGAN UNIVERSITY

Preparing Students Academically for Success in College, Work and Life

"America must have high college and career-ready standards. Every business owner knows you set high expectations for employees. We must do the same for students."

-Arne Duncan, U.S. Secretary of Education

Today, more than ever, it's apparent that the need is not for just more educational options, but for more quality options. We need schools that not only meet the individual needs of the students they serve, but also fulfill the needs of our state and country to be competitive in the global economy.

This is why Central Michigan University ("CMU") became the first university in the nation to charter a public school in 1994. As a university with over a 100-year tradition of preparing teachers and school leaders, we see firsthand the transformative power that charter public schools can have for individual students, schools, and public education as a whole.

In our passionate pursuit of excellence, we are raising the bar by beginning with what Stephen Covey calls "the end in mind." Our goal is simple, but not simplistic. We want the schools chartered by CMU to prepare students academically for success in college, work, and life. Moreover, we commit to holding ourselves and the schools we charter accountable for achieving this goal. In the attached *Derivation of College-Readiness Benchmarks*, we detail how we plan to measure each year whether or not individual students and the collective "we" are performing.

Beginning in second grade and each grade thereafter, we will provide academic performance reports –for students and their parents, teachers and their principals, school boards and other policymakers – showing their achievement status and whether or not they are on track to achieve a composite score of 21 or better on the ACT® in the eleventh grade.

Rather than talking about linking student outcomes to effectiveness, CMU and the 58 schools we charter are boldly proceeding to do just that. This represents 25% of all schools chartered in Michigan and over 30,000 students, two-thirds of which would traditionally be labeled as at-risk.

Introduction

This document describes the data and methods that The Center for Charter Schools ("Center") at Central Michigan University ("CMU") used to develop college-readiness benchmarks for the charter schools that it authorizes. The steps in this development were as follows:

a) Identify scores on the ACT® which give students a reasonable probability of gaining admission to college, and of succeeding in first-year college courses. The State of Michigan administers the ACT® to students in the spring of grade 11 as part of the Michigan Merit Examination.

b) Identify scores on ACT's EXPLORE® test (given in grade 8 or 9) and PLAN® test (given in grade 10) which students typically achieve who later score at or above the ACT® benchmarks identified in step a) above.

c) Use ordinary least-squares regression analysis to determine the scores which a student must achieve on the Performance Series® (PS) or Measures of Academic Performance (MAP) near the end of grade 8 in order to have a reasonable probability of achieving the benchmark scores on the EXPLORE® in grade 9.

d) Set PS and MAP benchmarks for the spring of grade 2 at the fiftieth percentile.

e) Set benchmarks for the spring of grade 5 which are somewhat above the midpoint between the grade 2 and grade 8 benchmarks (since students grow more quickly in earlier grades than in later ones).

ACT® Benchmarks (Grade 11)

In "Statistical Properties of Accountability Measures Based on ACT's Educational planning and Assessment System," Jeff Allen (2009) et al. examined post-secondary enrollment data on over 70,000 high school students belonging to 1,019 cohorts who had taken ACT's EXPLORE® , PLAN® and ACT® tests. One of their key findings was that the mean number of ACT® benchmarks met was a "valuable source of information" for "measuring school effects on college readiness". Specifically, they found a simple correlation of 0.42 between college enrollment and the mean number of ACT® benchmarks met. After adjusting for several confounding variables, the correlation dropped to 0.39. (See Table 33 on p. 65 of Allen's 2009 paper.)

In an earlier paper ("Using ACT® Assessment Scores to Set Benchmarks for College Readiness"), Allen and Sconing (2005) analyzed grades achieved in typical first-year college courses by students who had taken the ACT® test. For each college in their sample, Allen and Sconing used logistic regression to model the probability of success in a given course (a grade of B or better) as a function of the student's ACT® score. Based on these models, they then identified (for each college and course) a cutoff score -- the ACT® score which yielded a 0.50 probability of success in the course. Finally, for each course, Allen and Sconing found the median cutoff score for all the colleges in their sample, and recommended using those scores as benchmarks of college-readiness in that subject area. The following table shows Allen and Sconing's benchmark ACT® scores for college-readiness:

Table 1. ACT® Benchmarks for College Readiness, by Subject Area[1]

Course	ACT® Test	Benchmark Score
English Composition	English	18
College Algebra	Mathematics	22
Social Science	Reading	21
Biology	Science	24

EXPLORE® and PLAN® Benchmarks (Grades 8-10)

ACT's Educational Planning and Assessment System (EPAS®) includes two tests which schools can administer before the ACT®, to get an early sense of students' academic progress toward college-readiness. ACT provides the EXPLORE® test for use in grade 8 or 9, and the PLAN® test for use in grade 10. The technical manuals for the EXPLORE® and PLAN® tests both include tables showing the correlations (both observed and disattenuated) between the EXPLORE® and PLAN®. The values differ slightly between the two manuals, because ACT® used different samples to calculate the correlations (352,405 students in the EXPLORE® manual, 481,996 in the PLAN® manual). In addition, the EXPLORE® manual shows the correlations between the ACT® and the EXPLORE®. The PLAN® manual shows how PLAN® scores correlate with ACT® scores. Here are the tables:

Table 2. Correlations, Observed and (Disattenuated), Between EXPLORE®, PLAN®, and ACT® Test Scale Scores[2]

	PLAN®				
EXPLORE®	**English**	**Mathematics**	**Reading**	**Science**	**Composite**
English	.74 (.85)	.60	.63	.58	.75
Mathematics	.60	.73 (.88)	.53	.60	.72
Reading	.67	.56	.63 (.77)	.58	.71
Science	.64	.63	.59	.62 (.78)	.72
Composite	.77	.73	.69	.69	.84 (.89)

	ACT®				
EXPLORE®	**English**	**Mathematics**	**Reading**	**Science**	**Composite**
English	.75 (.85)	.60	.67	.61	.74
Mathematics	.60	.73 (.85)	.57	.66	.72
Reading	.68	.56	.68 (.80)	.60	.71
Science	.65	.64	.63	.65 (.80)	.72
Composite	.79	.73	.74	.72	.83 (.87)

[1] Allen and Sconing 2005, Table 1, p. 3.
[2] *EXPLORE® Technical Manual*, Table 4.25, p. 45

Table 3. Correlations, Observed and (Disattenuated), Between EXPLORE®, PLAN®, and ACT® Test Scale Scores[3]

	EXPLORE®				
PLAN®	**English**	**Mathematics**	**Reading**	**Science**	**Composite**
English	.75 (.88)	.61	.67	.64	.77
Mathematics	.60	.73 (.90)	.57	.63	.73
Reading	.62	.53	.63 (.77)	.59	.69
Science	.59	.61	.59	.63 (.78)	.69
Composite	.75	.72	.72	.72	.84 (.89)

	ACT®				
PLAN®	**English**	**Mathematics**	**Reading**	**Science**	**Composite**
English	.80 (.82)	.64	.72	.65	.80
Mathematics	.66	.81 (.94)	.60	.70	.77
Reading	.67	.55	.70 (.85)	.60	.71
Science	.64	.67	.63	.68 (.83)	.73
Composite	.81	.77	.77	.76	.88 (.93)

To establish college-readiness benchmarks for the EXPLORE® and PLAN® tests, ACT then identified the EXPLORE® and PLAN® scores which most nearly gave a student a 50% probability of scoring at or above the benchmarks shown in Table 1 above. These benchmarks appear in Table 4 below.

In addition to the scores on the four subject-specific tests (English, mathematics, reading, and science), ACT also reports a composite score, which is the average of the four subject-specific scores, rounded to the nearest whole number. Summarizing the development to this point in terms of composite scores, the Center's benchmarks for college-readiness are as shown in Table 5 below.

Table 4. EXPLORE® and PLAN® College-Readiness Benchmarks[4]

Subject	**EXPLORE® benchmark**	**PLAN® benchmark**
English	13	15
Mathematics	17	19
Reading	15	17
Science	20	21

[3] *PLAN® Technical Manual*, Table 4.14, p. 41
[4] From *EXPLORE® Technical Manual*, Table 3.5, p. 18

Table 5. Composite college-readiness benchmarks

Grade 8 or 9 (EXPLORE®)	Grade 10 (PLAN®)	Grade 11 (ACT®)
16	18	21

Performance Series®-to-EXPLORE® Regressions

In its contracts with the schools authorized by CMU, the Center requires that each school administer a computer adaptive test in reading and mathematics to students in grades K-8 each fall and spring. Targeted schools may also be required to administer a winter test. The Center provides the web-based Performance Series® tests, from Scantron™ Corporation, free of charge to schools. A school need not use the Performance Series® (PS) tests, but if it wants to use a different kind of test, it must (a) demonstrate to the Center's satisfaction that its preferred test series meets or exceeds the PS capabilities, and (b) bear the full cost of testing.

The only schools authorized by CMU which currently do not use the PS are the eight schools managed and operated by National Heritage Academies (NHA). NHA has chosen to use Measures of Academic Progress (MAP) tests from the Northwest Evaluation Association (NWEA). The Center has approved MAP tests as an acceptable alternative to the PS tests.

Students take PS tests beginning in grade 2. These tests provide an early means of assessing whether a child is "on track" to meet the EXPLORE® college-readiness benchmarks in grade 8 or 9. This section focuses on work done by the Center by on the relationship between Scantron PS test scores and scores a student may be expected to achieve on ACT's EXPLORE® test.

The next section will focus on the relationship between the NWEA MAP test and EXPLORE® scores.

Though Table 5 above gives the EXPLORE® benchmark in terms of the *composite* score, the Center only requires PS tests in reading and mathematics. For this reason, the relationships between PS and EXPLORE® scores for these two subjects were analyzed. (ACT® composite scores are simply the average of the scores on the subject-specific tests, rounded to the nearest whole number.)[5]

The first and most straightforward way to investigate the relationship between PS scores in the spring of grade 8 and EXPLORE® scores in the fall of grade 9 is as follows:

a) Assemble data from students who took both tests;
b) Identify the students whose scores equaled or exceeded the EXPLORE® benchmark; and
c) Calculate the average PS score achieved by those students.

The summary of those calculations appear below in Table 6.

[5] "Understand Your Scores," from ACT®, Inc: A Student Site for ACT® Test Takers (http://www.ACTstudent.org/index.html).

Table 6. PS scores of students who met the EXPLORE® benchmarks

Subject	Average[6] PS score	Standard Deviation	Count of Students	% who met benchmark
Mathematics	2879.3	147.15	556	11%
Reading	3035.5	138.64	553	23%

Second, a linear regression analysis was performed to get a more general view of how PS scores relate to EXPLORE® scores. The resulting parameters are in Table 7 below. Figure 1 and Figure 2 below show scatterplots and trend lines for mathematics and reading scores, respectively. The dashed lines mark one standard error of estimate above and below the trend lines.

Table 7. Parameters from linear regression of PS scores on EXPLORE® scores

Subject	Slope	Intercept	SE_y
Mathematics	0.0127	-20.2991	2.4689
Reading	0.0075	-8.4991	2.4411

Based on these regression parameters, the PS scores which correspond to the EXPLORE® benchmarks are those shown in Table 8 below.

Table 8. Linear regression: PS Scores corresponding to EXPLORE® benchmarks

Subject	PS score to meet EXPLORE® benchmark
Mathematics	2937
Reading	3133

[6] To maximize the size of the sample, PS and ACT® scaled scores from 2007, 2008 and 2009 were used. The same strategy was used in the regression analyses reported below.

Figure 1. Scatterplot and trend line for PS and EXPLORE® math scores

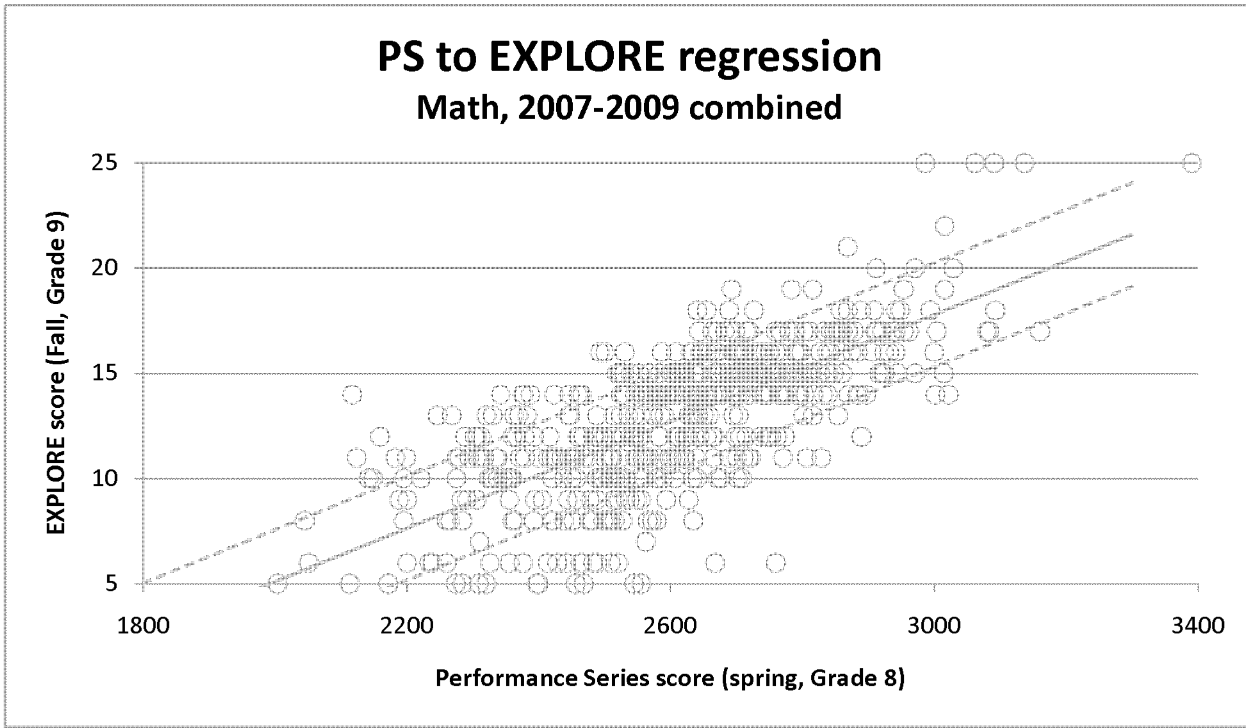
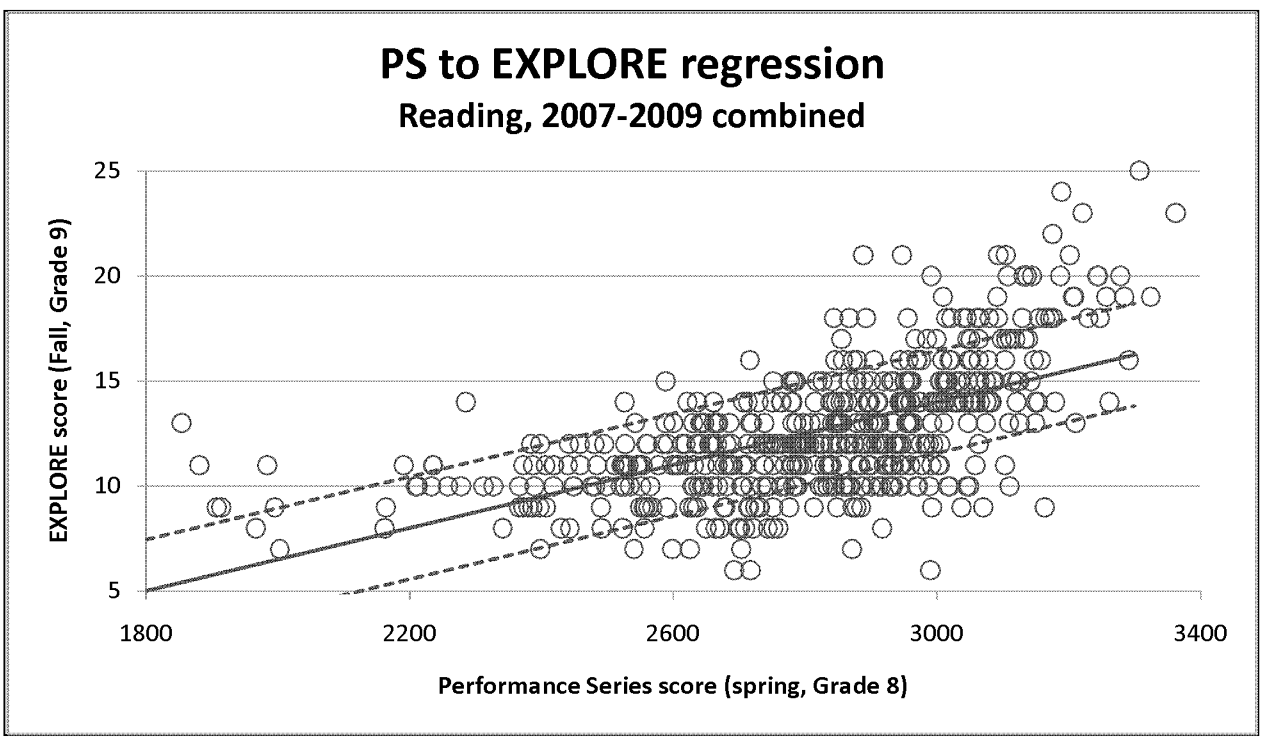


Figure 2. Scatterplot and trend line for PS and EXPLORE® reading scores



Finally, logistic regressions were performed to determine the PS scores which correspond to a 50% probability of meeting the EXPLORE® benchmarks. (See "Logistic regression datasets.xlsx," which used John Pezzullo's "Logistic Regression Calculating Page" website.) Table 9 below shows the PS scores associated with a fifty-percent success rate from grade 8 PS to a grade 9 EXPLORE® composite score of 16.

Table 9. Logistic regression: PS scores for 50% probability of meeting EXPLORE® benchmarks

Subject	PS score for 50% success rate
Mathematics	2902
Reading	3045

This provides three statistical measures of what a reasonable college-readiness benchmark might be for students taking the PS test in spring of grade 8. Table 10 below shows the statistical results, as well as the PS scores which the Center proposes to use as benchmarks of college-readiness in the spring of grade 8.

Table 10. Summary of results for PS grade 8 benchmarks

Subject	Mean of passers	Linear regression	Logistic regression	Proposed Benchmark
Mathematics	2879	2937	2902	2890
Reading	3036	3133	3045	3012

Measures of Academic Progress-to-EXPLORE® Regressions

Table 11 below gives descriptive statistics concerning the spring MAP scores of those students in the sample who met the benchmark when they took the EXPLORE® test the same spring:

Table 11. MAP scores of students who met the EXPLORE® benchmarks

Subject	Average MAP score	Standard Deviation	Count of students	% who met benchmark
Mathematics	256	82.47	235	66%
Reading	236	52.16	236	65%

To show the statistical relationship between MAP scores and EXPLORE® scores, the steps from the preceding section, showing how PS scores correlate with EXPLORE® scores, were repeated with MAP scores in place of PS scores. The results of the linear regression analyses between MAP scores and EXPLORE® scores appear in Table 12 below.[7]

Table 12. Parameters from linear regression of MAP scores on EXPLORE® scores

Subject	Slope	Intercept	SE_y
Mathematics	0.186	-28.802	2.224
Reading	0.255	-42.656	2.910

[7] The dataset for this analysis is available upon request.

The regression parameters in Table 12 above enable the prediction of the expected MAP scores a student would need to achieve in order to meet the benchmarks on the EXPLORE® test. Those values appear in Table 13 below.

Table 13. Linear regression: MAP scores corresponding to EXPLORE® benchmarks

Subject	MAP score to meet EXPLORE® benchmark
Mathematics	244
Reading	225

Figure 3 and Figure 4 below show the trend lines implied by the parameters in Table 12, with points representing the MAP and EXPLORE® scores of all students in the samples for math and reading respectively.

Figure 3. Scatter plot and trend line for MAP and EXPLORE® math scores

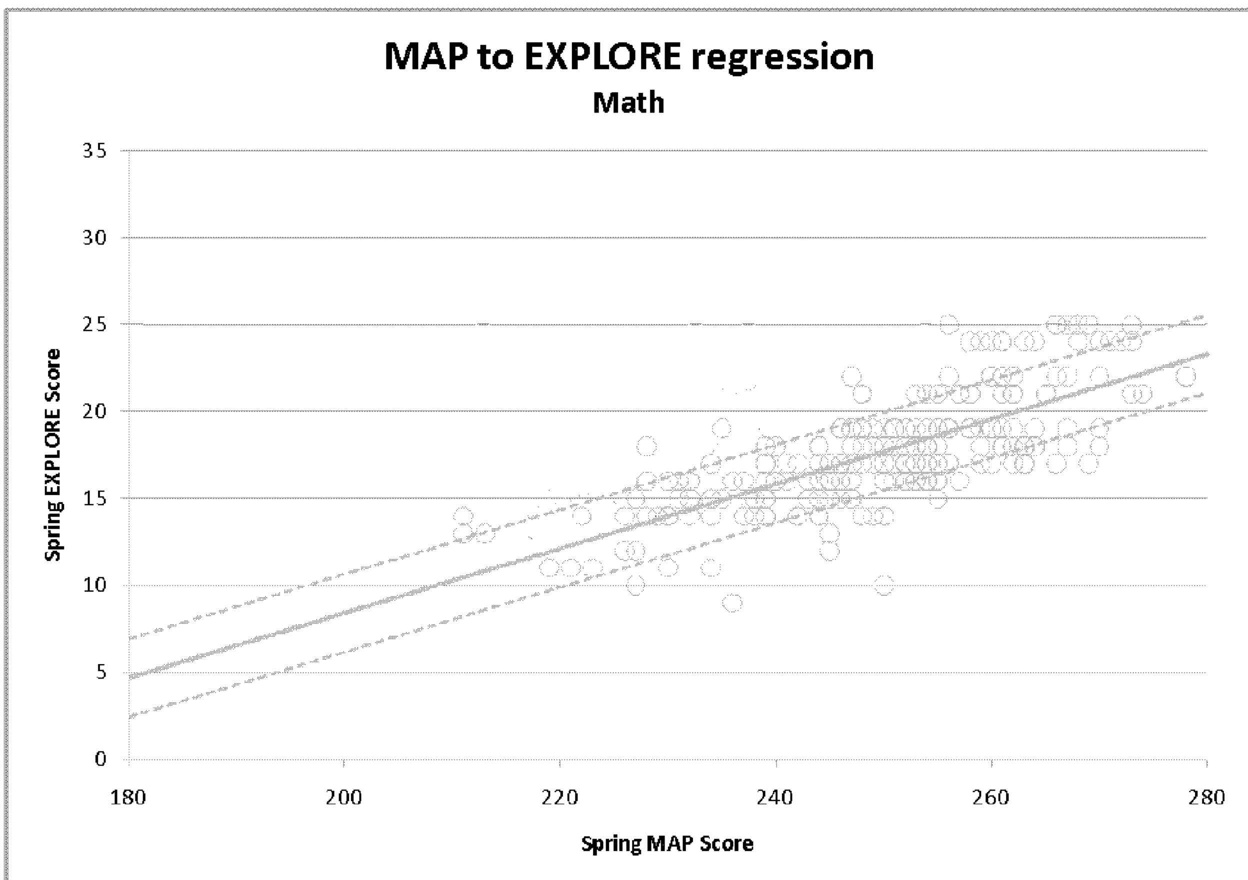
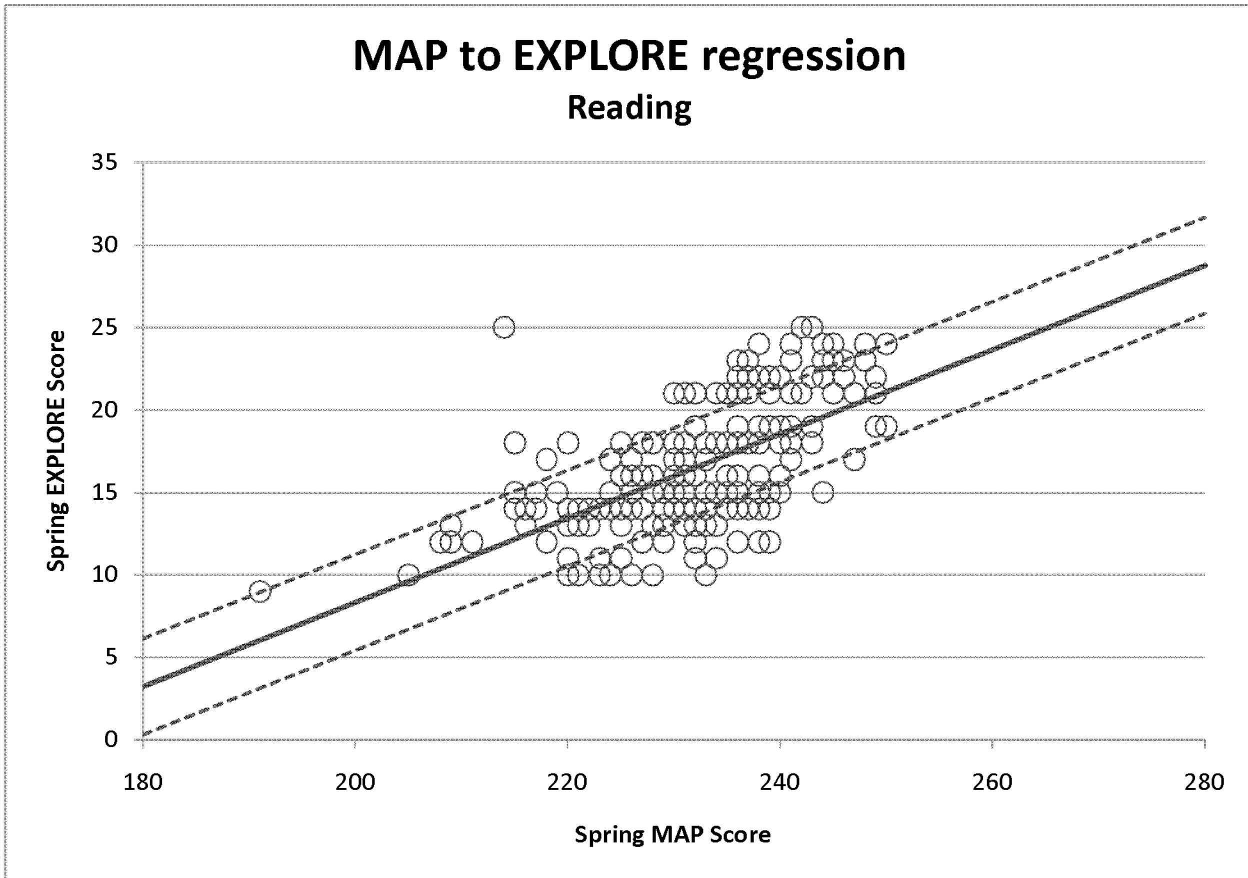


Figure 4. Scatterplot and trend line for MAP and EXPLORE® reading scores



A logistic regression was performed on the MAP and EXPLORE® data in the samples, in order to identify the MAP scores which correspond to a 50% probability that a student will achieve the benchmark scores on the EXPLORE® test. The results of this logistic regression analysis appear in Table 14 below.

Table 14. Logistic regression: MAP scores for 50% probability of meeting EXPLORE® benchmarks

Subject	MAP score for 50% success rate
Mathematics	245
Reading	228

Finally, Table 15 below compares the proposed benchmarks for MAP scores in grade 8 with the results of the three statistical analyses just presented.

Table 15. Summary of results for MAP grade 8 benchmarks

Subject	Mean of passers	Linear regression	Logistic regression	Proposed Benchmark
Mathematics	256	244	245	242
Reading	236	225	228	227

Note: The Center benchmark was set to be within 1 standard error of measurement of the logistic regression analysis.

The college-readiness trajectory for Performance Series®

Scantron has published a report, "*Observed Mean Gains in Performance Series By Grade/Subject*", which provides information on how much students normally gain between fall and spring tests in a given grade. College-readiness benchmarks previously established for the PS Mathematics and Reading tests given to students in the spring of grade 8. The *Observed Mean Gains* report will help us to identify benchmarks for the fall of grade 8, and for the fall and spring tests in earlier grades.

The "*Observed Mean Gains*" report provides different fall-to-spring growth values for students, depending on the quartile in which they score on the fall test. Table 16 below shows an excerpt from the *Observed Mean Gains* report.

Table 16. *Observed Mean Gains* in grade 2 Mathematics

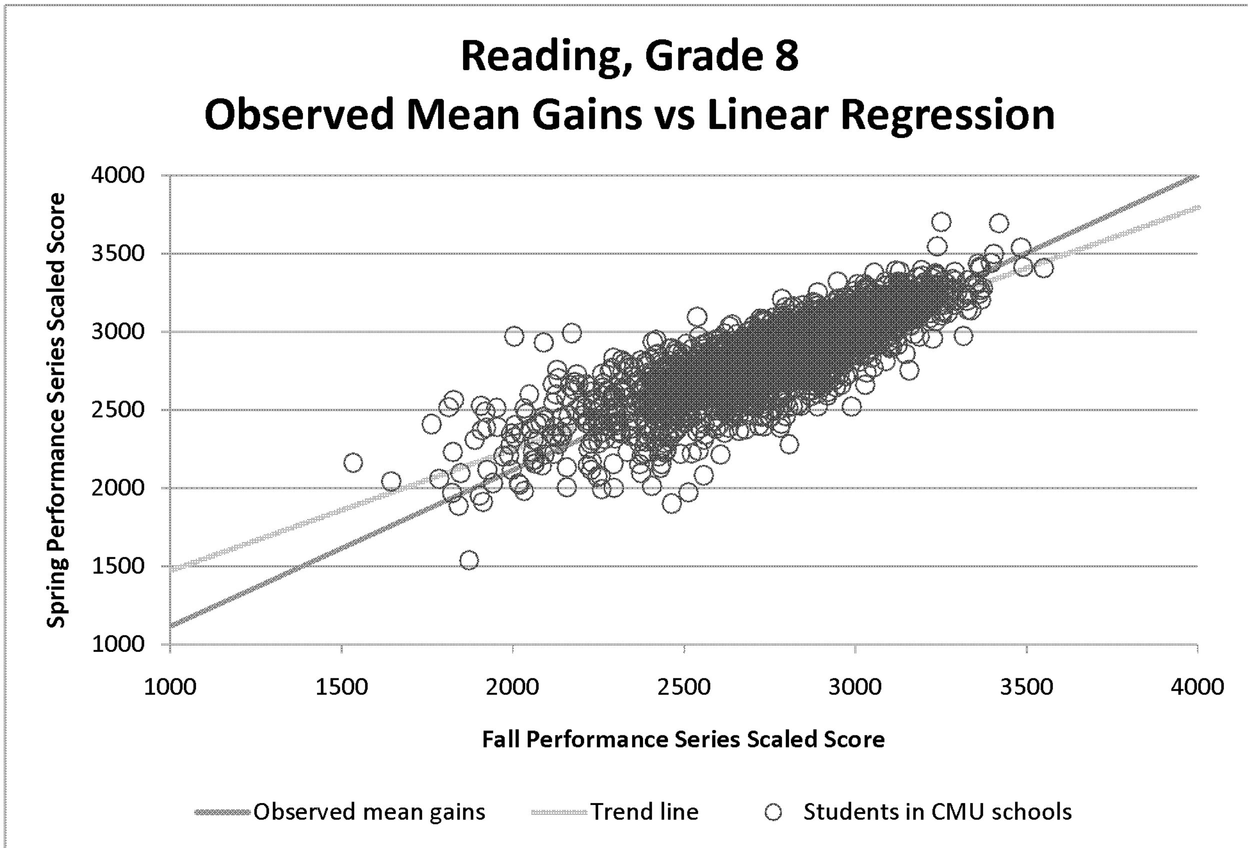
Quartile	Fall Mean SS	Spring Mean SS	Fall-to-Spring Gain	Std Dev	Std Error
1	1781.44	2023.77	242.33	141.78	5.45
2	1942.93	2140.19	197.27	109.40	4.19
3	2049.35	2213.92	164.57	104.61	4.19
4	2195.99	2336.41	140.43	100.96	3.88

Scantron's model of student growth assumes that all students in a given quartile grow by the same number of scaled-score points between fall and spring of a given school year. This is equivalent to having four linear regression models (one for each quartile), each with a distinct intercept, but all with a slope of 1 (45°).

Table 16 reflects the fact that students who start at lower achievement levels tend to grow more than those who start at higher levels: the mean fall-to-spring gain in mathematics for second-grade students in the bottom quartile is 242.33 scaled-score points, while those in the top quartile grow by only 140.43 points over the same period.

The schools authorized by CMU have built up a fairly substantial body of scores on the Performance Series tests (except in grade 2), so it was decided to prepare a set of scatter plots, illustrating fall scores on the horizontal axis and spring scores for the same students on the vertical axis. Over these scatter plots, the growth predicted by "*Observed Mean Gains*" was overlaid, and the trend line resulting from an ordinary least squares regression analysis. Figure 5 below gives one example of this type of chart.

Figure 5. Fall-to-Spring Growth in grade 8 Reading at CMU Schools



Note that:

a) The slope of the trend line (based on linear regression) is a bit flatter than the prediction line based on *Observed Mean Gains*, but that

b) Both prediction lines appear to pass through the heart of the data points.

The differences in accuracy of prediction are all in favor of the linear regression, but the differences are also fairly small. This result encourages us to believe that the *Observed Mean Gains* method is a reasonable tool to use for creating a trajectory of college-readiness benchmarks, linked by normal growth.

Table 17, below, shows results of the OLS regression analyses for grade/subject combinations.

Table 17. PS regression parameters and sum of squared residuals comparison

							SS_{resid}		
grade	Subject	Slope	Intercept	DF	r^2	SE_y	SCANTRON	OLS	% different
2	Reading	0.79	655.26	157	0.68	179.26	5270712	5045023	4%
3	Reading	0.78	672.47	3020	0.69	165.55	86061735	82769274	4%
4	Reading	0.81	598.76	3030	0.72	156.05	75180163	73785619	2%
5	Reading	0.79	657.91	2916	0.73	144.59	65006728	60965511	7%
6	Reading	0.79	651.25	2702	0.73	142.25	58602746	54674641	7%
7	Reading	0.77	716.84	2723	0.74	131.85	51427005	47341347	9%
8	Reading	0.77	698.37	2685	0.69	133.96	52552937	48180730	9%
2	Math	0.71	784.53	214	0.53	135.83	4373016	3948133	11%
3	Math	0.77	651.57	4107	0.61	101.23	46519198	42088540	11%
4	Math	0.82	528.14	4047	0.63	101.34	43946696	41562803	6%
5	Math	0.85	453.35	3938	0.68	100.89	43803302	40085764	9%
6	Math	0.89	354.78	3755	0.71	100.87	39769833	38203720	4%
7	Math	0.90	325.17	3777	0.73	104.50	42617140	41242454	3%
8	Math	0.92	281.39	3585	0.75	104.88	40954615	39435121	4%

Table 18 below shows the proposed PS college-readiness benchmarks in reading and mathematics, for grades 2-8 and for each testing term (fall, winter, and spring). Spring benchmarks for grades 2, 5, and 8 are bold to indicate that they will have a special significance in assessing the performance of schools. Percentile ranks corresponding to the scaled scores are provided as an additional context. The details of the procedure are available in "College readiness (PS).xlsx." In overview, this procedure was as follows:

a) The spring benchmarks are based on previous (unpublished) research.

b) The fall benchmark for grade 2 matches the percentile rank of the benchmark for spring of the same grade.

c) Fall benchmarks for grades 3-8 start with the benchmark for the previous fall. Based on the quartile of that fall benchmark, *Observed Mean Gains* was consulted, and the observed fall-to-fall gain for that quartile were added to the previous fall benchmark. (Note that *Observed Mean Gains* provides fall-to-fall gains only "between the lines." On its face, it lists only fall-to-spring gains.)

d) Winter benchmarks are half-way between the fall and spring benchmarks for each grade.

Table 18. Performance Series® College-Readiness Benchmarks

Reading

grade	Test term	Benchmark	Percentile
2	Fall	1961	50
2	Winter	2113	51
2	Spring	**2265**	50
3	Fall	2275	46
3	Winter	2389	49
3	Spring	2504	52
4	Fall	2505	47
4	Winter	2598	56
4	Spring	2691	54
5	Fall	2677	48
5	Winter	2760	55
5	Spring	**2843**	60
6	Fall	2799	50
6	Winter	2860	62
6	Spring	2921	60
7	Fall	2858	52
7	Winter	2903	54
7	Spring	2948	60
8	Fall	2927	51
8	Winter	2970	62
8	Spring	**3012**	60

Math

grade	Test term	Benchmark	Percentile
2	Fall	1991	50
2	Winter	2091	52
2	Spring	**2191**	50
3	Fall	2186	48
3	Winter	2283	54
3	Spring	2380	53
4	Fall	2339	48
4	Winter	2418	60
4	Spring	2497	56
5	Fall	2438	47
5	Winter	2526	57
5	Spring	**2615**	60
6	Fall	2546	47
6	Winter	2640	66
6	Spring	2733	63
7	Fall	2613	46
7	Winter	2706	60
7	Spring	2800	65
8	Fall	2684	46
8	Winter	2787	69
8	Spring	**2890**	69

A graphical way to put these benchmarks in perspective is to plot them on the same chart with quartile-range means from *Observed Mean Gains*. Figure 6 and Figure 7 below show these plots[8], for mathematics and reading respectively. The round dots represent the benchmarks from Table 18 above. The light horizontal bars represent the means for the first quartile (percentiles 1-25) and the fourth quartile (percentiles 76-99). The heavy horizontal bars represent the means of the second and third quartiles.

Note that the spring benchmarks fall close to the means of the third quartile, which encompasses the territory between the fifty-first and the seventy-fifth percentiles – above average, but not far above average. This seems appropriate for college-readiness benchmarks.

[8] The data for these plots are in “Observed mean PST gain plots.xlsx.”

Figure 6. Observed mean gain profiles in mathematics with PS benchmarks

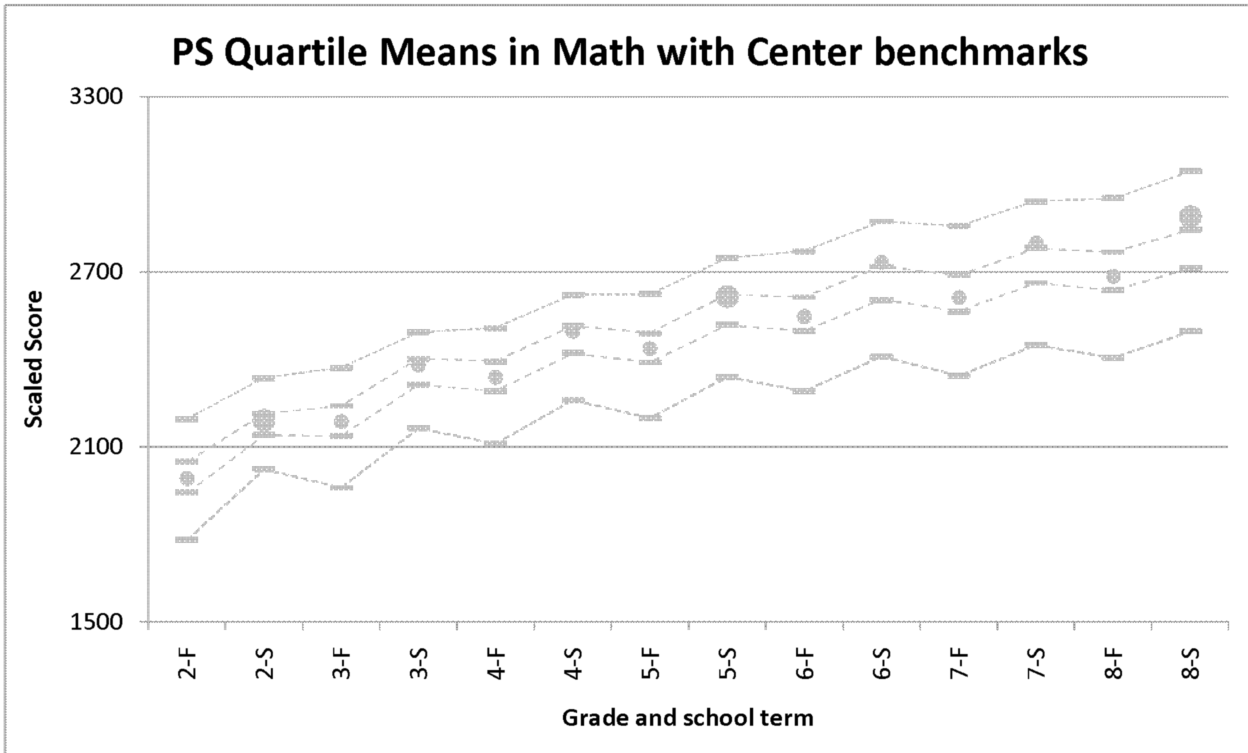
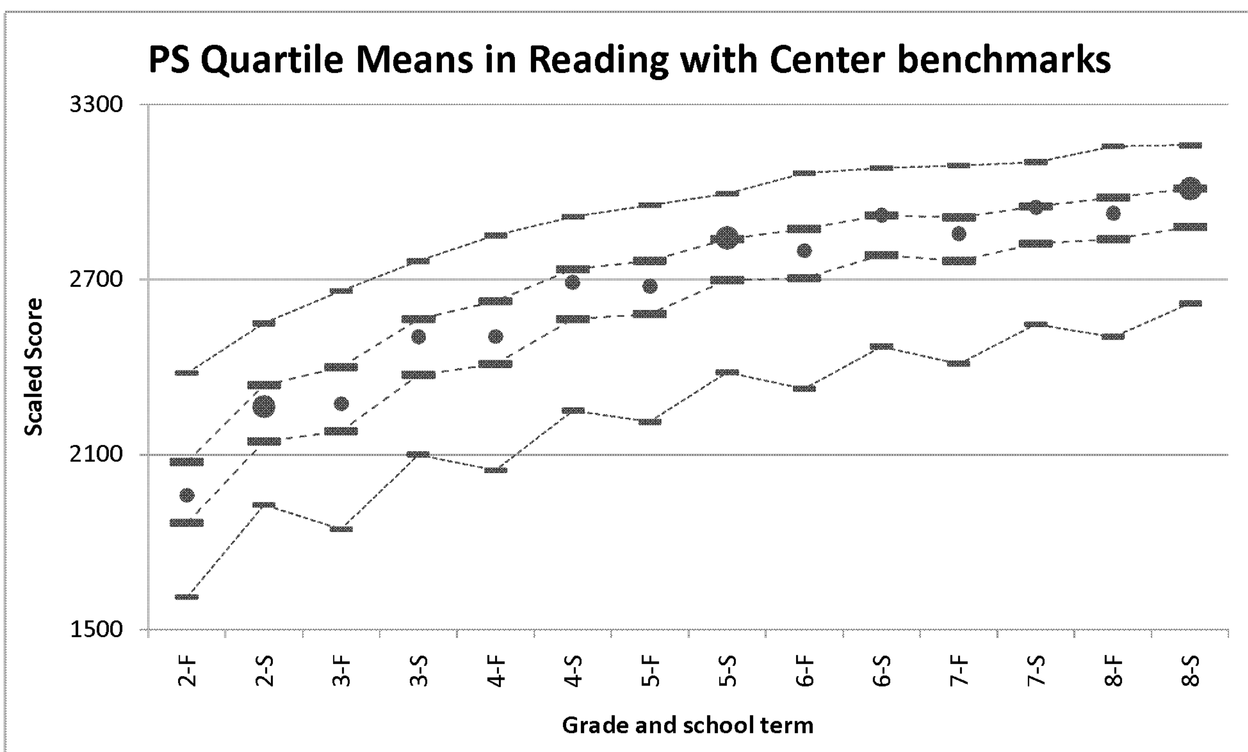


Figure 7. Observed mean gain profiles in reading with PS benchmarks



These charts show lines connecting the n^{th}-quartile means for the various grades only as an aid in seeing which quartile a given marker belongs to. These lines should not be taken to mean that students typically maintain a constant percentile rank throughout grades 2-8. Figure 8 and Figure 9 below show what happens to the percentile ranks of students who enter grade 2 at the fifth, sixtieth, and ninety-fifth percentiles, and then achieve normal growth (as defined by *Observed Mean Gains*) through the end of grade 8. Since Scantron provides norms only for fall-to-spring growth, these plots assume that a student's Fall scaled score in a given subject is the same as his or her spring score in that subject.

What these plots show is a student who enters grade 2 with a low percentile rank will (with normal growth) leave grade 8 at a significantly higher percentile rank. A student who enters grade 2 at a high percentile rank, on the other hand, will (with normal growth) leave grade 8 at a lower percentile rank. (This effect is much more pronounced in reading than in math.) A student who enrolls in grade 2 at the sixtieth percentile will lose considerable ground (in percentile terms) in reading. In math, such a student will lose percentile standing for two years, then start gaining ground, leaving grade 8 at the sixty-ninth percentile.

Figure 8. Three normal-growth PS profiles in mathematics

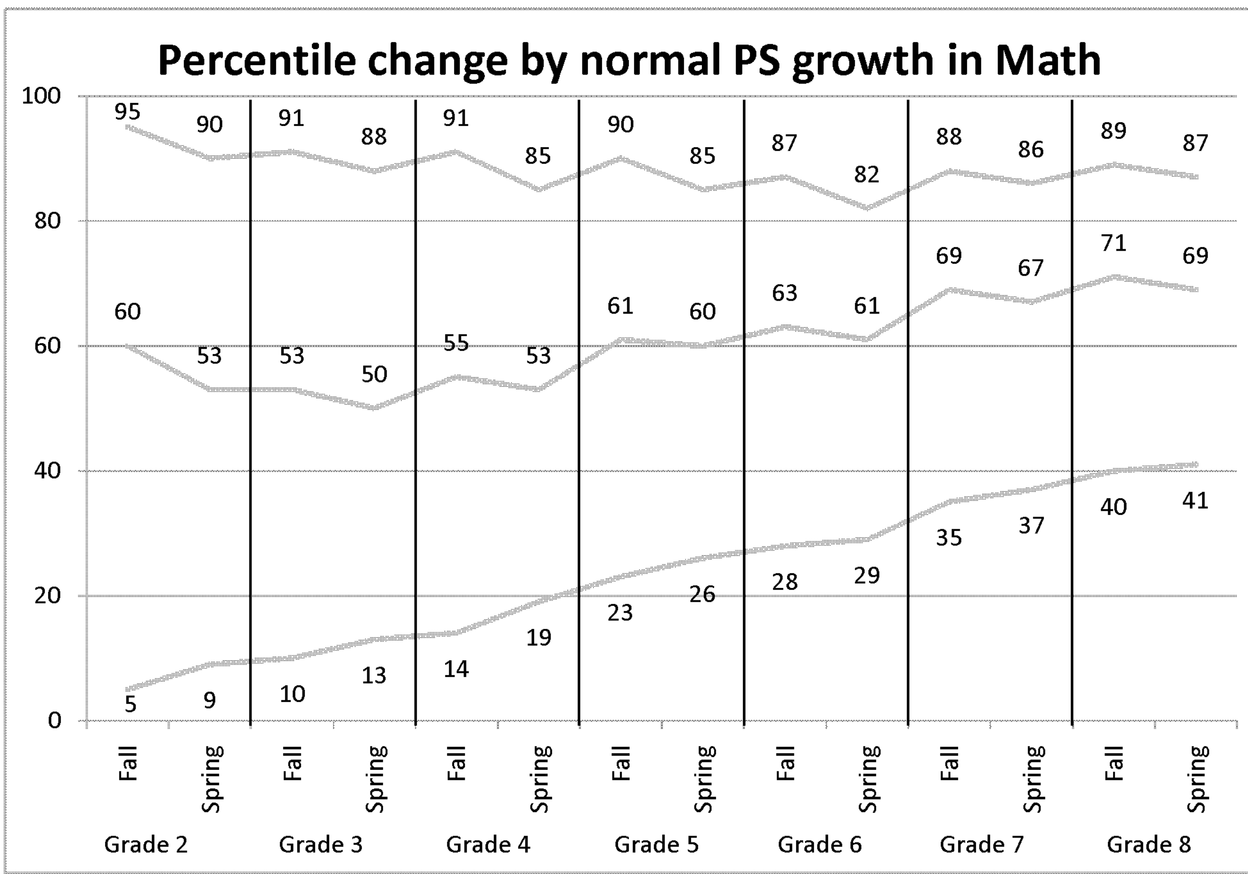
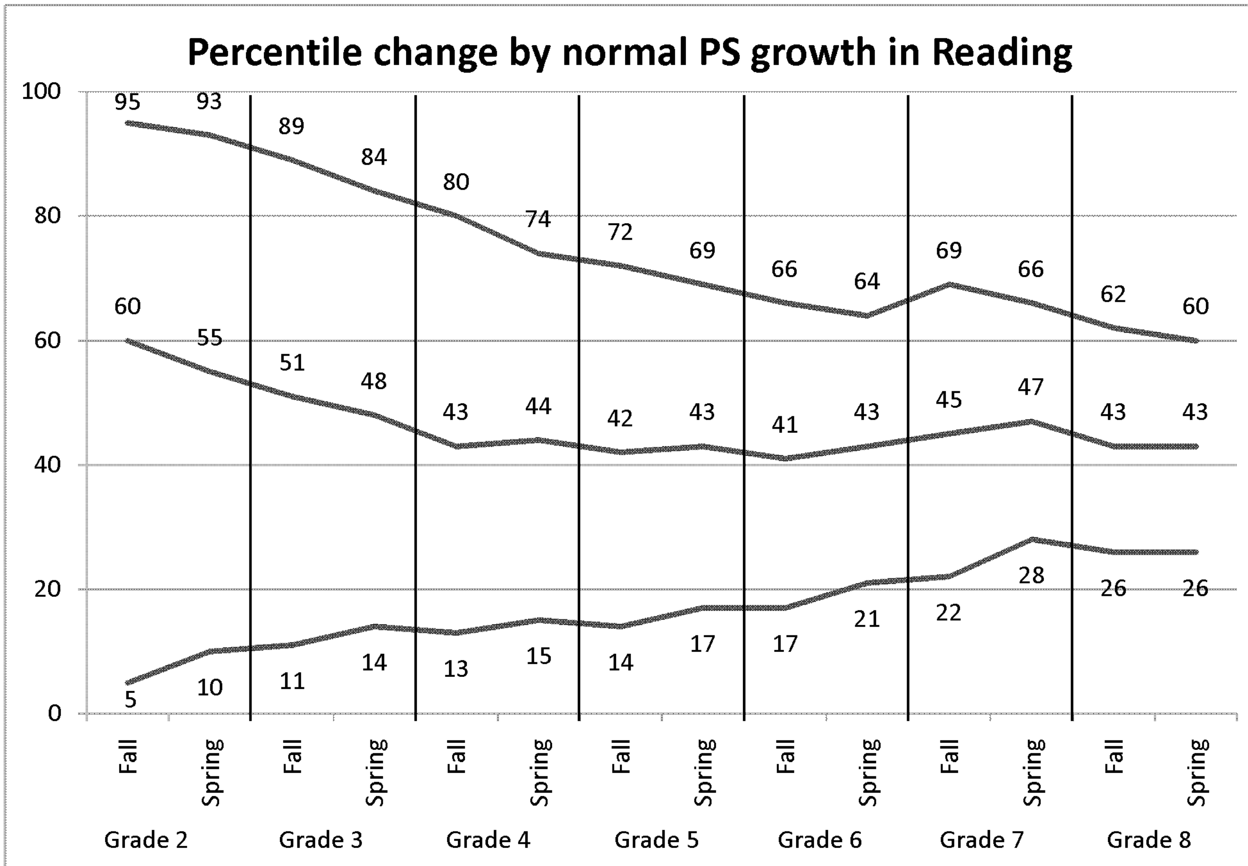


Figure 9. Three normal-growth PS profiles in reading



Scantron has published two graphical summaries of *Observed Mean Gains* in smoothed form. In both these summaries, the authors started with two administrations of the tests, and then used a logistic equation to interpolate scores for every month of the school year. They based the first summary on test results achieved by Michigan students in September, 2003 and May, 2004.[9] For the second set of smoothed growth plots, Scantron used data from across the nation, collected in the 2005-06 school year.

The Center has replicated these charts[10], and then added the Performance Series benchmarks; see Figure 10 through Figure 13 below. On these charts, the solid curve shows the fiftieth percentile; the dashed curves show the twenty-fifth and seventy-fifth percentiles. The round dots, again, are benchmarks from Table 18.

As with Figure 6 and Figure 7 above, it is important to realize that the lines on Figure 10 through Figure 13 do not represent normal growth for individual students, even though Scantron refers to these plots as "growth trajectory graphs." What these lines actually show are the scaled scores at particular quartiles, and the conclusion drawn from Figure 8 and Figure 9 above is that with normal growth, students' percentile ranks do not remain constant from grades 2 through 8.

[9] See p. 1, *Michigan PS Growth Trajectory Table*. The nationwide summary appears in *Growth Trajectory Table and Graph: 2005-2006 National Norm Sample* (Scantron 2005-2006).
[10] In "PS growth Michigan 2003-04.xlsx."

Figure 10. Smoothed PS gain trajectories in mathematics (Michigan only, 2003-04)

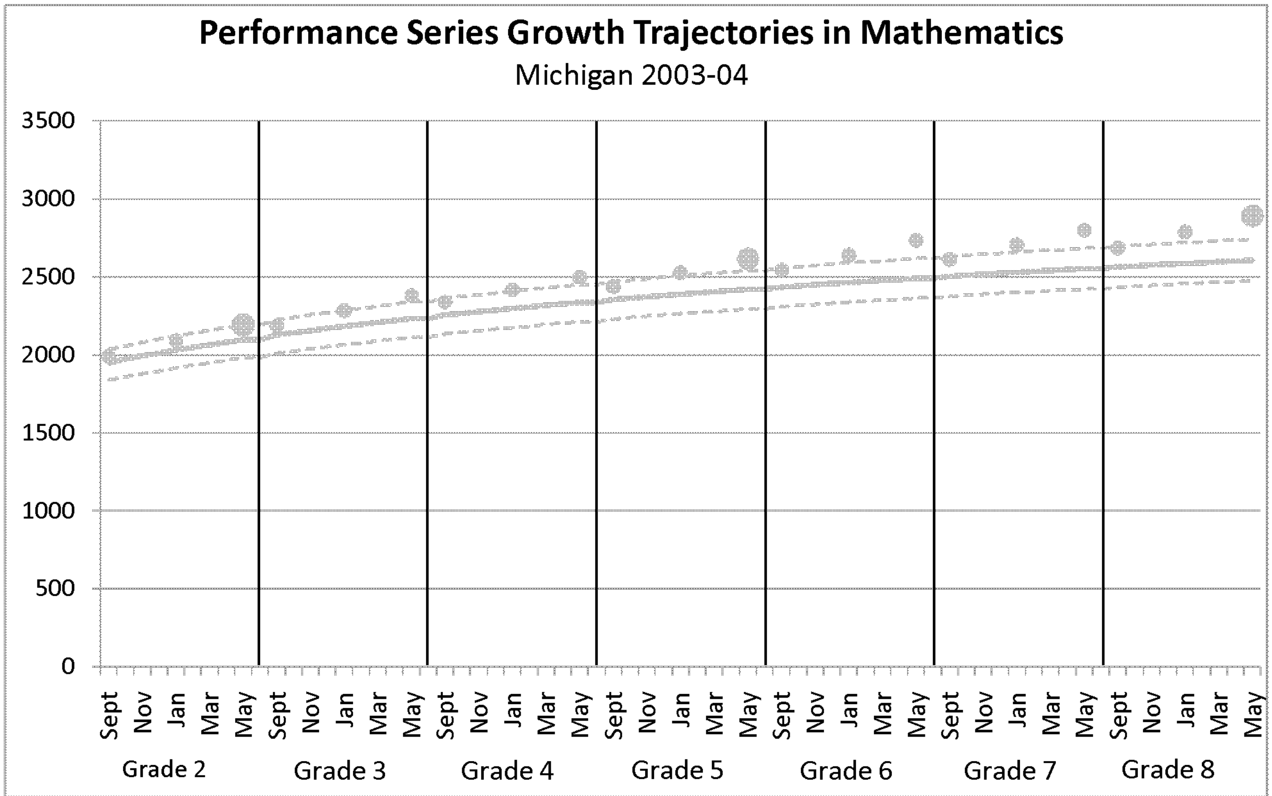


Figure 11. Smoothed PS gain trajectories in mathematics (Nationwide, 2005-06)

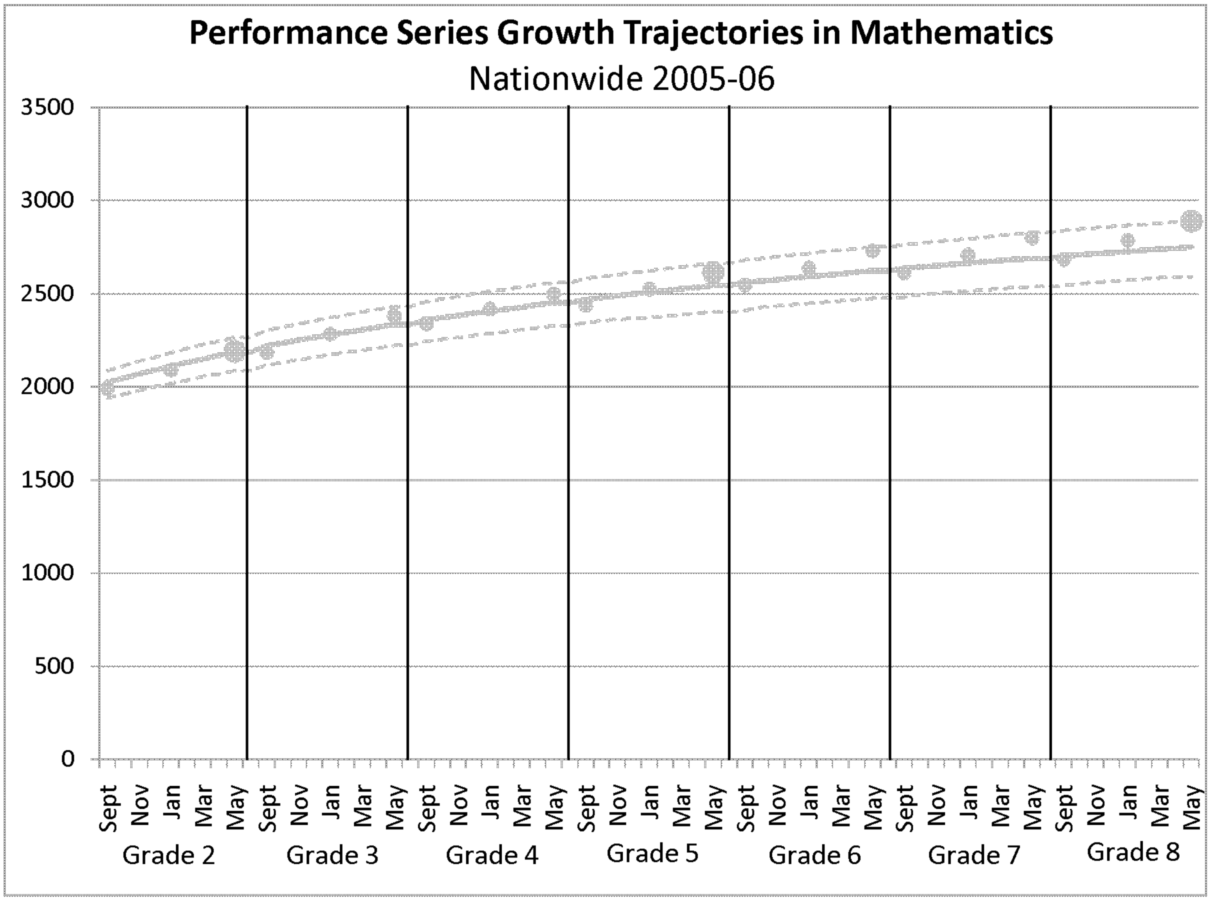


Figure 12. Smoothed PS gain trajectories in reading (Michigan only, 2003-04)

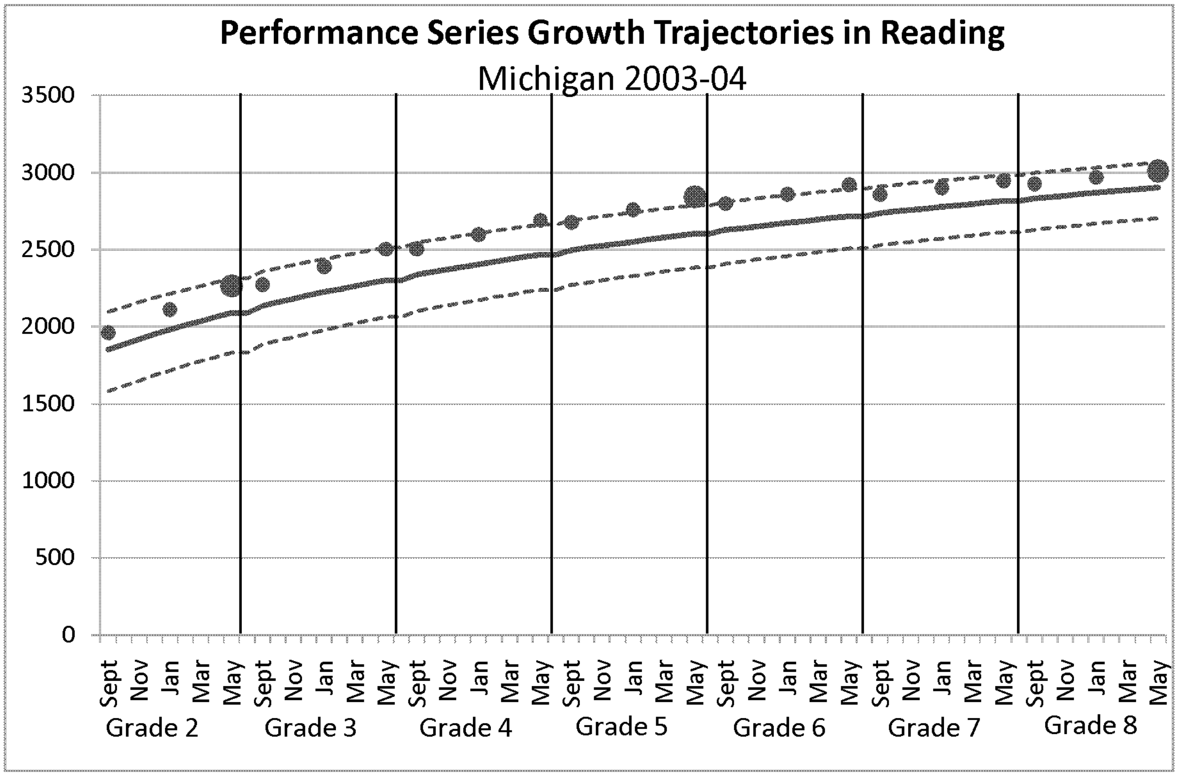
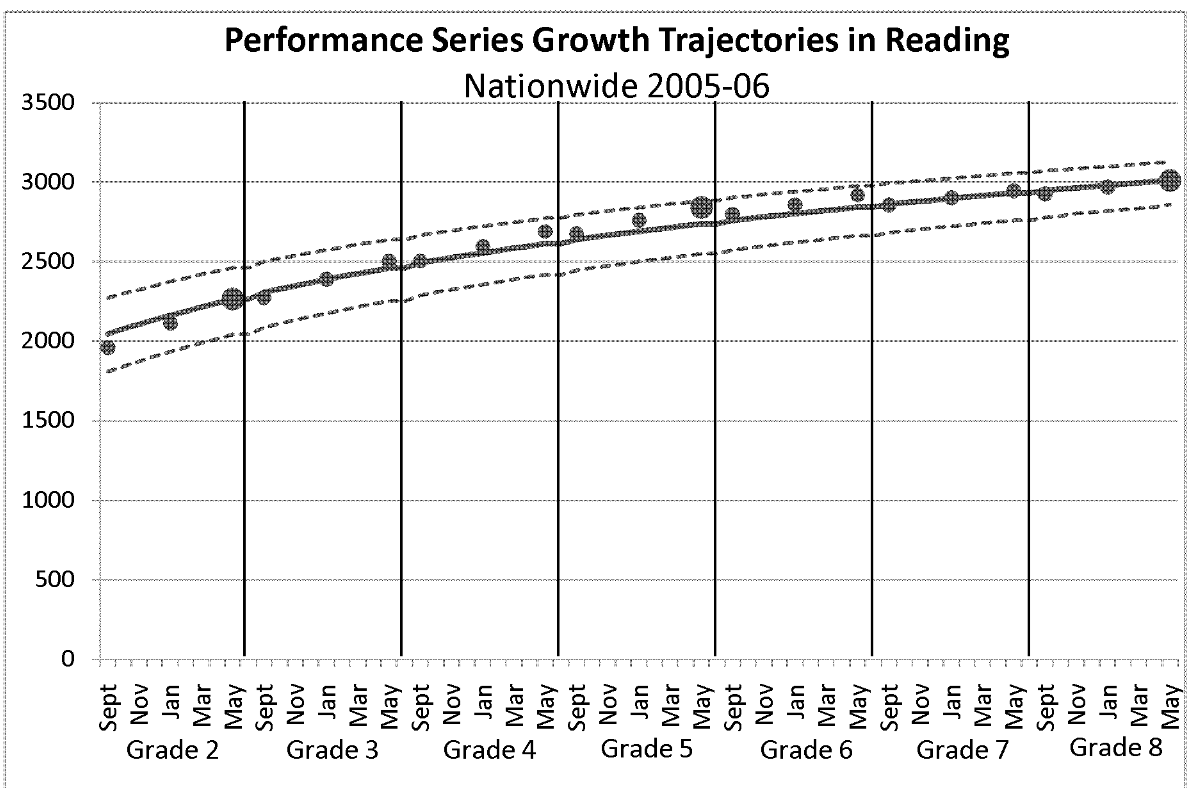


Figure 13. Smoothed PS gain trajectories in reading (Nationwide, 2005-06)



One final observation about the PS benchmarks is that normal growth from a fiftieth percentile starting point in fall of grade 2 will enable a student to reach the final benchmark in grade 8 in mathematics, but not in reading. In Figure 14 and Figure 15 below, the large dots at spring of grades 2, 5 and 8 are critical benchmarks; the numbers in large type show the number of scaled-score points represented by each. The numbers in smaller type show the score a student would be expected to earn if he or she began with a score at the fiftieth percentile in fall of grade 2, and had normal growth from then on.

In the case of mathematics (Figure 14), normal growth puts a student just below the grade 2 benchmark, and slightly above the benchmarks in grades 5 and 8. For completeness, Table 19 is provided, listing the standard errors of measurement (SEMs) for grades 2, 5, and 8, and the differences between the benchmarks in these grades, and the scores a student would achieve if he or she entered grade 2 at the fiftieth percentile, and grew normally thereafter.

Figure 14. PS benchmarks and normal growth in mathematics

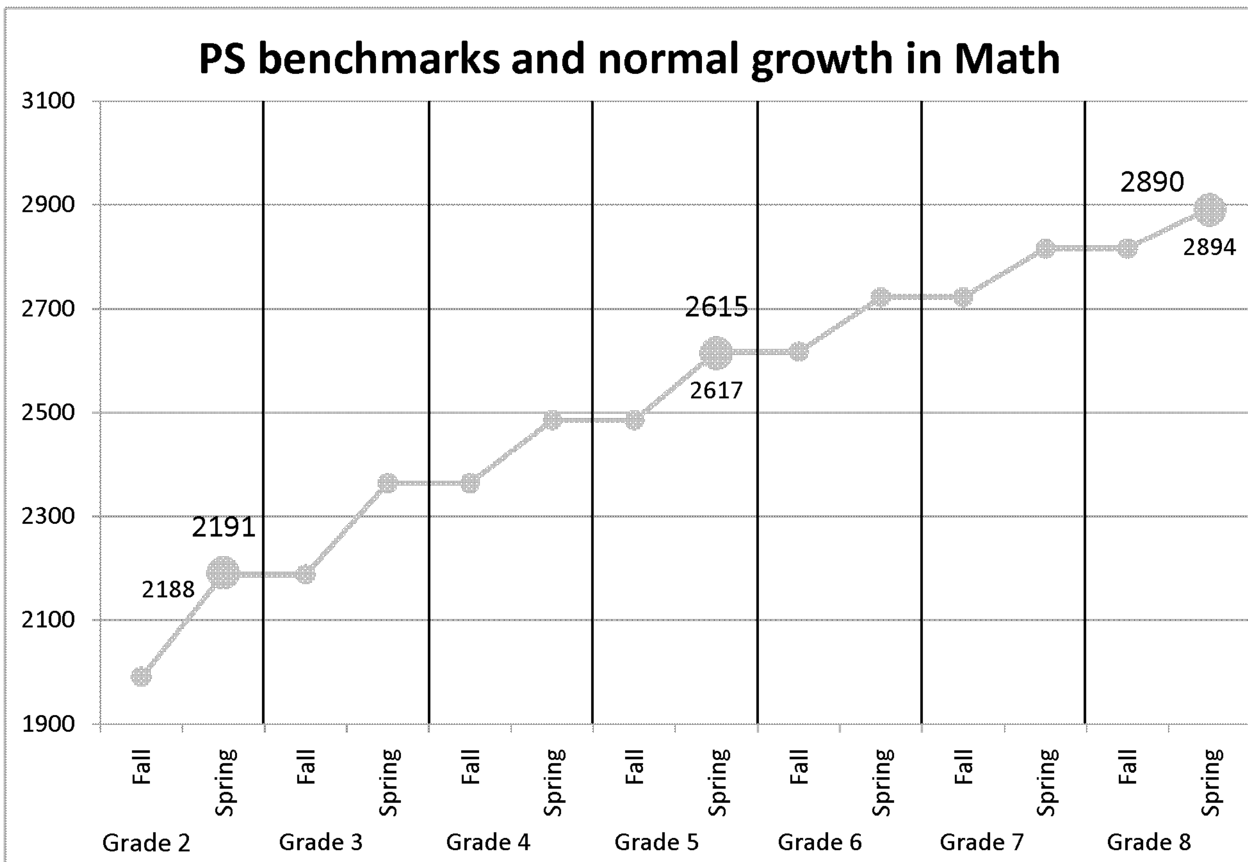


Table 19. Math benchmarks and normal growth on the Performance Series

grade	Points short	SEM	SEMs short
2	3	58	0.05
5	-2	54	-0.04
8	-4	54	-0.07

In reading, on the other hand (Figure 15), a student who begins at the fiftieth percentile, and grows only at the normal rate, will fall short of all three critical benchmarks. Table 20 below shows the extent of the shortfalls, both in terms of scaled-score units and in terms of standard errors of measurement (SEMs).

Figure 15. PS benchmarks and normal growth in reading

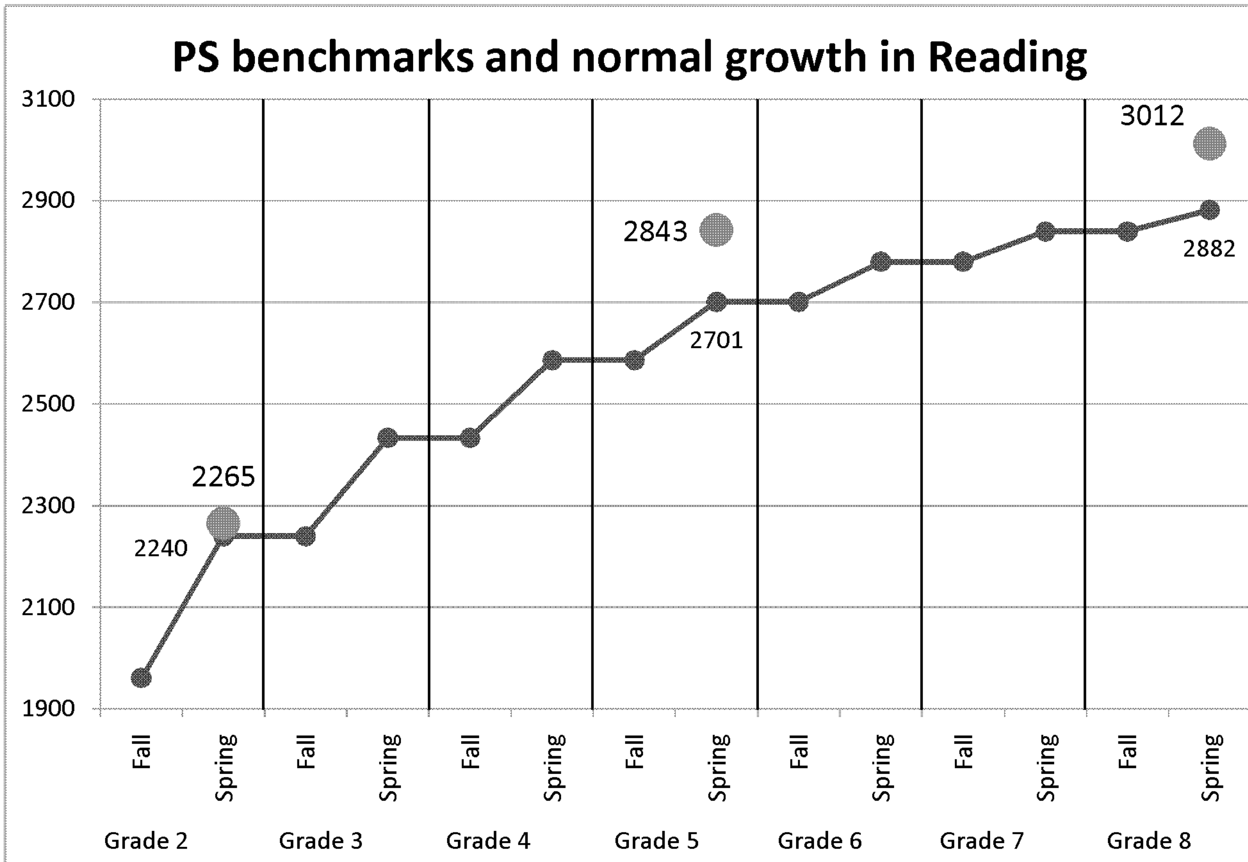


Table 20. Reading benchmarks and normal growth on the Performance Series

grade	Points short	SEM	SEMs short
2	25	74	0.34
5	142	64	2.22
8	130	62	2.10

The college-readiness trajectory for MAP

As previously mentioned, eight of CMU's charter public schools use the Measures of Academic Progress (MAP) tests from the Northwest Evaluation Association (NWEA) rather than the Performance Series® from Scantron™. Like Scantron™, NWEA has published a set of growth norms[11] for use in evaluating the progress of students who take the MAP tests. This section explains how these growth norms were used to develop the college-readiness benchmarks for schools using the MAP tests.

[11] *RIT Scale Norms* (2008). For convenience in calculation, the The Center developed "NWEA growth norms (reading, math).xlsx" from the data in this document.

NWEA's growth norms appear in Chapter 5 of *RIT Scale Norms*.

Table 21. Excerpt from MAP growth norm tables

READING grade 2 Growth Estimates, Beginning of Yr to End of Yr (≈ 32 Instr'l Wks)

Start RIT	Estimated growth	SD	N
156	20.30	7.34	5,885
157	19.81	7.34	8,339
158	19.40	7.35	10,993
159	19.06	7.39	13,775
160	18.75	7.42	16,285
161	18.36	7.41	18,457
162	18.03	7.41	20,497
163	17.77	7.35	22,311
164	17.42	7.29	23,747
165	17.13	7.23	25,209

The growth estimates in Table 21 show two decimal places of precision, but in practice these estimates are rounded to the nearest whole number.

Unlike Scantron's growth model, the NWEA model does not require a user to know the quartile of a scaled score in order to find how many points a student normally grows who earns that scaled score. One way to look at this difference is to note that Table 21 provides a growth estimate for every possible scaled score, whereas Scantron™ provides the same growth estimate for all scaled scores in any given quartile.

The heading above this table reflects the fact that NWEA provides four sets of growth tables for each grade/subject combination:

a) One table for growth from the beginning of a school year to the middle of the school year (referred to as "fall to winter growth");

b) Another table for growth from the beginning of a school year to the end of that year (illustrated here, and called "fall to spring");

c) A fall-to-fall growth table; and

d) A spring-to-spring table.

For the Performance Series® tests, Scantron™ provides only a table representing fall-to-spring growth.

Table 22 below shows the proposed MAP college-readiness benchmarks in reading and mathematics, for grades K-8 and for each testing term (fall, winter and spring). Spring benchmarks for grades 2, 5 and 8 are bold to indicate that they will have a special significance in assessing the performance of schools. Percentile ranks corresponding to the scaled scores are provided as an additional check.

In overview, the procedure was as follows:

a) The spring benchmarks for grade 2 are based on previous unpublished research.

b) The fall benchmarks for Kindergarten were chosen to lead by normal growth[12] to the grade 2 spring benchmarks.

c) All spring benchmarks (other than those for grade 2) result from adding normal growth to the fall benchmark from the previous grade. This method was also used to calculate all fall and winter scores except those mentioned in items d) and e) below.

d) NWEA does not offer fall-to-fall norms for Kindergarten or grade 1, so an assumption was made that a student's fall score for grades 1 and 2 will be the same as his or her spring score in the previous grade. In other words, the assumption is that students will experience no summer loss.

e) NWEA does not provide fall-to-winter norms for Kindergarten or grade 1 either, so the winter benchmarks in Table 22 are midway between the falls and spring benchmarks for those grades. That is, linear growth was assumed from fall to winter to spring in Kindergarten and grade 1.

[12] NWEA, *RIT Scale Norms for Use with Measures of Academic Progress*, Chapter 5.

Table 22. College Readiness Benchmarks for Measures of Academic Progress

Reading

grade	Test term	Benchmark	Percentile
K	Fall	154	84
K	Winter	160	82
K	Spring	165	80
1	Fall	165	68
1	Winter	172	67
1	Spring	179	69
2	Fall	179	48
2	Winter	186	48
2	Spring	**190**	49
3	Fall	193	52
3	Winter	198	51
3	Spring	201	52
4	Fall	202	51
4	Winter	205	49
4	Spring	208	52
5	Fall	209	52
5	Winter	212	53
5	Spring	**215**	57
6	Fall	214	52
6	Winter	216	52
6	Spring	218	55
7	Fall	218	53
7	Winter	220	53
7	Spring	222	57
8	Fall	222	54
8	Winter	224	55
8	Spring	**227**	61

Math

grade	Test term	Benchmark	Percentile
K	Fall	152	65
K	Winter	158	69
K	Spring	164	67
1	Fall	164	49
1	Winter	172	52
1	Spring	179	53
2	Fall	179	50
2	Winter	186	49
2	Spring	**191**	49
3	Fall	194	54
3	Winter	200	54
3	Spring	204	53
4	Fall	205	54
4	Winter	210	57
4	Spring	214	56
5	Fall	215	59
5	Winter	219	57
5	Spring	**224**	60
6	Fall	223	60
6	Winter	227	61
6	Spring	229	59
7	Fall	230	62
7	Winter	233	63
7	Spring	236	64
8	Fall	236	63
8	Winter	238	63
8	Spring	**242**	68

A student who starts at the fiftieth percentile in fall of grade 2 will fall short of the grade 5 and grade 8 MAP benchmarks in both reading and mathematics. Figure 16 and Figure 17 below show normal growth on the MAP test series in mathematics and reading respectively. As in Figure 14 and Figure 15 above, critical benchmarks appear as large dots, with large numbers to show the scaled scores corresponding to the benchmarks. Table 23 and Table 24 show the extent of the shortfalls for the MAP series. Four or six points may not sound like much, but in terms of SEM units, these shortfalls are comparable to the ones previously noted for the PS benchmarks in reading (Figure 15 and Table 20 on page 22 above).

Figure 16. MAP benchmarks and normal growth in mathematics

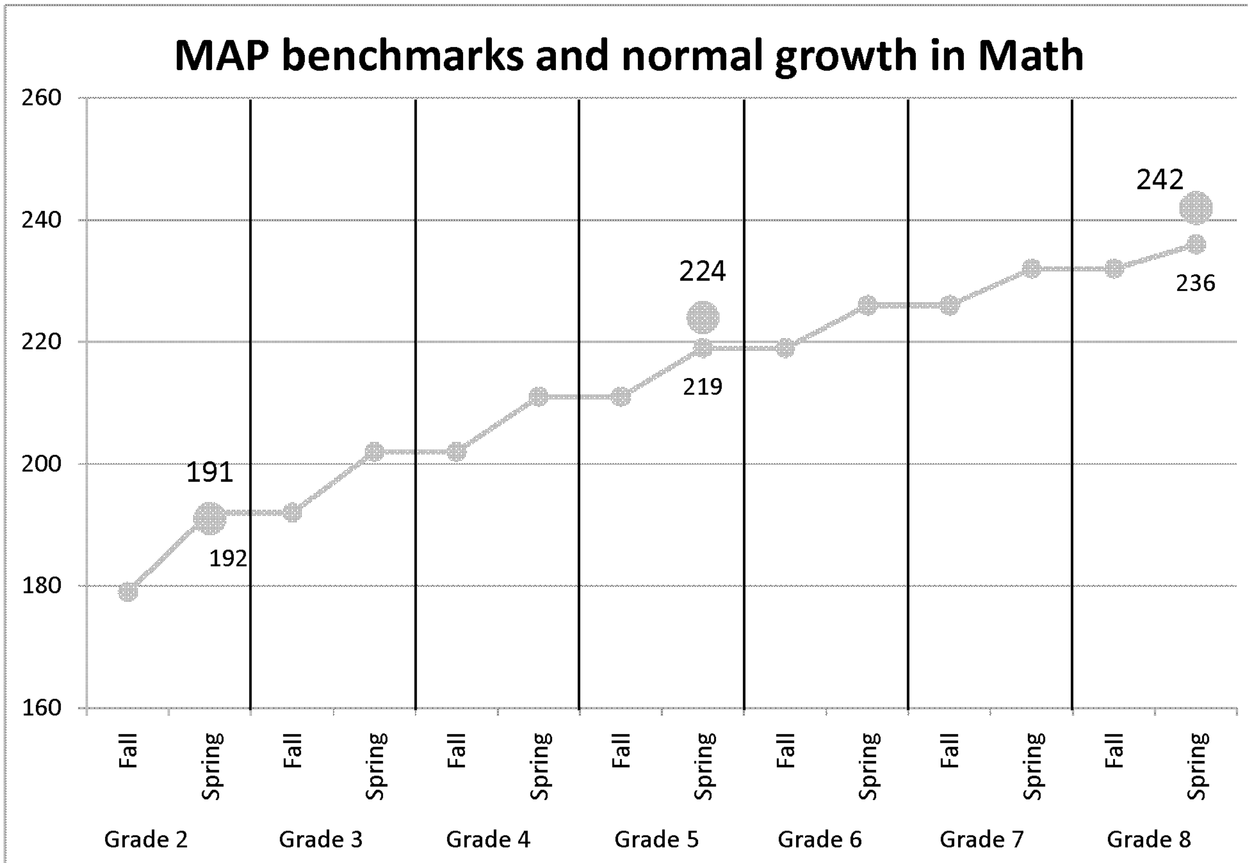


Table 23. Mathematics benchmarks and normal growth on the MAP

grade	Points short	SEM	SEMs short
5	5	3	1.67
8	6	3	2.00

Figure 17. MAP benchmarks and normal growth in reading

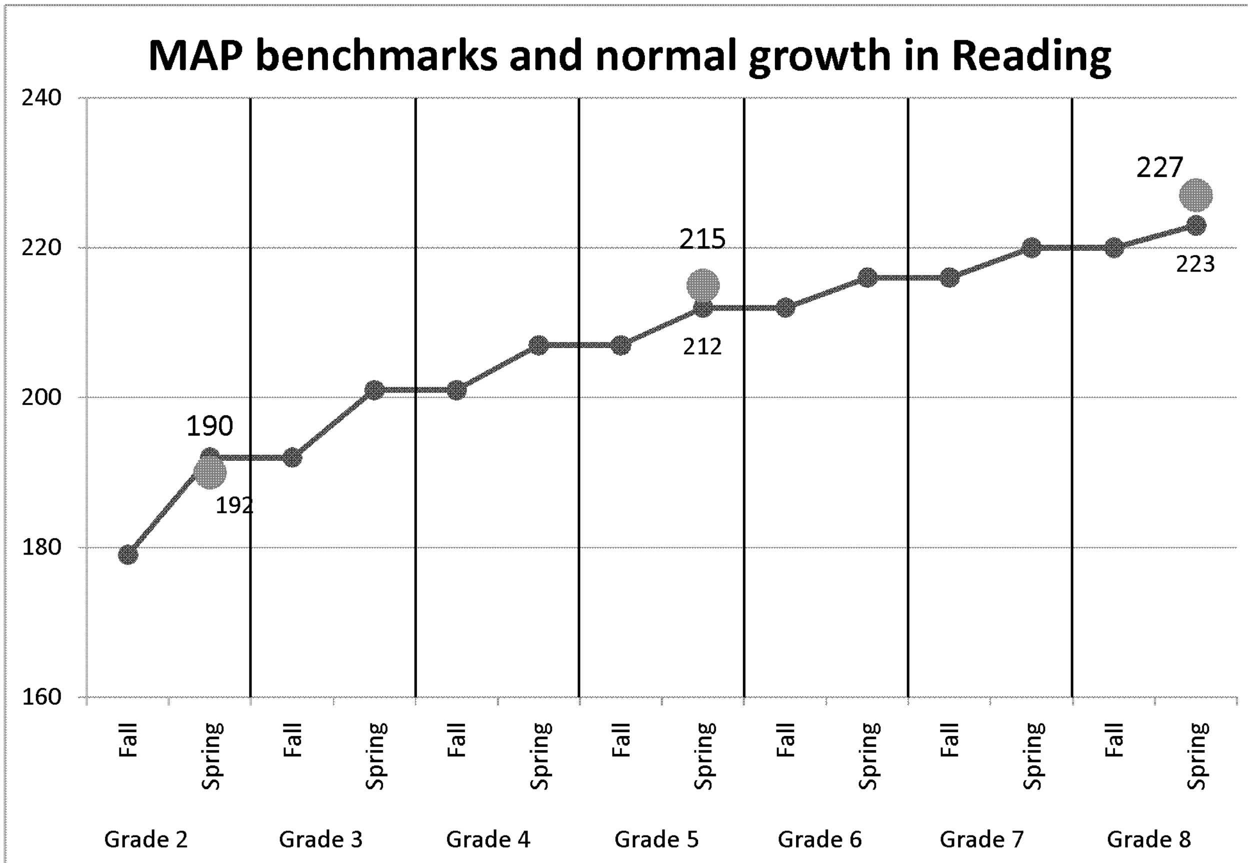


Table 24. Reading benchmarks and normal growth on the MAP

grade	Points short	SEM	SEMs short
5	3	3	1.00
8	4	3	1.33

Conclusion

The benchmarks proposed by the Center are intended to give early information on college-readiness to students, teachers, parents and administrators. For students with average academic aptitude, these benchmarks will present a challenge, but one which they should be able to overcome with consistent, focused effort and with resourceful and dedicated teachers.

Bibliography

ACT. (2007). *EXPLORE Technical Manual.* Retrieved March 18, 2010, from www.ACT.org: http://www.act.org/explore/pdf/TechManual.pdf

ACT. (2007). *PLAN Technical Manual.* Retrieved March 18, 2010, from ACT.org: http://www.act.org/plan/pdf/PlanTechnicalManual.pdf

ACT. (2007). *The ACT Technical Manual.* Retrieved March 18, 2010, from ACT.org: http://www.act.org/aap/pdf/ACT_Technical_Manual.pdf

ACT. (2010). *Understand your scores*. Retrieved March 23, 2010, from ACT, Inc.: A Student Site for ACT Test Takers: http://www.actstudent.org/scores/understand/index.html

Allen, J. B. (2009). *Statistical Properties of Accountability Measures Based on ACT's Educational Planning and Assessment System.* Iowa City, IA: ACT.

Allen, Jeff and Sconing, Jim. (2005). *Using ACT Assessment Scores to Set Benchmarks for College Readiness.* Iowa City, IA: ACT.

Northwest Evaluation Association. (2008). *RIT Scale Norms For Use with Measures of Academic Progress.* Lake Oswego, OR: NWEA.

Pezzullo, J. C. (2010). *Logistic Regression Calculating Page*. Retrieved March 23, 2010, from Interactive Stitistical Calculation Pages: http://statpages.org/logistic.html

Scantron. (2005-2006). *Growth Trajectory Table and Graph: 2005-2006 National Norm Sample.* Eagan, MN: Scantron, Inc.

Scantron, Inc. (2005). *Michigan PS Growth Trajectory Table.* Eagan, MN: Scantron, Inc.

Scantron, Inc. (2008). *Observed Mean Gains in Performance Series By Grade/Subject.* Scantron, Inc.

Scantron, Inc. (2009). *Performance Series Technical Report, 7th Edition.* Eagan, MN: Scantron.

The Center for Charter Schools, Central Michigan University. (2010, March 24). College readiness (PS).xlsx. Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 23). Logistic regression datasets (PS to EXPLORE). Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 24). MAP to EXPLORE regression (no IDs).xlsx. Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 24). NWEA growth norms (reading, math).xlsx. Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 24). Observed mean PST gain plots.xlsx. Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 24). PS growth Michigan 2003-04.xlsx. Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 24). PS scatterplots (no IDs).xlsx. Lansing, MI, USA.

The Center for Charter Schools, Central Michigan University. (2010, March 23). PS to EXPLORE regression (no IDs).xlsx. Lansing, MI, USA.

MICHIGAN SCHOOL IMPROVEMENT FRAMEWORK

MICHIGAN Department of Education
Office of School Improvement

FRAMEWORK OVERVIEW

Each year, schools and districts review policies and practices to consider ways to improve and enhance student achievement. This process, commonly referred to as the school improvement process, is deeply embedded in building, district and state planning and accountability systems, and has become an integral and necessary part of school and system reform. While this type of planning has existed for many years, recent state and federal mandates including annual testing directives and increased accountability have intensified the importance of this process and its outcomes.

Since the passage of Public Act 25 in 1990, Michigan schools and districts have been required to develop 3-5 year school improvement plans. Schools and districts use these plans as a blueprint to establish goals and objectives that will guide teaching for learning, resource allocation, staff development, data management and assessment. They also use it to measure their ability to meet the goals and objectives established in the plan.

To provide schools and districts with a comprehensive framework based on current research and best practice, the Michigan Department of Education in conjunction with school improvement specialists and educators across the state, developed the Michigan School Improvement Framework. This framework can be individualized and used in multiple ways to develop, support and enhance school improvement plans. For example, the framework can be used to guide the development of a school improvement plan. It can also be used by buildings and districts to review and enhance existing improvement plans to reveal where plans match or differ from state-of-the-art school improvement practice. In addition, this framework can be used during a peer-assessment exchange with a similar school which could lead to mutual problem solving.

UNDERSTANDING THE FRAMEWORK

The framework is organized in a typical curriculum development layout with strands, standards, and benchmarks. Within the framework, there are five strands or areas of general focus. Drilling down into the 12 standards are 26 benchmarks that further define the standards within each strand. These benchmarks will be used to guide revisions to Michigan's Education Yes! accreditation performance indicators. Each benchmark also contains helpful key characteristics and sample discussion questions districts and schools can use to guide discussion and increase understanding of the research-based school improvement benchmarks.

Strand I	Strand II	Strand III	Strand IV	Strand V
Teaching for learning	Leadership	Personnel & Professional Learning	School & Community Relations	Data & Information Management
Standards (12) and Benchmarks (26)				
1. Curriculum • *Aligned, Reviewed & Monitored* • *Communicated* 2. Instruction • *Planning* • *Delivery* 3. Assessment • *Aligned to Curriculum and Instruction* • *Data Reporting and Use*	1. Instructional Leadership • *Educational Program* • *Instructional Support* 2. Shared Leadership • *School Culture & Climate* • *Continuous Improvement* 3. Operational Resource Management • *Resource Allocation* • *Operational Management*	1. Personnel Qualifications • *Requirements* • *Skills, Knowledge, Dispositions* 2. Professional Learning • *Collaboration* • *Content & Pedagogy* • *Alignment*	1. Parent/Family Involvement • *Communication* • *Engagement* 2. Community Involvement • *Communication* • *Engagement*	1. Data Management • *Data Generation, Identification & Collection* • *Data Accessibility* • *Data Support* 2. Information Management • *Analysis & Interpretation* • *Applications*
Key Characteristics with Sample Discussion Questions				

Annotated Bibliography on Issues with Using Value-Added Measures based on Growth in Student Achievement

Betebenner, D. W. (2005, June). *Performance Standards in Measures of Educational Effectiveness.* Paper presented at the 25th Annual Conference on Large Scale Assessment of the Council of Chief State School Officers, San Antonio, TX.

This paper describes an alternative to using vertical scales for developing value added models. This model follows student transitions from category to category across grades as an approach that avoids many of the serious problems with using vertical scales in value-added modeling

Hill, R. (2005, June). *Measuring Student Growth Through Value Tables.* Paper presented at the 25th Annual Conference on Large Scale Assessment of the Council of Chief State School Officers, San Antonio, TX.

This paper describes another alternative to using vertical scales for developing value added models. This model follows student transitions from category to category across grades as an approach that avoids many of the serious problems with using vertical scales in value-added modeling

Martineau, J. A. (2009). The Validity of Value-Added Models: An Allegory. *Phi Delta Kappan*. 91(7), 64-67.

This paper lays out the pitfalls of teacher evaluation based on student achievement growth data for a lay audience in the form of an allegory about evaluating foster parents.

Martineau, J. A. (2006). Distorting Value Added: The Use of Longitudinal, Vertically Scaled Student Achievement Data for Growth-Based Value-Added Accountability. *Journal of Educational and Behavioral Statistics, 31*(1), 35-62.

This paper describes serious distortions in measures of teacher effectiveness that arise from using vertical scales as outcomes in value-added models based on student growth.

Martineau, J.A. (2007). *Designing a Valid and Transparent Progress-Based Value-Added Accountability Model*. Paper presented at the Annual Conference of the American Educational Research Association (AERA), Chicago, IL.

This paper summarizes threats to the validity of value added models from the statistical, psychometric, and policy perspective, and lays out a growth model that minimizes those threats through a model combining and augmenting the Martineau, et al (2007), Rigney & Martineau (2006), Betebenner (2005), and Hill (2005) papers.

Reckase, M. D. (2004). The Real World Is More Complicated Than We Would Like. *Journal of Educational and Behavioral Statistics, 29*(1), 117-120.

This paper describes in conceptual terms the psychometric and statistical issues in using value added models for teacher evaluation.

Rigney, S. L., & Martineau, J. A. (2006). NCLB and Growth Models: In Conflict or in Concert? In R. L. Lissitz (Ed.), *Longitudinal and Value Added Models of Student Performance* (pp. 47-81). Maple Grove, MN: JAM Press.

This paper lays out the ideal characteristics of a growth model that both addresses the tensions in value-added modeling between fairness toward students (the same standard for all) and fairness toward educators (the same expectation of impact on student growth for all), and lays out the characteristics of an ideal growth model for those purposes.

Schmidt, W. H., Houang, R. T., & McKnight, C. C. (2005). Value-Added Research: Right Idea but Wrong Solution? In R. Lissitz (Ed.), *Value Added Models in Education: Theory and Applications* (pp. 145-164). Maple Grove, MN: JAM Press.

This paper describes in terms of the implications of the standard-based movement the psychometric problems that plague value added models for teacher evaluation.

THE REVISED SCHOOL CODE (EXCERPT)
Act 451 of 1976

380.1280 Accreditation.

Sec. 1280.

(1) The board of a school district that does not want to be subject to the measures described in this section shall ensure that each public school within the school district is accredited.

(2) As used in subsection (1), and subject to subsection (6), "accredited" means certified by the superintendent of public instruction as having met or exceeded standards established under this section for 6 areas of school operation: administration and school organization, curricula, staff, school plant and facilities, school and community relations, and school improvement plans and student performance. The building-level evaluation used in the accreditation process shall include, but is not limited to, school data collection, self-study, visitation and validation, determination of performance data to be used, and the development of a school improvement plan.

(3) The department shall develop and distribute to all public schools proposed accreditation standards. Upon distribution of the proposed standards, the department shall hold statewide public hearings for the purpose of receiving testimony concerning the standards. After a review of the testimony, the department shall revise and submit the proposed standards to the superintendent of public instruction. After a review and revision, if appropriate, of the proposed standards, the superintendent of public instruction shall submit the proposed standards to the senate and house committees that have the responsibility for education legislation. Upon approval by these committees, the department shall distribute to all public schools the standards to be applied to each school for accreditation purposes. The superintendent of public instruction shall review and update the accreditation standards annually using the process prescribed under this subsection.

(4) The superintendent of public instruction shall develop and distribute to all public schools standards for determining that a school is eligible for summary accreditation under subsection (6). The standards shall be developed, reviewed, approved, and distributed using the same process as prescribed in subsection (3) for accreditation standards, and shall be finally distributed and implemented not later than December 31, 1994.

(5) The standards for accreditation or summary accreditation under this section shall include as criteria pupil performance on Michigan education assessment program (MEAP) tests and on the Michigan merit examination under section 1279g and, until the

Michigan merit examination has been fully implemented, the percentage of pupils achieving state endorsement under section 1279, but shall not be based solely on pupil performance on MEAP tests or the Michigan merit examination or on the percentage of pupils achieving state endorsement under section 1279. The standards shall also include as criteria multiple year change in pupil performance on MEAP tests and the Michigan merit examination and, until after the Michigan merit examination is fully implemented, multiple year change in the percentage of pupils achieving state endorsement under section 1279. If it is necessary for the superintendent of public instruction to revise accreditation or summary accreditation standards established under subsection (3) or (4) to comply with this subsection, the revised standards shall be developed, reviewed, approved, and distributed using the same process as prescribed in subsection (3).

(6) If the superintendent of public instruction determines that a public school has met the standards established under subsection (4) or (5) for summary accreditation, the school is considered to be accredited without the necessity for a full building-level evaluation under subsection (2).

(7) If the superintendent of public instruction determines that a school has not met the standards established under subsection (4) or (5) for summary accreditation but that the school is making progress toward meeting those standards, or if, based on a full building-level evaluation under subsection (2), the superintendent of public instruction determines that a school has not met the standards for accreditation but is making progress toward meeting those standards, the school is in interim status and is subject to a full building-level evaluation as provided in this section.

(8) If a school has not met the standards established under subsection (4) or (5) for summary accreditation and is not eligible for interim status under subsection (7), the school is unaccredited and subject to the measures provided in this section.

(9) Beginning with the 2002-2003 school year, if at least 5% of a public school's answer sheets from the administration of the Michigan educational assessment program (MEAP) tests are lost by the department or by a state contractor and if the public school can verify that the answer sheets were collected from pupils and forwarded to the department or the contractor, the department shall not assign an accreditation score or school report card grade to the public school for that subject area for the corresponding year for the purposes of determining state accreditation under this section. The department shall not assign an accreditation score or school report card grade to the public school for that subject area until the results of all tests for the next year are available.

(10) Subsection (9) does not preclude the department from determining whether a public school or a school district has achieved adequate yearly progress for the school year in which the answer sheets were lost for the purposes of the no child left behind act of 2001, Public Law 107-110. However, the department shall ensure that a public school or the school district is not penalized when determining adequate yearly progress status due to the fact that the public school's MEAP answer sheets were lost by the department or by a

state contractor, but shall not require a public school or school district to retest pupils or produce scores from another test for this purpose.

(11) The superintendent of public instruction shall annually review and evaluate for accreditation purposes the performance of each school that is unaccredited and as many of the schools that are in interim status as permitted by the department's resources.

(12) The superintendent of public instruction shall, and the intermediate school district to which a school district is constituent, a consortium of intermediate school districts, or any combination thereof may, provide technical assistance, as appropriate, to a school that is unaccredited or that is in interim status upon request of the board of the school district in which the school is located. If requests to the superintendent of public instruction for technical assistance exceed the capacity, priority shall be given to unaccredited schools.

(13) A school that has been unaccredited for 3 consecutive years is subject to 1 or more of the following measures, as determined by the superintendent of public instruction:

(a) The superintendent of public instruction or his or her designee shall appoint at the expense of the affected school district an administrator of the school until the school becomes accredited.

(b) A parent, legal guardian, or person in loco parentis of a child who attends the school may send his or her child to any accredited public school with an appropriate grade level within the school district.

(c) The school, with the approval of the superintendent of public instruction, shall align itself with an existing research-based school improvement model or establish an affiliation for providing assistance to the school with a college or university located in this state.

(d) The school shall be closed.

(14) The superintendent of public instruction shall evaluate the school accreditation program and the status of schools under this section and shall submit an annual report based upon the evaluation to the senate and house committees that have the responsibility for education legislation. The report shall address the reasons each unaccredited school is not accredited and shall recommend legislative action that will result in the accreditation of all public schools in this state.

(15) Beginning with the 2008-2009 school year, a high school shall not be accredited by the department unless the department determines that the high school is providing or has otherwise ensured that all pupils have access to all of the elements of the curriculum required under sections 1278a and 1278b. If it is necessary for the superintendent of public instruction to revise accreditation or summary accreditation standards established under subsection (3) or (4) to comply with the changes made to this section by the amendatory act that added this subsection, the revised standards shall be developed,

reviewed, approved, and distributed using the same process as prescribed in subsection (3).

History: Add. 1990, Act 25, Eff. Apr. 13, 1990 ;-- Am. 1993, Act 335, Imd. Eff. Dec. 31, 1993 ;-- Am. 1995, Act 289, Eff. July 1, 1996 ;-- Am. 1997, Act 180, Imd. Eff. Dec. 30, 1997 ;-- Am. 2003, Act 275, Imd. Eff. Jan. 8, 2004 ;-- Am. 2006, Act 123, Imd. Eff. Apr. 20, 2006
Popular Name: Act 451

Michigan's School Accountability and Accreditation System: From Education YES! To MI-SAAS

Background

In March, 2002, the State Board of Education approved "Education YES!—A Yardstick for Excellent Schools" as the state's accreditation system to provide a means of setting standards for continuous school improvement and measuring the need for support and intervention for schools. Michigan's initiation of this accreditation system was concurrent with passage of No Child Left Behind (NCLB), which required states to have an accountability system. As a result, Education YES! has been Michigan's method to align state and federal requirements by blending state accountability and adequate yearly progress (AYP) reporting for NCLB.

Since 2002, the Board has made significant policy changes that resulted in the Michigan Merit Exam, expanded indicators for the School Improvement Framework self-assessment, MI-Access for students with special needs, testing in grades 3-8, and inclusion of a growth model. In addition to policy changes, educators, parents, and employers have identified concerns with the system and made numerous recommendations to make it more understandable and transparent.

As a result, the Michigan Department of Education (MDE) staff determined a major redesign of the current system was needed. A stakeholder group was convened to evaluate the current system, review the statutory basis for school accreditation, and make recommendations for a redesigned system of state school accreditation.

The redesign team, which met regularly for over a year to complete its work, analyzed the current system and identified the following concerns with Education YES!:

- Consequences of Michigan accreditation and NCLB AYP are not aligned.
- It shifts emphasis from Michigan to federal requirements.
- Its grading structure uses the federal Adequate Yearly Progress (AYP) status to lower the Michigan accreditation status.
- It needs additional clarity, usefulness, and credibility.
- Educators, parents, and employers want and deserve an understandable one-stop information system.

In analyzing NCLB requirements, the team determined that Education YES! failed to distinguish between schools making progress but missing one or two of the 40-plus requirements from those not making progress and missing many or most of the requirements. The team concurred that Michigan needed a system that could make such distinctions as a means to identify schools most in need of interventions and support services.

The proposed redesign, the Michigan School Accountability and Accreditation System (MI-SAAS), addresses these concerns. It makes Michigan standards the primary determinants for the state's accreditation system. It recognizes academic progress in all core subjects, recognizes five and six year graduation rates as successes, and enables schools to calculate their accreditation status. Using a "dashboard" display rather than a single letter grade, MI-SAAS provides greater credibility, more transparent accountability, and increased usefulness to those interested in the continuous improvement of Michigan schools. The MI-SAAS will report a school's accreditation status, as well as its AYP status and subgroup data as required by the Elementary and Secondary Education Act (ESEA). This will provide both state and federal data to identify those schools that merit the highest priority for support and intervention.

PROPOSED REDESIGN: MICHIGAN SCHOOL ACCOUNTABILITY AND ACCREDITATION SYSTEM (MI-SAAS)

The MI-SAAS is based on student achievement and compliance with Michigan statute. These components are combined to assign an Annual State Accreditation Status to each school. To provide educators, parents, and employers with a complete picture of the school, additional information about the school and its district, community, and the state is included as part of the "dashboard" display.

Each of these four elements is described below:
1) Student Achievement,
2) Compliance with Michigan Statute,
3) Annual State Accreditation Status, and
4) Additional School, District, Community, and State Information.

1. Student Achievement.

MI-SAAS sets standards for accreditation that demonstrate students are achieving at appropriate levels. Measurement of student achievement includes three components:

- Proficiency (elementary, middle, and high schools)
- Performance Level Change (elementary and middle school with annual grades 3-8 assessments)
- Provisionally proficient on the Michigan Merit Exam (high schools with 11th grade assessment)

<u>Proficiency.</u>

State standards for proficiency in core curriculum subjects are used to determine the accreditation status for all elementary, middle, and high schools. Based on assessment data for the four core subject areas of English language arts (reading and writing), mathematics, science, and social studies, a school's accreditation status is determined to be "summary accredited," "interim status," or "unaccredited" (Section MCL 380.1280 of the Revised School Code).

MI-SAAS establishes the following proficiency standards to determine a school's accreditation status:

- ACCREDITED: No more than one subject below 60% proficient and no subjects below 35% proficient.

- INTERIM (Proficiency): Two or more subjects lower than 60% proficient but not lower than 35% proficient. NOTE: A school may also fall into Interim if it meets all standards for accreditation but does not make AYP. Such a school will be designated INTERIM (AYP).
- UNACCREDITED: One or more subjects lower than 35% proficient.

At least every two years the MI-SAAS proficiency standards will be evaluated by the State Board of Education so that the cut-off percentages may be adjusted upward as student achievement increases statewide or to meet new state or federal legislative requirements. The measures of student achievement include the Michigan Educational Assessment Program (MEAP), the Michigan Merit Examination (MME), and MI-Access (Michigan's alternate assessments for students with disabilities). The assessment data used to determine a school's accreditation status will use only the scores of students at the school for a full academic year prior to the assessment. Since the MEAP assessment (elementary and middle school) is given in the fall and covers content learned the previous year, feeder codes will be used to attribute the students' scores to the school attended during the prior school year. In contrast to federal AYP requirements, MI-SAAS does not cap the number of students with proficient scores on the MI-Access assessments. All proficient scores on MI-Access will be included in the achievement calculation.

<u>Performance Level Change.</u>
Performance Level Change (PLC) is a new component for assessing student achievement that was approved for Michigan's use by the United States Department of Education for compliance with NCLB. PLC is important because it provides information about increases in student academic achievement that are greater than expected for one year of school. Because achievement "growth" can be calculated only for subject areas where students are tested in consecutive years, PLC is calculated only for English language arts and math for students in grades 3-8.

Students are counted as proficient if they show more than the expected improvement in their achievement level. This measure is based on the PLC model using scores that fall into the Improvement or Significant Improvement range. Performance Level Change allows schools to demonstrate increases in pupil achievement, the result of intensive efforts of students and staff, even though a student is not yet scoring in the proficient range on the MEAP assessment.

PLC enables schools to show their students may not yet be proficient, but achievement is improving. To determine the PLC for elementary and middle schools, the achievement levels (Not Proficient, Partially Proficient, Proficient and Advanced) for all grades for the four core subjects are totaled and students in the top two levels (proficient and advanced) are counted as proficient. Then for English language arts (ELA) and math, the following number of students is totaled:

- Students testing proficient but not improving
- Students improving but not proficient
- Students who are both proficient and improving.

Since Social Studies, Science, and Writing are not tested annually, the PLC calculation cannot be used for these subjects. The totals of students in each category of proficient or not proficient are divided by the total number of students tested to arrive at the percentage of students proficient in each subject area.

Proficient or Provisionally Proficient on the Michigan Merit Exam.
At the high school level, no subject area is tested at consecutive grade levels. Therefore, PLC cannot be measured for high schools. Instead, the MI-SAAS determines the number of students, based on the Michigan Merit Exam (which includes the ACT, Michigan Content Expectations, and WorkKeys), who are proficient or provisionally proficient. Provisional proficiency uses a standard error measurement to provide greater reliability and to eliminate any false negatives. This is similar to polling data that makes reference to "a margin of error of + or – 4%." The margin of error is applied to student scores that are just below the cut score.

Student achievement is based on the total of achievement levels for English language arts, math, science, and social studies. Then, for each subject, the following number of students is totaled:

- Students testing proficient
- Students provisionally proficient (within a margin of error).

These totals are divided by the total number of students tested to determine the percent proficient.

Improvement of Student Achievement
Performance Level Change (PLC) is used in cases where achievement is measured at adjacent grade levels in the same subject on the same state assessment. Improvement of student achievement (non-cohort growth) will be measured in the following cases:

- Science, Social Studies and Writing for each grade level in which it is tested; and
- Mathematics and Reading at the high school level.

A school in which achievement improves ten or more percentage points from year to year in a subject will be considered as having achieved the next higher threshold for classification as interim or accredited in that subject.

2. Compliance with Michigan Statute.
The second core element for accountability in the MI-SAAS is a school's compliance with Michigan statute. For schools to be accredited, they must comply with basic accreditation requirements in MCL 380.1280 and with the requirement to employ only teachers who hold a valid teaching certificate (MCL 380.1233). The eight statutory requirements appear below.

The MI-SAAS will measure compliance by evaluating schools on the following eight questions.

- Do 100% of the school's staff hold the necessary Michigan certification? (MCL 380.1233)
- Is the school's annual School Improvement Plan published? (MCL 380.1204a)
- Are required curricula offered (MCL 380.1204a):
  - Grade Level Content Expectations in grades K-8?
  - Michigan Merit Curriculum in grades 9-12?

- Is a fully compliant Annual Report published? (MCL 380.1204a)
- Have the Performance Indicators or equivalent been submitted through the School Improvement Framework or AdvancED Standards and Assessment Report? (MCL 380.1204a)
- Are literacy and math tested annually in grades 1-5? (MCL 380.1280b)
- If the school was designated for participation in the National Assessment of Educational Progress (NAEP), did the school participate? (MCL 380.1280b)
- Is the high school six-year graduation rate 80% or above? (MCL 380.1280b and MCL 388.1619)

If the answer to **any** one of these questions is "no" for two consecutive years, the school's accreditation status is lowered one level even if the "no" is for a different question each year.

3. Annual State Accreditation Status.
Student achievement and compliance with Michigan statute are combined to annually assign a state accreditation label for each school. A school cannot be fully accredited if it does not make AYP. As illustrated below, accreditation status will be lowered from accredited to interim for any school year in which the school does not make AYP.

Preliminary Accreditation Status	*Final Accreditation Status*	
	Makes AYP	**Does not make AYP**
Accredited	Accredited	Interim (AYP)
Interim	Interim (Proficiency)	Interim (Proficiency)
Unaccredited	Unaccredited	Unaccredited

With the closer alignment of accreditation and AYP, schools may be sorted into three categories:
- School is accredited and is making AYP.
- School is in interim status and may or may not be making AYP.
- School is unaccredited and may or may not be making AYP.

Note that state accreditation status is not related to federal Title I funding. A school in need of support and intervention should be treated the same regardless, whether:
- It receives Title I funds or not.
- The standards it doesn't meet are federal or state.

4. ADDITIONAL SCHOOL, DISTRICT, COMMUNITY, AND STATE INFORMATION.
In the same way that a car's dashboard provides gauges with a variety of helpful information, MI-SAAS displays various data elements to create a more complete picture of the school. These data elements are clustered into four areas: District Context, People/Programs, Success Indicators, and NCLB Performance. These elements are not included in the accreditation status calculation in the interests of credibility and transparency. That is, when a school is unaccredited, it is because of

achievement and compliance with statute, not due to other variables. MI-SAAS also includes space for the school or school district to report its own "points of pride."

The District Context can display financial data comparing the district's per pupil funding with the state average, the average teacher salary, the percent of funds spent on instruction as a percent of operating costs and other data already collected by MDE. Enrollment trends for both the building and district may be displayed, along with the percentage of students in the building from various feeder schools in the district and their annual state accreditation status.

People/Programs section may display the teacher/student ratio and percent of teachers receiving professional development. The percentage of students enrolled and participating in Career and Technical Education programs is displayed, as well as the percentage who are "concentrators" (i.e., A secondary student who has completed at least six of the twelve segments and is enrolled in the next segment). Finally, the different student populations served in the building are reported: English Language Learners, students eligible for Free and Reduced Price meals, and students with Special Needs.

The Success Indicators may include post-secondary readiness (for high schools) to report the percentage of students who applied to post-secondary institutions, the percent who achieved a college ready score on the ACT, and the percent who achieved a workforce ready score on the WorkKeys assessment. Completion-success rates for high schools are reported for the percentage of students dually enrolled, graduated within six years, or dropped out of school. Schools also show the percentage of students making progress as English Language Learners and the 9th grade promotion rate. Schools may choose other data to report, such as Title I Distinguished Award, or Teacher of the Year. If a school is accredited through AdvancED (parent organization of North Central Accreditation), the accreditation logo appears in this section.

THE REVISED SCHOOL CODE (EXCERPT)
Act 451 of 1976

380.1280c Identification of lowest achieving 5% of public schools; list; placement under supervision of reform/redesign officer; submission of redesign plan; implementation; creation of state school reform/redesign school district; appointment of chief executive officer to control multiple schools; implementation of restart, turnaround, or transformation models; release of public school from measures imposed by subsection (6) or (7); report; posting of certain information.

Sec. 1280c.

(1) Beginning in 2010, not later than September 1 of each year, the superintendent of public instruction shall publish a list identifying the public schools in this state that the department has determined to be among the lowest achieving 5% of all public schools in this state, as defined for the purposes of the federal incentive grant program created under sections 14005 and 14006 of title XIV of the American recovery and reinvestment act of 2009, Public Law 111-5.

(2) The superintendent of public instruction shall issue an order placing each public school that is included on the list under subsection (1) under the supervision of the state school reform/redesign officer described in subsection (9). Within 90 days after a public school is placed under the supervision of the state school reform/redesign officer under this section, the school board or board of directors operating the public school shall submit a redesign plan to the state school reform/redesign officer. For a public school operated by a school board, the redesign plan shall be developed with input from the local teacher bargaining unit and the local superintendent or, if an emergency financial manager is in place under the local government fiscal responsibility act, 1990 PA 72, MCL 141.1201 to 141.1291, the emergency financial manager. The redesign plan shall require implementation of 1 of the 4 school intervention models that are provided for the lowest achieving schools under the federal incentive grant program created under sections 14005 and 14006 of title XIV of the American recovery and reinvestment act of 2009, Public Law 111-5, known as the "race to the top" grant program. These models are the turnaround model, restart model, school closure, and transformation model. The redesign plan shall include an executed addendum to each applicable collective bargaining agreement in effect for the public school that meets the requirements of subsection (8).

(3) Within 30 days after receipt of a redesign plan for a public school under subsection (2), the state school reform/redesign officer shall issue an order approving, disapproving, or making changes to the redesign plan. If the order makes changes to the redesign plan, the school board or board of directors has 30 days after the order to change the redesign plan to incorporate those changes into the redesign plan and resubmit it to the state school reform/redesign officer for approval or disapproval.

(4) The state school reform/redesign officer shall not disapprove a redesign plan that includes all of the elements required under federal law for the school intervention model included in the redesign plan. A school board or board of directors may appeal disapproval of a redesign plan on this basis to the superintendent of public instruction. The decision of the superintendent of public instruction on the appeal is final.

(5) If the state school reform/redesign officer approves a redesign plan under this section, the school board or board of directors shall implement the redesign plan for the public school beginning with the beginning of the next school year that begins after the approval. The school board or board of directors shall regularly submit monitoring reports to the state school reform/redesign officer on the implementation and results of the plan in the form and manner, and according to a schedule, as determined by the state school reform/redesign officer.

(6) The state school reform/redesign school district is created. The state school reform/redesign school district is a school district for the purposes of section 11 of article IX of the state constitution of 1963 and for receiving state school aid under the state school aid act of 1979 and is subject to the leadership and general supervision of the state board over all public education under section 3 of article VIII of the state constitution of 1963. The state school reform/redesign school district is a body corporate and is a governmental agency. Except as otherwise provided in subsection (7), if the state school reform/redesign officer does not approve the redesign plan, or if the state school reform/redesign officer determines that the redesign plan is not achieving satisfactory results, the state school reform/redesign officer shall issue an order placing the public school in the state school reform/redesign school district, imposing for the public school implementation of 1 of the 4 school intervention models described in subsection (2) beginning with the beginning of the next school year, and imposing an addendum to each applicable collective bargaining agreement in effect for the public school as necessary to implement the school intervention model and that meets the requirements of subsection (8). All of the following apply to the state school reform/redesign school district:

(a) The state school reform/redesign school district shall consist of schools that are placed in the state school reform/redesign school district.

(b) The state school reform/redesign officer shall act as the superintendent of the state school reform/redesign school district. With respect to schools placed in the state school reform/redesign school district, the state school reform/redesign officer has all of the powers and duties described in this section; all of the provisions of this act that would otherwise apply to the school board that previously operated a school placed in the state school reform/redesign school district apply to the state school reform/redesign officer with respect to that school, except those relating to taxation or borrowing; except as otherwise provided in this section, the state school reform/redesign officer may exercise all the powers and duties otherwise vested by law in the school board that previously operated a school placed in the state school reform/redesign school district and in its officers, except those relating to taxation or borrowing, and may exercise all additional powers and duties provided under this section; and, except as otherwise provided in this section, the state school reform/redesign officer accedes to all the rights, duties, and obligations of the school board with respect to that school. These powers, rights, duties, and obligations include, but are not limited to, all of the following:

(i) Authority over the expenditure of all funds attributable to pupils at that school, including that portion of proceeds from bonded indebtedness and other funds dedicated to capital projects that would otherwise be apportioned to that school by the school board that previously operated the school according to the terms of the bond issue or financing documents.

(ii) Subject to subsection (8), rights and obligations under collective bargaining agreements and employment contracts entered into by the school board for employees at the school.

(iii) Rights to prosecute and defend litigation.

(iv) Rights and obligations under statute, rule, and common law.

(v) Authority to delegate any of the state school reform/redesign officer's powers and duties to 1 or more designees, with proper supervision by the state school reform/redesign officer.

(vi) Power to terminate any contract or portion of a contract entered into by the school board that applies to that school. However, this subsection does not allow any termination or diminishment of obligations to pay debt service on legally authorized bonds and does not allow a collective bargaining agreement to be affected except as provided under subsection (8). A contract terminated by the state school reform/redesign officer under this subsection is void.

(7) If the state school reform/redesign officer determines that better educational results are likely to be achieved by appointing a chief executive officer to take control of multiple public schools, the state school reform/redesign officer may make a recommendation to the superintendent of public instruction for appointment of a chief executive officer to take control over those multiple schools. If the superintendent of public instruction appoints a chief executive officer to take control of multiple public schools under this subsection, the chief executive officer shall impose for those public schools implementation of 1 of the 4 school intervention models described in subsection (2) and impose an addendum to each applicable collective bargaining agreement in effect for those public schools as necessary to implement the school intervention model and that meets the requirements of subsection (8). With respect to those public schools, the chief executive officer has all of the same powers and duties that the state school reform/redesign officer has for public schools placed in the state school reform/redesign school district under subsection (6). The chief executive officer shall regularly submit monitoring reports to the state school reform/redesign officer on the implementation and results of the intervention model in the form and manner, and according to a schedule, as determined by the state school reform/redesign officer. The chief executive officer shall

exercise any other powers or duties over the public schools as may be directed by the superintendent of public instruction.

(8) An addendum to a collective bargaining agreement under this section shall provide for any of the following that are necessary for the applicable school intervention model to be implemented at each affected public school:

(a) That any contractual or other seniority system that would otherwise be applicable shall not apply at the public school. This subdivision does not allow unilateral changes in pay scales or benefits.

(b) That any contractual or other work rules that are impediments to implementing the redesign plan shall not apply at the public school. This subdivision does not allow unilateral changes in pay scales or benefits.

(c) That the state school reform/redesign officer shall direct the expenditure of all funds attributable to pupils at the public school and the principal or other school leader designated by the state school reform/redesign officer shall have full autonomy and control over curriculum and discretionary spending at the public school.

(9) The superintendent of public instruction shall hire a state school reform/redesign officer to carry out the functions under this section and as otherwise prescribed by law. The state school reform/redesign officer shall be chosen solely on the basis of his or her competence and experience in educational reform and redesign. The state school reform/redesign officer is exempt from civil service. The state school reform/redesign officer is responsible directly to the superintendent of public instruction to ensure that the purposes of this section are carried out, and accordingly the position of state school reform/redesign officer should be a position within the department that is exempt from the classified state civil service. The department shall request that the civil service commission establish the position of state school reform/redesign officer as a position that is exempt from the classified state civil service.

(10) If the state school reform/redesign officer imposes the restart model for a public school in the state school reform/redesign school district, or a chief executive officer under subsection (7) imposes the restart model for multiple public schools under that subsection, all of the following apply:

(a) The state school reform/redesign officer or chief executive officer shall enter into an agreement with an educational management organization to manage and operate the public school or schools. The state school reform/redesign officer or chief executive officer shall provide sufficient oversight to ensure that the public school or schools will be operated according to all of the requirements for a restart model.

(b) There shall be considered to be no collective bargaining agreement in effect that applies to employees working at the public school or schools under this model at the time of imposition of the model.

(11) If the state school reform/redesign officer imposes the turnaround model for a public school in the state school reform/redesign school district, or a chief executive officer under subsection (7) imposes the turnaround model for multiple public schools under that subsection, all of the following apply:

(a) A collective bargaining agreement that applies to employees working at the public school or schools under this model at the time of imposition of the model, and any successor collective bargaining agreement, continues to apply with respect to pay scales and benefits.

(b) Subject to any addendum to the collective bargaining agreement that applies to the public school or schools, an employee who is working at the public school or schools and who was previously employed in the same school district that previously operated that school shall continue to retain and accrue seniority rights in that school district according to the collective bargaining agreement that applies to employees of that school district.

(12) If more than 9 public schools operated by a school district are on the list under subsection (1), the transformation model may not be implemented for more than 50% of those schools.

(13) If the state school reform/redesign officer determines that a public school that is subject to the measures under subsection (6) or (7) has made significant improvement in pupil achievement and should be released from the measures that have been imposed under subsection (6) or (7), the state school reform/redesign officer may recommend this to the superintendent of public instruction. If the superintendent of public instruction agrees with the determination and recommendation, the superintendent of public instruction may release the public school from the measures that have been imposed under subsection (6) or (7).

(14) At least annually, the state school reform/redesign officer shall submit a report to the standing committees of the senate and house of representatives having jurisdiction over education legislation on the progress being made in improving pupil proficiency due to the measures under this section.

(15) As soon as practicable after the federal department of education has adopted the final work rules and formula for identifying the lowest achieving 5% of all public schools in this state for the purposes of the federal incentive grant program created under sections 14005 and 14006 of title XIV of the American recovery and reinvestment act of 2009, Public Law 111-5, known as the "race to the top" grant program, the department shall post all of the following on its website:

(a) The federal work rules and formula.

(b) A list of the public schools in this state that have been identified for these purposes as being among the lowest achieving 5% of all public schools in this state. The department shall update this list as it considers appropriate.

History: Add. 2009, Act 204, Imd. Eff. Jan. 4, 2010
Popular Name: Act 451

LOCAL GOVERNMENT FISCAL RESPONSIBILITY ACT (EXCERPT)
Act 72 of 1990

141.1238 Emergency financial manager; nominees; appointment, qualifications, and term; contract; compensation and expenses; staff and professional assistance.

Sec. 38.

(1) If the superintendent of public instruction determines under section 35 or 36 that a school district has a financial emergency, the superintendent of public instruction, within 30 days after that determination, shall submit to the state board the names of nominees who shall be considered for appointment to serve as an emergency financial manager for the school district. From the list of nominees submitted to the state board, the state board shall submit to the governor the names of not more than 3 nominees who shall be considered for appointment to serve as an emergency financial manager for the school district. From the list of nominees submitted to the governor, the governor shall appoint, with the advice and consent of the senate, an emergency financial manager for the school district who shall hold office for a term fixed by the governor, but not to exceed 1 year. The appointment shall be by written contract and may be renewed on an annual basis for not more than 1 year.

(2) An emergency financial manager appointed under this article shall be chosen solely on the basis of his or her competence in fiscal matters and shall not have been either an elected or appointed official or employee of the school district for which he or she is appointed for not less than 5 years before the appointment. The emergency financial manager shall not be the superintendent of public instruction. The emergency financial manager need not be a resident of the school district for which he or she is appointed.

(3) Unless the legislature provides special funding, an emergency financial manager shall receive compensation and reimbursement for actual and necessary expenses from the school district as approved by the superintendent of public instruction. In addition to staff otherwise authorized by law, with the approval of the superintendent of public instruction, the emergency financial manager may appoint additional staff and secure professional assistance considered necessary to implement this article.

History: 1990, Act 72, Imd. Eff. May 15, 1990

THE REVISED SCHOOL CODE (EXCERPT)
Act 451 of 1976

380.502 Public school academy; organization; operation; bodies authorized to issue contract; application to obtain contract; contents; oversight; suspension of powers; fees; presumption of legality.

Sec. 502.

(1) A public school academy shall be organized and administered under the direction of a board of directors in accordance with this part and with bylaws adopted by the board of directors. A public school academy corporation shall be organized under the nonprofit corporation act, 1982 PA 162, MCL 450.2101 to 450.3192, except that a public school academy corporation is not required to comply with sections 170 to 177 of 1931 PA 327, MCL 450.170 to 450.177. To the extent disqualified under the state or federal constitution, a public school academy shall not be organized by a church or other religious organization and shall not have any organizational or contractual affiliation with or constitute a church or other religious organization.

(2) Any of the following may act as an authorizing body to issue a contract to organize and operate 1 or more public school academies under this part:

(a) The board of a school district that operates grades K to 12. However, the board of a school district shall not issue a contract for a public school academy to operate outside the school district's boundaries, and a public school academy authorized by the board of a school district shall not operate outside that school district's boundaries.

(b) An intermediate school board. However, the board of an intermediate school district shall not issue a contract for a public school academy to operate outside the intermediate school district's boundaries, and a public school academy authorized by the board of an intermediate school district shall not operate outside that intermediate school district's boundaries.

(c) The board of a community college. However, except as otherwise provided in this subdivision, the board of a community college shall not issue a contract for a public school academy to operate in a school district organized as a school district of the first class, a public school academy authorized by the board of a community college shall not operate in a school district organized as a school district of the first class, the board of a community college shall not issue a contract for a public school academy to operate outside the boundaries of the community college district, and a public school academy authorized by the board of a community college shall not operate outside the boundaries of the community college district. The board of a community college also may issue a contract for not more than 1 public school academy to operate on the grounds of an active or closed federal military installation located outside the boundaries of the community college district, or may operate a public school academy itself on the grounds of such a federal military installation, if the federal military installation is not located within the boundaries of any community college district and the community college has previously offered courses on the grounds of the federal military installation for at least 10 years.

(d) The governing board of a state public university. However, the combined total number of contracts for public school academies issued by all state public universities shall not exceed 150. Further, the total number of contracts issued by any 1 state public university shall not exceed 50% of the maximum combined total number that may be issued under this subdivision.

(3) To obtain a contract to organize and operate 1 or more public school academies, 1 or more persons or an entity may apply to an authorizing body described in subsection (2). The application shall include at least all of the following:

(a) Identification of the applicant for the contract.

(b) Subject to the resolution adopted by the authorizing body under section 503(4), a list of the proposed members of the board of directors of the public school academy and a description of the qualifications and method for appointment or election of members of the board of directors.

(c) The proposed articles of incorporation, which shall include at least all of the following:

(i) The name of the proposed public school academy.

(ii) The purposes for the public school academy corporation. This language shall provide that the public school academy is incorporated pursuant to this part and that the public school academy corporation is a governmental entity.

(iii) The name of the authorizing body.

(iv) The proposed time when the articles of incorporation will be effective.

(v) Other matters considered expedient to be in the articles of incorporation.

(d) A copy of the proposed bylaws of the public school academy.

(e) Documentation meeting the application requirements of the authorizing body, including at least all of the following:

(i) The governance structure of the public school academy.

(ii) A copy of the educational goals of the public school academy and the curricula to be offered and methods of pupil assessment to be used by the public school academy. To the extent applicable, the progress of the pupils in the public school academy shall be assessed using at least a Michigan education assessment program (MEAP) test or the Michigan merit examination, as applicable.

(iii) The admission policy and criteria to be maintained by the public school academy. The admission policy and criteria shall comply with section 504. This part of the application also shall include a description of how the applicant will provide to the general public adequate notice that a public school academy is being created and adequate information on the admission policy, criteria, and process.

(iv) The school calendar and school day schedule.

(v) The age or grade range of pupils to be enrolled.

(f) Descriptions of staff responsibilities and of the public school academy's governance structure.

(g) For an application to the board of a school district, an intermediate school board, or board of a community college, identification of the local and intermediate school districts in which the public school academy will be located.

(h) An agreement that the public school academy will comply with the provisions of this part and, subject to the provisions of this part, with all other state law applicable to public bodies and with federal law applicable to public bodies or school districts.

(i) For a public school academy authorized by a school district, an assurance that employees of the public school academy will be covered by the collective bargaining agreements that apply to other employees of the school district employed in similar classifications in schools that are not public school academies.

(j) A description of and address for the proposed physical plant in which the public school academy will be located.

(4) An authorizing body shall oversee, or shall contract with an intermediate school district, community college, or state public university to oversee, each public school academy operating under a contract issued by the authorizing body. The oversight shall be sufficient to ensure that the authorizing body can certify that the public school academy is in compliance with statute, rules, and the terms of the contract.

(5) If the superintendent of public instruction finds that an authorizing body is not engaging in appropriate continuing oversight of 1 or more public school academies operating under a contract issued by the authorizing body, the superintendent of public instruction may suspend the power of the authorizing body to issue new contracts to organize and operate public school academies. A contract issued by the authorizing body

during the suspension is void. A contract issued by the authorizing body before the suspension is not affected by the suspension.

(6) An authorizing body shall not charge a fee, or require reimbursement of expenses, for considering an application for a contract, for issuing a contract, or for providing oversight of a contract for a public school academy in an amount that exceeds a combined total of 3% of the total state school aid received by the public school academy in the school year in which the fees or expenses are charged. An authorizing body may provide other services for a public school academy and charge a fee for those services, but shall not require such an arrangement as a condition to issuing the contract authorizing the public school academy.

(7) A public school academy shall be presumed to be legally organized if it has exercised the franchises and privileges of a public school academy for at least 2 years.

History: Add. 1993, Act 362, Imd. Eff. Jan. 14, 1994 ;-- Am. 1994, Act 416, Eff. Mar. 30, 1995 ;-- Am. 1995, Act 289, Eff. July 1, 1996 ;-- Am. 2009, Act 205, Imd. Eff. Jan. 4, 2010
Compiler's Notes: Former MCL 380.502, which pertained to public school academy, organization, and operation, was repealed by Act 362 of 1993, Imd. Eff. Jan. 14, 1994.
Popular Name: Act 451
Popular Name: Charter Schools
Popular Name: Public School Academies

SIG School Ranking Business Rules

Short Narrative Version

Persistently Lowest Achieving Schools for SFSFII and SIG Applications

To identify the persistently lowest performing schools the Michigan Department of Education (MDE) first identified the pool of eligible schools. All Title I schools in improvement, corrective action, or restructuring were identified and listed. All non-Title I secondary schools that were eligible to receive Title I funds were listed. Secondary schools in Michigan are those schools with any grades 7-12. Closed schools were removed from both lists. Schools were then rank ordered using the business rules below to find the lowest 5% of each and identify schools eligible for SIG funds as Tier 1, Tier 2 and Tier 3 schools.

The following business rules were used to create the list of lowest performing 5% of Title I schools identified for improvement, corrective action and restructuring. These schools are eligible for SIG funds as Tier 1 schools:

- Schools were included if they receive Title I funds AND are identified for improvement, corrective action, or restructuring.
- Shared educational entities (SEE) with test scores to be sent back to the resident district were not included.
- The rules for school rankings described below were applied.
- The lowest 5% of the ranked schools are identified as Tier 1 schools.
- Any high schools in the Tier 1 pool that have a four-year graduation rate of 60% or less for the last three years are also identified as Tier 1 schools.

The following business rules were used to create the list of lowest performing 5% of secondary schools that are eligible to receive Title I funds but are not receiving Title I funds. These schools are eligible for SIG funds as Tier 2 schools.

- Schools were included if they were secondary schools (those housing any of grades 7-12) AND were eligible to receive Title I funds but did not receive Title I funds.
- Shared educational entities (SEE) with test scores to be sent back to the resident district were not included.
- The rules for school rankings described below were applied.
- The lowest 5% of the ranked schools are identified as preliminary Tier 2 schools.
- Secondary schools from the Tier 1 pool (Title I secondary schools that have not made AYP for two or more consecutive years) that did not fall

into the lowest 5% but that have academic performance equal to or lower than the highest ranked preliminary Tier 2 school are added into the Tier 2 schools list.*

- Any high schools in the Tier 2 pool that have a four-year graduation rate of 60% or less for the last three years are also identified as Tier 2 schools.

The following business rules were used to create the list of Tier 3 schools. These schools are eligible for SIG funds as Tier 3 schools.

- All schools from the Tier 1 pool of schools that were not identified as Tier 1 lowest 5% or as Tier 1 based on graduation rate are included as Tier 3 schools unless the schools were newly eligible and identified as Tier 2 schools.
- Any school that was omitted due to small size (fewer than 30 FAY students tested), but shows up on Tier 1 or Tier 2 on a rerun of the list without the 30 FAY students tested restriction.

The following business rules were used to calculate the school rankings for the Tier 1 and Tier 2 lists.

- Proficiency calculations are based on regular and alternate assessments: MEAP, MEAP-Access (if available), MME, MME-Access, and MI-Access.
- Students with valid math and reading scores in the assessments were included.
- A student with a performance level of 1 or 2 is considered proficient.
- Students with test scores who are full academic year (FAY) were included.
- Only public school students were included (no home schooled or private school students).
- The school receives a ranking if at least 30 FAY students are tested in either the elementary/middle school span or the high school span (or both) for each year.
- Schools were rank ordered using a proficiency index (based on the weighted average of two years of achievement data) and a progress index (based on three years of achievement data) to combine test scores from different grades, progress over two or three years, and test scores for both reading and mathematics.
- Achievement is weighted twice as much as improvement. This is because the focus is on persistently low-achieving schools. Weighting proficiency more heavily assures that the lowest performing schools, unless they are improving significantly over time, still receive the assistance and monitoring they need to begin improvement and/or increase their improvement to a degree that will reasonably quickly lead to adequate achievement levels.

* Although Michigan applied for a waiver to include Title I secondary schools in the Tier 2 pool, Michigan has chosen instead to use the flexibility granted to states through the Consolidated Appropriations Act of 2010 to make newly eligible all Title 1 secondary schools with lower performance than the highest performing Tier 2 school. This allows us to offer School Improvement Grant funds to an additional 64 schools. This additional flexibility is described in Guidance on School Improvement Grants, page 11: an SEA may identify as a Tier II school a secondary school that is eligible for Title I, Part A funds and that:

(A)(1) Has not made AYP for at least two consecutive years; or

(2) Is in the State's lowest quintile of performance based on proficiency rates on the State's assessments under section 1111(b)(3) of the ESEA in reading/language arts and mathematics combined; and

(B)(1) Is no higher achieving than the highest-achieving school identified by the SEA under paragraph (a)(2)(i) of the definition of "persistently lowest-achieving schools" (step 14 in A-18); or

(2) Is a high school that has had a graduation rate as defined in 34 C.F.R. § 200.19(b) that is less than 60 percent over a number of years.

SIG School Ranking Business Rules

Full Narrative Version

Datasets to be included (if available)

- Most recent two years of published data from fall MEAP, grades 03-08
- Most recent two years of published data from fall MEAP-Access, grades 03-08
- Most recent two years of published data from fall MI-Access, grades 03-08
- Most recent three years of published data from spring MME, grade 11
- Most recent three years of published data from spring MME-Access, grade 11
- Most recent three years of published data from spring MI-Access, grade 11

Subjects to be included (if available)

- Reading
  - English Language Arts is used in place of reading where English Language Arts is tested in all grades of a program (e.g., MEAP, MEAP-Access, MI-Access, MME, MME-Access, and MI-Access)
- Mathematics

Inclusion rules

- Include only scores from students who are full academic year (FAY)
- Include fall scores in data for the previous year's school and previous grade using feeder codes
- Include spring scores for the current year's school and grade
- Calculate ranking for a school on a subject only if at least 30 FAY students were tested in the elementary/middle school span (3-8) ***or*** the high school span (9-12), ***or*** both, for the most recent two years
- Include only public school students (no home schooled or private school students)
- Include schools only if they have ranks in both reading/ELA and mathematics
- Include schools only if they are not shared educational entities (SEEs) whose scores are returned to the sending districts for accountability purposes

Definitions

- Elementary/middle school = a school housing any of grades K-8
- High school = a school housing any of grades 9-12
- Secondary school = a school housing any of grades 7-12
- Full academic year (FAY) indicates that the student was claimed by the school on the previous two count days

Conventions

- A school classified as both elementary/middle and high school has ranks calculated for both sets of grades
- All calculations are rounded to the nearest 0.0001 (4^{th} decimal place)
- The definitive version is based on mathematical operations as performed by Microsoft SQL.

Steps in Calculations

1. Repeat steps 2-5 separately for reading and mathematics and each grade range (elementary/middle versus high school) for each school with 30 or more FAY students tested the grade and subject in the most recent two years for which data are available

2. Calculate a percent proficiency index for the most recent two years in which data are available:
   a. Obtain the percent proficient (*pp3* and *pp2* for the most recent and previous year, respectively)
   b. Obtain the number of students tested (*nt3* and *nt2* for the most recent and previous year, respectively)
   c. Calculated a weighted average of percent proficient over the most recent to years as $pp=((pp3*nt3)+(pp2*nt2))/(nt3+nt2)$
   d. Calculate the percent proficient index $ppi = (pp - \text{mean}(pp)) / \text{sd}(pp)$ [a *z*-score]
3. Calculate a percent change index:
   a. Where adjacent year testing occurs (e.g., reading & math in elementary/middle school):
      i. Obtain the percent of students improving or significantly improving for the two most recent years (*pi3* and *pi2* for the most recent and previous year, respectively)
      ii. Obtain the percent of student declining or significantly declining for the two most recent years (*pd3* and *pd2* for the most recent and previous year, respectively)
      iii. Calculate a weighted average of percents improving and declining as $pi=((pi3*nt3)+(pi2*nt2))/(nt3+nt2)$ and $pd=((pd3*nt3)+(pd2*nt2))/(nt3+nt2)$
      iv. Calculate the two-year average percent improving minus two-year average percent declining ($pid = pi - pd$)
      v. Calculate the percent change index $pci = (pid - \text{mean}(pid)) / \text{sd}(pid)$ [a *z*-score]
   b. Where adjacent grade testing does not occur (e.g., high school):
      i. Obtain the percent proficient two years ago (*pp1*) and if available three years ago (*pp0*)
      ii. Obtain the number of FAY students tested two years ago (*nt1*) and if available three years ago (*nt0*)
      iii. Calculate the slope ($b1$) of the simple regression of percents proficient on year (representing the three-year or four-year annual change in percent proficient) if there are at least 20 FAY students tested in each of the years used for calculating slopes. Assign a zero (0) if there are less than 20 FAY students tested in any one of the years used to calculate slopes.
      iv. Calculate the percent change index $pci = (b1 - \text{mean}(b1)) / \text{sd}(b1)$ [a *z*-score]
4. Calculate the percent proficient plus change index ($ppci = [2*ppi + pci]/3$)
5. Calculate the school percentile rank on *ppci* (*pr*)
6. Calculate the average school percentile rank across reading and mathematics and grade spans (elementary/middle versus high school) in which the school received a percentile rank (*pr.av.mr* is calculated as the average of from 2 to 4 percentile ranks)
7. Calculate the school overall percentile rank across reading and mathematics (*pr.mr*) as the school percentile rank on *pr.av.mr*

NOTE: mean(x) denotes the mean (or average) of x
NOTE: sd(x) denotes the standard deviation of x
NOTE: Calculating separately for each grade span addresses the issues of differences in pass rates across subjects and across elementary/middle schools versus high schools. This assures that the list does not consist

solely of high schools because of relatively more rigorous performance expectations in high school as compared to elementary/middle schools. Calculating separately for each grade span also assures that schools that teach students in both grade ranges (3-8 and high school) have measures that are comparable to all other schools.

NOTE: Using *z*-scores weights the proficiency and improvement portions of the calculations in the desired proportions, weights all subjects evenly, and weights elementary school and high school performance evenly.

Additional steps/criteria for Tier 1 lowest 5% and state watch lists**

1. Obtain for each school the following:
    a. Whether the school receives Title I funds. Title I eligibility is derived from N129 CCD Schools (I.D. #22 - Title I School Status) file submission of previous school year.
    b. Whether the school is under corrective action, restructuring, or improvement (CARI) under ESEA because of not making AYP for the most recent two years for which data are available
2. Limit the pool of schools upon which calculations are based to those that:
    a. Receive Title I funds AND are under CARI
3. Identify schools in the lowest 5% of the eligible pool (*pr.mr* ≤ 5) and schools in the eligible pool that are high schools with a graduation rate of 60% or lower for the last three consecutive year as on the Tier 1 lowest 5% list
4. Identify schools in the next lowest 15% of the eligible pool (*pr.mr* > 5 and *pr.mr* ≤ 20) as on the state's Tier 1 watch list, if they do not show up on the Tier 2 list (described below)

Additional steps/criteria for Tier 2 lowest 5% and state watch lists**

1. Obtain for each school the following:
    a. Whether the school is a secondary school
    b. Whether the school has a graduation rate less than 60 for the most recent three years for which data are available (low grad rate)
    c. Whether the school is eligible for, but does not receive, Title I funds (Title I eligible)
2. Limit the pool of schools upon which calculations are based to those that:
    a. Are secondary schools AND are Title I eligible AND are not on the Tier 1 lowest 5% list
    b. OR are secondary schools AND have a low graduation rate AND are not on the Tier 1 lowest 5% list
3. Identify schools in the lowest 5% of the eligible pool (*pr.mr* ≤ 5) or schools with a graduation rate of less than 60 for the most recent three years for which data are available as on the preliminary Tier 2 lowest 5% list
4. Identify schools in the next lowest 15% of the eligible pool (*pr.mr* > 5 and *pr.mr* ≤ 20) as on the preliminary Tier 2 watch list
5. Obtain the percentile rank of the highest ranked school on the Tier 2 lowest 5% list
6. Obtain the percentile rank of the highest ranked school on the state's Tier 2 watch list
7. Place on the final Tier 2 lowest 5% list:
    a. all schools on the preliminary Tier 2 lowest 5% list
    b. PLUS any schools from the Tier 1 pool that:
        i. are secondary schools

   ii. AND did not make it onto the Tier 1 lowest 5% list
   iii. AND have overall performance (on *pr.mr* calculated for all schools statewide) that is lower than or equal to the highest ranked school (on *pr.mr* as calculated only for the Tier 2 eligible pool) that appears on the preliminary Tier 2 lowest 5% list
  c. High schools with a graduation rate of 60% or below for three years
8. Place on the final Tier 2 watch list:
  a. all schools on the preliminary Tier 2 watch list that do not show up on the Tier 2 list
  b. PLUS any schools from the Tier 1 pool that:
   i. are secondary schools
   ii. AND did not make it onto the Tier 1 lowest 5% list
   iii. AND did not make it onto the Tier 1 watch list
   iv. AND have overall performance (on *pr.mr* calculated for all schools statewide) that is lower than or equal to the highest ranked school (on *pr.mr* as calculated only for the Tier 2 eligible pool) that appears on the preliminary Tier 2 watch list

Additional steps for the overall lowest 5% list (schools subject to state reform officer monitoring and/or takeover) and overall watch list (schools in danger of falling onto the lowest 5% list)

1. Place schools onto the overall lowest 5% list if they are on either the Tier 1 or Tier 2 lowest 5% list
2. Place schools onto the overall watch list if they are on either the Tier 1 or Tier 2 watch list

Additional steps/criteria for the small school lowest 5% projection list

1. Rerun the entire Tier 1/Tier 2 process as a projection without the FAY ≥ 30 restriction (replaced by a FAY ≥ 1 restriction), and identify schools as on the small schools lowest 5% projection list if:
  a. They were not included in the original run
  b. AND they appear on either the projected Tier 1 lowest 5% list or projected Tier 2 lowest 5% list

Additional steps for the Tier 3 list

1. Place schools on the Tier 3 list if they are in the Tier 1 pool, but do not show up on the overall lowest 5% list
2. Place schools on the Tier 3 list if they show up on the small school lowest 5% projection list but did not show up on the Tier 1 or Tier 2 lists in the initial run.

** Note: In addition to publishing the list of persistently lowest achieving schools (PLA) the Michigan Department of Education will publish a state watch list of schools in the lowest quintile (6-20%). This does not affect the PLA ranking or eligibility for the School Improvement Grant, but provides an alert to LEAs to work with these schools to keep them out of the PLA category.

Michigan Charter School Legislation

Section F contains many references to Michigan state statute. The following website can be used to view all sections of legislation:

http://www.legislature.mi.gov/(S(nkcloa45xpibjzyrf5i42c55))/mileg.aspx?page=home

The following citations pertain to charter school law in Michigan.

Public Act 205 of 2009

MCL 380.502

MCL 380.503

MCL 380.504

MCL 380.505

MCL 380.506

MCL 380.507

MCL 388.1601

MCL 388.1603

MCL 388.1620

MCL 388.1631a

MCL 388.1651a

Budget Part I: Summary Budget Table
(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	$4,126,958	$4,045,921	$3,985,599	$3,985,599	$16,144,077
2. Fringe Benefits	$1,857,131	$1,820,664	$1,793,520	$1,793,520	$7,264,835
3. Travel	$578,450	$559,400	$559,400	$559,400	$2,256,650
4. Equipment	$65,000	$22,000	$22,000	$22,000	$131,000
5. Supplies	$1,418,294	$1,215,500	$1,222,500	$1,222,500	$5,078,794
6. Contractual	$71,028,327	$17,961,827	$12,886,827	$13,012,398	$114,889,378
7. Training Stipends	$9,500	$4,500	$4,500	$4,500	$23,000
8. Other	$4,060,540	$2,062,195	$2,062,210	$2,049,710	$10,234,655
9. Total Direct Costs (lines 1-8)	$83,144,200	$27,692,007	$22,536,556	$22,649,627	$156,022,389
10. Indirect Costs	$1,415,339	$1,120,641	$1,114,985	$1,111,160	$4,762,126
11. Funding for Involved LEAs	$4,292,000	$2,050,000	$1,050,000	$50,000	$7,442,000
12. Supplemental Funding for Participating LEAs	$14,370,500	$6,603,834	$5,603,834	$5,103,834	$31,682,002
13. Total Costs (lines 9-12)	$103,222,039	$37,466,482	$30,305,375	$28,914,621	$199,908,517
14. Funding Subgranted to Participating LEAs (50% of Total Grant)	$103,222,039	$37,466,482	$30,305,375	$28,914,621	$199,908,517
15. Total Budget (lines13-14)	$206,444,079	$74,932,964	$60,610,750	$57,829,242	$399,817,035

All applicants must provide a break-down by the applicable budget categories show 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.

A mandatory budget limit for Michigan and all other states applying for Phase II of this competition was established by United States Department of Education. Michigan's budget limit was set at $400 million; actual requested funds total $399,817,035. Of this amount, half, or $199,908,517, will be used to fund statewide Race to the Top activities and half, or $199,908,517 is required to be sub granted to participating local school districts, including public school academies, based on their relative share of 2009-2010 funding under Title I, Part A of the Elementary and Secondary Education Act. All funds must support state and local implementation of comprehensive education reform efforts as described in the Race to the Top application that will increase student achievement and close achievement gaps.

If Michigan is awarded a Race to the Top Phase II grant, the participating districts will have up to 90 days to complete a local scope of work detailing specific goals, activities, timelines, budgets, key personnel, and annual targets for performance measures aligned to the Accelerate Michigan Plan. Below is a brief summary of Michigan's Race to the Top Phase II project budgets, followed by a detailed overview of each project's expenditures.

Accelerate Michigan

The funding will be used to establish an office within the Michigan Department of Education (MDE) to provide oversight and project management for all of the Accelerate Michigan initiatives addressed in the Race to the Top application. This office will ensure that the coordination and collaboration described throughout the Race to the Top application will be implemented and that goals and timelines will be met. Funding in the Accelerate Michigan Office budget also includes staffing in other department offices to ensure comprehensive support. Contractual fees are included for the Department of Technology, Management and Budget (DTMB) to provide needed technology updates that will support the reporting and communication functions. The Accelerate Michigan Office budget also includes funding for Project ReImagine, which will be used to provide seed money that will give ReImagine districts the opportunity to implement bold reforms with a clear understanding that sustainability is dependent on the districts' re-envisioned use of existing resources.

Internationally Benchmarked Standards

Funds allocated to the Internationally Benchmarked Standards project budget will support activities that provide assistance and services to districts in implementing and aligning local curriculum, instruction, and assessments to the Common Core State Standards. These activities include roll-out workshops to assist districts in curriculum and assessment alignment, the development of model instructional units and instructional surveys to assist teachers in classroom practice, and the launch and maintenance of the Teaching for Learning Framework website, which will provide educators statewide with 24/7 access to instructional resources, reflection tools, and professional development that align to research-based best practices, professional teaching standards, and the Michigan School Improvement Framework. Funds are also allocated to support Math and Science Centers and Regional Literacy Centers to develop strategies, tools and professional development to accelerate achievement in schools receiving help from the Statewide System of Support including the development of elementary math specialists, teacher leaders, and increasing the number of subgroup students taking Advanced Placement Courses at the secondary level.

Balanced Assessments

The Balanced Assessment project provides support for Michigan's governing role in the SMARTER Balanced assessment consortium to develop summative, interim benchmark, and formative assessments aligned to the Common Core State Standards. Until the consortium assessments are developed, the state will contract with a national vendor to provide commercially available summative assessments aligned with college and career readiness standards for grades 9 and 10. Significant funding is budgeted as part of this project to be awarded to consortia of LEAs, Intermediate School Districts (ISD), and Institutions of Higher Education (IHE) through a competitive grant process to develop interim benchmark and formative assessments for all learners for content areas not covered by the Common Core State Standards. This project will also support a redesign of the Office of Educational Assessment and Accountability's secure site to provide access to individual student data, improve the connection of assessment data to teachers on state-tested subjects, and facilitate the capture and transfer of data critical to the state's longitudinal data system.

Statewide Longitudinal Data Systems

This funding will be used to complement work initiated under the State Longitudinal Data System Grant, awarded to Michigan by the Institute of Educational Sciences, to design and implement a longitudinal data system that supports the 12 activities outlined by the American COMPETES Act, and further supports efforts to provide meaningful data access to educators, researchers and the public. In addition, funding will support regional data system work and participation by ISDs, LEAs and Public School Academies (PSA) in these initiatives. These initiatives exist to provide teachers and administrators with access to state and local data for their use in making data-driven decisions to improve classroom instruction and outcomes for students. The funds support the need to "ramp up" local efforts to provide appropriate information access and analysis tools for use in local data driven decision making.

Teacher and Leader Pathways

Significant funding is budgeted to be awarded to teacher preparation institutions, through a competitive grant process, to focus on shortage area research and models of assuring adequate preparation of educators in areas of teacher shortages, as well as stipends for meeting targets. A focus will be placed on the fields of science, technology, engineering, and mathematics (STEM). Funding for this project will support the modification of the educator licensure database to account for alternate educator preparation requirements. This project will also support the development of a public reporting site for alternative certification along with review and feedback on alternate preparation and shortages. A portion of the funds will be used to support local districts and public school academies that employ alternate route teachers.

Educator Evaluations Based Significantly on Student Growth

This project provides an infrastructure and support for implementing Michigan's new law that requires annual educator evaluations. The funds in this portion of the budget cover state contracts, staff, and equipment costs for (1) enhancing existing data systems and maintaining those systems to support annual evaluations and to collect annual evaluation results; (2) creating, storing, and analyzing state-developed preliminary measures of educator impact on student growth; (3) studying, quality controlling, enhancing, and reporting on the validity of state-developed preliminary measures of educator impact; (4) studying and reporting on the impact and quality of local evaluation practices; (5) reporting annually on the results of annual evaluations; (6) convening stakeholder groups to develop best practice guidelines for the development of evidence to be used in annual evaluations; (7) convening stakeholder groups to develop best practice guidelines for the conduct of annual evaluations; (8) providing funds to LEAs for the purpose of entering annual evaluation results into state data systems, and (9) developing regional data initiative tools to conduct annual educator evaluations.

Equitable Distribution of Effective Teachers and Leaders

Funds will support the research on equitable distribution and the incentives necessary for attracting, supporting and retaining high quality educators to work in the most difficult to staff areas. A competitive grant process will be established for the scholarly development of models for differentiated compensation that supports the research.

Effective Teacher and Leader Preparation Programs

This project will support research on the effectiveness of existing and future educator preparation programs, including alternate, experimental and innovative programs. Significant funding will be used to establish consortiums of high performing teacher preparation institutions to develop and provide professional development and technical assistance to lower performing institutions.

Providing Effective Support to Teachers and Leaders

This project covers state staff, contract, equipment, travel, and supply costs to support teachers and leaders through (1) professional development for effective design and implementation of professional learning communities, (2) professional development for balanced assessment (including formative assessment) to inform instruction, (3) development of high-quality local assessments in non-core subjects to give timely information to students and teachers in non-core subjects, and (4) evaluation of the impact of these statewide activities on student achievement.

Breakthrough for Learning

This funding focuses on the development of three specific supports for persistently low performing schools in order to rapidly improve the achievement of all students. First, the Michigan Department of Education will hire two consultants to work closely with the persistently low performing schools and to link the efforts of the Statewide System of Support, the School Improvement Grant, Race to the Top and the State School Reform and Redesign Officer in order to minimize redundancy, disparate efforts, and maximize efficiency and effectiveness. Second, these funds will supply the state with a network of effective turnaround programs whose members have participated in a statewide training program to assure that services provided to Michigan schools are based on Michigan's tools for improvement coupled with the provider's model to turn around the school. Finally, the principals of the identified schools will be provided with a Principal's Academy where effective strategies and practices can be shared and developed for local use. Additionally, funds will be used to provide school turnaround grants to schools not eligible for Title I funding that are identified as lowest achieving to assist with implementation of one of the four school turnaround models.

Promise Zones

Promise Zones were enacted in 2008 by the Michigan Legislature. Ten Promise Zones were identified. This funding will provide competitive grants that will accelerate full implementation of the Promise Zones scholarship program. Promise Zones will apply for funds to complete their planning and implementation so that Promise scholarships will be operational within one year. The funding will be disbursed in the first year of the Accelerate Michigan project.

Michigan will leverage additional federal and state funds, including those from the School Improvement Grant, Title I, Perkins funds, Statewide Longitudinal Data Systems grant, and general state funds, as described in the Project Budgets below.

Please see below for a brief index of acronyms used throughout Michigan's Race to the Top budget.

Index of Acronyms

CCRS	College and Career Readiness Standards
CCSS	Common Core State Standards
CEPI	Center for Educational Performance and Information
CTE	(Office of) Career and Technical Education
DTMB	Department of Technology, Management and Budget
FTE	Full-time equivalent
FY	Fiscal year
IPDP	Individualized Professional Development Plan
LEA	Local Education Agency
MDE	Michigan Department of Education
MEGS	Michigan Electronic Grant System
MIEM	Michigan Institute for Educational Management
OEAA	Office of Educational Assessment and Accountability
OEII	Office of Education Improvement and Innovation
OPPS	Office of Professional Preparation Services
PD	Professional development
SLDS	Statewide Longitudinal Data System
TLF	Teaching for Learning Framework
UIC	Unique Identifier Code

Budget Part II: Project-Level Budget Table
Project Name: Office of Accelerate Michigan
Associated with Criteria: State Success Factors (A)(2)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 1,625,597	$ 1,625,597	$ 1,565,276	$ 1,565,276	$ 6,381,745
2. Fringe Benefits	$ 731,519	$ 731,519	$ 704,374	$ 704,374	$ 2,871,785
3. Travel	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ 560,000
4. Equipment	$ 30,000	$ 7,000	$ 7,000	$ 7,000	$ 51,000
5. Supplies	$ 157,500	$ 111,500	$ 108,500	$ 108,500	$ 486,000
6. Contractual	$ 1,116,400	$ 716,400	$ 716,400	$ 716,400	$ 3,265,600
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ 3,224,625	$ 1,224,625	$ 1,218,390	$ 1,218,390	$ 6,886,030
9. Total Direct Costs (lines 1-8)	$ 7,025,641	$ 4,556,641	$ 4,459,939	$ 4,459,939	$ 20,502,160
10. Indirect Costs	$ 612,433	$ 403,741	$ 393,877	$ 393,877	$ 1,803,927
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ 10,000,000	$ 3,333,334	$ 3,333,334	$ 3,333,334	$ 20,000,002
13. Total Costs (lines 9-12)	$ 17,638,073	$ 8,293,715	$ 8,187,151	$ 8,187,151	$ 42,306,089

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
New State Office Administrator 17 (Accelerate Michigan Office) will lead office that coordinates all Accelerate Michigan Plan initiatives (Base Salary: $111,100 x 1.0 FTE)	$ 111,100	$ 111,100	$ 111,100	$ 111,100	$ -
New State Administrative Manager 15 (Accelerate Michigan Office) will manage staff and personnel within office (Base Salary: $96,035 x 1.0 FTE)	$ 96,035	$ 96,035	$ 96,035	$ 96,035	$ -
New Department Specialist 15, Senior Proj Mgr 1 (Accelerate Michigan Office), will coordinate project management efforts for all office initiatives (Base Salary: $84,490 x 1.0 FTE)	$ 84,490	$ 84,490	$ 84,490	$ 84,490	$ -
New Department Analyst 12, Junior Proj Mgr 1 (Accelerate Michigan Office), will provide project management services and oversight in coordination with other MDE offices (Base Salary: $63,211 x 2.0 FTE)	$ 126,422	$ 126,422	$ 126,422	$ 126,422	$ -
New Education Consultant 14, bid evaluation coordinator (Accelerate Michigan Office), will coordinate development of RFPs and contracts required for implementation of office initiatives (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -

New Education Consultant 14, monitoring coordinator (Accelerate Michigan Office), will coordinate monitoring efforts across MDE offices for RT3 funded initiatives (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Education Consultant 14, evaluation and external partner coordinator (Accelerate Michigan Office), will oversee evaluation of various initiatives and coordinate work with education organizations, ISDs, and other partners (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Education Consultant 14, professional development (PD) coordinator (Accelerate Michigan Office), will work with MDE offices to ensure smooth coordination of professional development initiatives within Accelerate Michigan Plan (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Financial Analyst 12 (Accelerate Michigan Office) will oversee office budget and expenditures, monitor financial targets, and work with auditors as needed (Base Salary: $63,211 x 1.0 FTE)	$ 63,211	$ 63,211	$ 63,211	$ 63,211	$ -
New Exec Secretary 10 (Accelerate Michigan Office) will provide administrative support to director (Base Salary: $49,768 x 1.0 FTE)	$ 49,768	$ 49,768	$ 49,768	$ 49,768	$ -

New Secretary 9 (Accelerate Michigan Office) will provide administrative support to project staff (Base Salary: \$47,926 x 1.0 FTE)	\$ 47,926	\$ 47,926	\$ 47,926	\$ 47,926	\$ -
Steve Viger, Education Consultant Manager 16 (OEAA), will provide management and oversight of the evaluation staff serving the Accelerate Michigan Office (b)(6)	\$ 9,485	\$ 9,485	\$ 4,742	\$ 4,742	\$ -
Education Research Consultant 14, evaluation (OEAA), will provide evaluation services to perform the evaluation projects described under this grant (Base Salary: \$82,975 x 2.0 FTE)	\$ 165,950	\$ 165,950	\$ 165,950	\$ 165,950	\$ -
New Department Analyst 12, grants coordination (Grants), will manage all aspects of the federal grant monies associated with the project (Base Salary: \$63,211 x 1.0 FTE)	\$ 63,211	\$ 63,211	\$ 63,211	\$ 63,211	\$ -
New Department Analyst 9/10/11, monitoring (Grants), will conduct federal fiscal and programmatic monitoring for all funds (Base Salary: \$58,510 x 4.0 FTE)	\$ 234,040	\$ 234,040	\$ 234,040	\$ 234,040	\$ -
New Secretary 9 (Grants) will provide administrative support to project staff (Base Salary: \$47,926 x 1.0 FTE)	\$ 47,926	\$ 47,926	\$ 47,926	\$ 47,926	\$ -

Mary Ann Chartrand, State Office Administrator 17 (Grants), will provide oversight for grant award and monitoring (Base Salary: $111,100 x 0.2 FTE in FY 2011-2012; 0.1 FTE in FY 2013-2014)	$ 22,220	$ 22,220	$ 11,110	$ 11,110	$ -
Louis Burgess, State Administrative Manager 15 (Grants), will provide oversight for grant award and monitoring (Base Salary: $96,035 x 0.2 FTE in FY 2011-2012; 0.1 FTE in FY 2013-2014)	$ 19,207	$ 19,207	$ 9,604	$ 9,604	$ -
Jill Bradshaw, Education Consultant 13 (Grants), will coordinate federal ARRA reporting requirements (Base Salary: $76,440 x 0.2 FTE in FY 2011-2012; 0.1 FTE in FY 2013-2014)	$ 15,288	$ 15,288	$ 7,644	$ 7,644	$ -
Nancy Mincemoyer, State Office Administrator 17 (HR), will provide oversight of hiring activities for project (Base Salary: $111,100 x 0.2 FTE in FY 2011-2012; 0.1 FTE in FY 2013-2014)	$ 22,220	$ 22,220	$ 11,110	$ 11,110	$ -
Marilyn Fisher, Specialist 14 (HR), will ensure timely hiring of project staff (Base Salary: $80,558 x 0.2 FTE in FY 2011-2012; 0.1 FTE in FY 2013-2014)	$ 16,112	$ 16,112	$ 8,056	$ 8,056	$ -

Education Consultant 14, Project ReImagine (Accelerate Michigan Office), will work directly with Project ReImagine districts to fully implement pilot projects to ensure reporting requirements are met and to facilitate information gained from project successes (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	
Teresa Abbott, Specialist 14 (HR), will ensure timely hiring of project staff (Base Salary: (b)(6)	$ 16,112	$ 16,112	$ 8,056	$ 8,056	$ -
TOTAL	$ 1,625,597	$ 1,625,597	$ 1,565,276	$ 1,565,276	$ -

To coordinate initiatives across the Michigan Department of Education, an Office of Accelerate Michigan will be established with 13 FTE including a director and a variety of consultant and project management staff. 10.5 additional FTE are budgeted into other offices including Grants Management and Human Resources to ensure that staff are hired quickly and grants are managed and distributed efficiently. The five focus areas of the office are: (1) ensuring that project timelines are clearly defined, communicated, and met; (2) assisting with writing and tracking Accelerate Michigan Requests for Proposals and grants through the approval and dissemination processes to meet timelines; (3) communicating Accelerate Michigan reform policy decisions so they are executed uniformly across the Michigan Department of Education, (4) coordinating external partners' input to the Michigan Department of Education's Accelerate Michigan efforts to ensure success; and (5) providing assistance to Michigan Department of Education offices to integrate professional development into a responsive system for all educators.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Quarterly USED TA meetings (5 staff) (20 trips @ $2,500 each)	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -
Quarterly CCSSO/NGA/Achieve/NCES meetings (4 staff) (16 trips @ $2,500 each)	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ -
Instate monitoring (4 analysts) (200 trips @ $250 each)	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -
TOTAL	$ 140,000	$ 140,000	$ 140,000	$ 140,000	$ -

Minimal travel is included in the budget for required meetings and for monitoring of disbursed grant funds.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease (2 copiers @ $5,000 each)	$ 10,000	$ 5,000	$ 5,000	$ 5,000	$ -
Microsoft Project Server and maintenance	$ 10,000	$ 2,000	$ 2,000	$ 2,000	$ -
Server Hardware	$ 10,000	$ -	$ -	$ -	$ -
TOTAL	$ 30,000	$ 7,000	$ 7,000	$ 7,000	$ -

Needed equipment purchases include a server, software, and a copy machine lease.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Computers for new staff ($2,000 each for 21 new FTE)	$ 42,000	$ -	$ -	$ -	$ -
LCD projectors (8 @ $500 each)	$ 4,000	$ -	$ -	$ -	$ -

Office supplies @ $5000/FTE (22.3 FTE in FY 2011—2012; 21.7 FTE in FY 2013 - 2014)	$ 111,500	$ 111,500	$ 108,500	$ 108,500	$ -
TOTAL	$ 157,500	$ 111,500	$ 108,500	$ 108,500	$ -

New computers for new staff, LCD projectors and standard costs for office supplies are included in the budget.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
DTMB - Info Tech Manager 14 (1.45 FTE to cover fringe)	$ 115,000	$ 115,000	$ 115,000	$ 115,000	$ -
DTMB - Info Tech Proj Analyst 12 (1.45 FTE to cover fringe)	$ 100,700	$ 100,700	$ 100,700	$ 100,700	$ -
Center for Educational Performance and Information - Info Tech Proj Analyst 12 (1.45 FTE to cover fringe)	$ 100,700	$ 100,700	$ 100,700	$ 100,700	$ -
4-year RFP for MDE reform website maintenance/ enhancement	$ 300,000	$ 150,000	$ 150,000	$ 150,000	$ -
4-year RFP for MEGS enhancements for financial audit/reporting	$ 500,000	$ 250,000	$ 250,000	$ 250,000	$ -
TOTAL	$ 1,116,400	$ 716,400	$ 716,400	$ 716,400	$ -

Contractual costs include technology infrastructure, support costs, and maintenance and expansion costs for the electronic grants system and website updates.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 102,580	$ 102,580	$ 99,820	$ 99,820	$ -
DTMB computer support @ $5000/FTE	$ 111,500	$ 111,500	$ 108,500	$ 108,500	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 10,545	$ 10,545	$ 10,070	$ 10,070	$ -
Discretionary funds to support unanticipated LEA and State reform needs	$ 3,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ -
TOTAL	$ 3,224,625	$ 1,224,625	$ 1,218,390	$ 1,218,390	$ -

The project costs include building occupancy, technology support, and discretionary funds to support unanticipated LEA and state reform needs. In every large scale reform there are unanticipated costs for contracts, projects, and/or services. The Michigan Department of Education is setting aside funds to support those needs and ensure completion of the substantial projects described in the Accelerate Michigan Plan.

9. Direct Costs

Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs

Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

12. Supplemental Funding for Participating LEAs: Activity	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Detroit Public Schools	$ 1,225,000	$ 408,333	$ 408,333	$ 408,333	$ -
Ingham ISD	$ 1,225,000	$ 408,333	$ 408,333	$ 408,333	$ -
Saginaw ISD	$ 1,225,000	$ 408,333	$ 408,333	$ 408,333	$ -
Utica Community Schools	$ 1,100,000	$ 366,666	$ 366,666	$ 366,666	$ -

Traverse Bay Area ISD	$ 1,100,000	$ 366,666	$ 366,666	$ 366,666	$ -
Grand Rapids Public Schools	$ 1,100,000	$ 366,666	$ 366,666	$ 366,666	$ -
Mason Lake Oceana ISD	$ 550,000	$ 183,333	$ 183,333	$ 183,333	$ -
Oxford Area Schools	$ 550,000	$ 183,333	$ 183,333	$ 183,333	$ -
Lakeview School District (Calhoun)	$ 550,000	$ 183,333	$ 183,333	$ 183,333	$ -
Comstock Public Schools	$ 312,500	$ 104,168	$ 104,168	$ 104,168	$ -
Armada Area Schools	$ 312,500	$ 104,168	$ 104,168	$ 104,168	$ -
University Prep Academy (Detroit)	$ 250,000	$ 83,334	$ 83,334	$ 83,334	$ -
Farwell Area Schools	$ 250,000	$ 83,334	$ 83,334	$ 83,334	$ -
N.I.C.E. Community Schools	$ 250,000	$ 83,334	$ 83,334	$ 83,334	$ -
TOTAL	$ 10,000,000	$ 3,333,334	$ 3,333,334	$ 3,333,334	$ -

Project ReImagine is Michigan's opportunity to reimagine our current educational system. It is a reality that state funding will not increase and may never return to former levels. In order to truly transform Michigan's education system, we must stop thinking in terms of silver bullets and small scale programs. Michigan's future depends on these school districts rethinking the use of their time, talents, and available resources to implement systemic change. The $20 million in funding that has been requested in this proposal for Project ReImagine will be used to provide seed money that will give ReImagine districts an opportunity to implement many bold reforms with a clear understanding that sustainability is dependent on the districts' re-envisioned use of existing resources.

Budget Part II: Project-Level Budget Table
Project Name: Implementing Internationally Benchmarked Standards (Common Core State Standards)
Associated with Criteria: Standards and Assessments (B)(1) and (B)(3)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 260,303	$ 179,266	$ 179,266	$ 179,266	$ 798,100
2. Fringe Benefits	$ 117,136	$ 80,670	$ 80,670	$ 80,670	$ 359,145
3. Travel	$ 24,700	$ 39,400	$ 39,400	$ 39,400	$ 142,900
4. Equipment	$ -	$ -	$ -	$ -	$ -
5. Supplies	$ 34,397	$ 22,000	$ 32,000	$ 32,000	$ 120,397
6. Contractual	$ 1,000,000	$ -	$ -	$ -	$ 1,000,000
7. Training Stipends	$ 5,000	$ -	$ -	$ -	$ 5,000
8. Other	$ 481,340	$ 482,995	$ 489,245	$ 476,745	$ 1,930,325
9. Total Direct Costs (lines 1-8)	$ 1,922,877	$ 804,330	$ 820,580	$ 808,080	$ 4,355,867
10. Indirect Costs	$ 101,783	$ 82,042	$ 83,699	$ 82,424	$ 349,948
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ 4,000,000	$ 2,900,000	$ 1,900,000	$ 1,400,000	$ 10,200,000
13. Total Costs (lines 9-12)	$ 6,024,660	$ 3,786,372	$ 2,804,279	$ 2,290,504	$ 14,905,815

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Ruth Isaia, Education Consultant 13 (OEII), will coordinate secondary ELA CCSS alignment, review, and analysis and RESPONSE support activities (Base (b)(6) [redacted]	$ 22,932	$ 7,644	$ 7,644	$ 7,644	$ -
Dan LaDue, Education Consultant 13 (OEII), will coordinate secondary mathematics CCSS alignment, review, and analysis and RESPONSE support activities (Base Salary: (b)(6) [redacted]	$ 22,932	$ 7,644	$ 7,644	$ 7,644	$ -
Lynette VanDyke, Education Consultant 13 (OEII), will coordinate CCSS ELA alignment, review and analysis and RESPONSE support activities (Base Salary: (b)(6) [redacted]	$ 22,932	$ 7,644	$ 7,644	$ 7,644	$ -
Ruth Anne Hodges, Education Consultant 13 (OEII), will coordinate CCSS mathematics alignment, review, and analysis and RESPONSE support activities (Base Salary: (b)(6) [redacted]	$ 22,932	$ 7,644	$ 7,644	$ 7,644	$ -

Deb Clemmons, Education Consultant Manager 15 (OEII), will provide management and oversight of standards project and roll-out (Base (b)(6) [redacted]	$ 26,364	$ 8,788	$ 8,788	$ 8,788	$ -
Vonda Combs, Secretary 10 (OEII), will provide administrative support to project staff (b)(6) [redacted]	$ 19,907	$ 9,954	$ 9,954	$ 9,954	$ -
Abbie Hilgendorf, Education Consultant 13 (OEII), will participate in planning and implementation of roll-outs; develop supporting materials to introduce RESPONSE; develop the Teaching for Learning Framework and related projects; and develop pilot PD program(s) (b)(6) [redacted]	$ 76,440	$ 76,440	$ 76,440	$ 76,440	$ -
John VanWagoner, Education Consultant 13 (OEII), will participate in planning and implementation of roll-outs; develop supporting materials to introduce RESPONSE; and develop the TLF and related projects (Base Salary: (b)(6) [redacted]	$ 30,576	$ 22,932	$ 22,932	$ 22,932	$ -

Ana Cardona, Education Consultant 13 (OEII), will coordinate RESPONSE support activities and co-direct instructional unit development (Base Salary: (b)(6) [redacted]	$ 15,288	$ 22,932	$ 22,932	$ 22,932	$ -
Kevin Richard, Education Consultant 13 (OEII), will coordinate alignment, review, and analysis of science content within instructional units and RESPONSE support activities (Base (b)(6) [redacted]	$ -	$ 7,644	$ 7,644	$ 7,644	$ -
New Education Consultant 13, Small High Schools (OEII), will coordinate HS reform projects and activities (Base Salary: $76,440 x 1.0 FTE in FY 2011—2014; includes fringe benefits @ 45%)	$ -	$ -	$ -	$ -	$ 443,352
New Education Consultant 13, AP/Middle College/Alternative Education (OEII), will coordinate HS reform projects and activities (Base Salary: $76,440 x 1.0 FTE in FY 2011—2014; includes fringe benefits @ 45%)	$ -	$ -	$ -	$ -	$ 443,352
New Secretary 8, HS Reform (OEII), will provide administrative support to HS Reform consultants (Base Salary: $44,883 x 1.0 FTE in FY 2011—2014; includes fringe benefits @ 45%)	$ -	$ -	$ -	$ -	$ 260,320

Patty Cantu, State Office Administrator 17 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base (b)(6)	$ -	$ -	$ -	$ -	$ 19,332
Carol Clark, Vocational Education Consultant 14 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base (b)(6)	$ -	$ -	$ -	$ -	$ 9,396
Jamie Hess, Vocational Education Consultant 12 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base (b)(6)	$ -	$ -	$ -	$ -	$ 8,248
Joanne Mahony, Education Consultant Manager 15 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base (b)(6)	$ -	$ -	$ -	$ -	$ 10,196

Patricia Talbott, Higher Education Consultant 13 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base (b)(6)	$ -	$ -	$ -	$ -	$ 44,336
Norma Tims, Vocational Education Consultant 14 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base (b)(6)	$ -	$ -	$ -	$ -	$ 9,396
Glenna Zollinger-Russell, Consultant Manager 15 (CTE), will provide professional development and technical assistance to CTE teachers and administrators on integrating CCRS (Base Salary: (b)(6)	$ -	$ -	$ -	$ -	$ 25,484
TOTAL	$ 260,303	$ 179,266	$ 179,266	$ 179,266	$ 1,273,412

Personnel include content consultants, instructional staff, and support staff who are responsible for work associated with the adoption and transition of the Common Core State Standards, including: developing alignment and clarification documents; podcasts; webinars; professional development; and other supporting materials to communicate with ISDs and LEAs about the standards, curriculum development, instructional support specific to the rollout of standards, the Teaching and Learning Framework, instructional surveys and units. In-Kind support is provided to support staff for the high school unit and Office of Career and Technical Education (CTE) to implement a state plan for high school redesign to impact secondary schools and ensure effective implementation of the Michigan Merit Curriculum and College and Career Readiness Standards (CCRS) that are aligned with college entrance and skilled trades requirements.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Travel to 4 regional standards roll-out events (Wayne Co., Grand Rapids, Traverse City, Marquette) for 7 involved consultants and 1 consultant manager (8 involved consultants, 1 manager, and 2 contract consultants in FY 2012-2014)	$ 19,200	$ 26,400	$ 26,400	$ 26,400	$ -
Out-of-state trips for TLF development and related projects	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ -
In-state travel for TLF development and related projects	$ 2,500	$ 2,500	$ 2,500	$ 2,500	$ -
Out-of-state trips for HS Reform consultants for professional learning and program development	$ -	$ -	$ -	$ -	$ 12,000
In-state travel for HS Reform Consultants	$ -	$ -	$ -	$ -	$ 10,000
Teacher-Leader training for MDE-developed professional development program; two three-day meetings and five one-day meetings per year	$ -	$ -	$ -	$ -	$ 141,075
Review and validation workshop for instructional units; 25 teachers in each of 2 content areas for two-day meeting	$ -	$ 7,500	$ 7,500	$ 7,500	$ -

Travel for 25 teachers each to 4 regional workshops on instructional unit development	$ -	$ -	$ -	$ -	$ 45,000
TOTAL	$ 24,700	$ 39,400	$ 39,400	$ 39,400	$ 208,075

Funds for travel will allow staff to attend the 4 regional rollouts and staff professional development to identify researched based practices to support the development of the teaching and learning framework and travel for teachers to work with the Michigan Department of Education to review and validate instructional units. In-kind travel from Title 1, School Improvement and general state funds will support staff travel for the high school unit, teacher leader development to support the teaching and learning framework, and stakeholder professional development specific to engaging ISDs and LEAs in the development of instructional units and surveys.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
InDesign/Final Cut Pro software for developing high-quality webinars, videos, and podcasts regarding the adoption and implementation of the CCRS and CCK-12	$ 2,000	$ -	$ -	$ -	$ -
Printing, postage for projects related to the roll-out of the CCRS and CCK-12	$ 5,000	$ -	$ -	$ -	$ -
Apple MacPro computer for high-quality development of materials for posting to web regarding the adoption and implementation of the CCRS and CCK-12	$ 9,897	$ -	$ -	$ -	$ -
Miscellaneous books, copies, etc. for teacher leaders	$ -	$ -	$ -	$ -	$ 55,000
Computers for new staff	$ -	$ -	$ -	$ -	$ 6,000
Computers for teacher leader PD participants	$ -	$ 10,000	$ 20,000	$ 20,000	$ 60,000

Office supplies at $5000/FTE	$ 17,500	$ 12,000	$ 12,000	$ 12,000	$ -
TOTAL	$ 34,397	$ 22,000	$ 32,000	$ 32,000	$ 121,000

Funded supplies include printing, postage, supplies, computers, software, and other materials to support the development of high quality podcasts, webinars, and professional development programs specific to the Teaching and learning Framework, web design, instructional units and surveys and other components of the Responsive Education Support System. In-kind contributions from Title 1, School Improvement and general state funds will provide supplies for the high school unit.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Four-year contract for development of instructional surveys	$ 400,000	$ -	$ -	$ -	$ -
Four-year contract for development of instructional units	$ 400,000	$ -	$ -	$ -	$ -
Four-year contract for development and professional production of model instructional unit videos	$ 200,000	$ -	$ -	$ -	$ -
TOTAL	$ 1,000,000	$ -	$ -	$ -	$ -

Funded contracts will support the development of instructional units, surveys and videos to ensure effective implementation of standards, curriculum, and instruction.

7. Training Stipends	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Staff training for Final Cut Pro, InDesign, etc. for developing high-quality podcasts/ webinars	$ 5,000	$ -	$ -	$ -	$ -
TOTAL	$ 5,000	$ -	$ -	$ -	$ -

Training stipends include staff training for Final Cut Pro, InDesign, etc. for developing high-quality podcasts/webinars.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 16,100	$ 11,040	$ 11,040	$ 11,040	$ -
DTMB computer support @ $5000/FTE	$ 17,500	$ 12,000	$ 12,000	$ 12,000	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 1,615	$ 1,330	$ 1,330	$ 1,330	$ -
Meetings/webinars/ podcasts for specific audiences (e.g., Middle Cities, Deans/Colleges)	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ -
25 teachers to review and validate instructional skills surveys @ $125/day for substitute teachers	$ 3,125	$ 3,125	$ 3,125	$ 3,125	$ -
Parking, event planning costs, etc. through the Michigan Institute for Educational Management for 4 regional events for 1200 people @ $40 per person	$ 192,000	$ 192,000	$ 192,000	$ 192,000	$ -
Food/beverage - $40 per person for 1200 people at 4 regional events	$ 192,000	$ 192,000	$ 192,000	$ 192,000	$ -
A/V equipment at regional event sites	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ -
Facility rental for 4 regional events ($6000/ event)	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ -
25 teachers to review and validate curriculum components of the model instructional units (25 teachers for each of 2 content areas @ $125/ day for substitute teacher fees)	$ -	$ 6,250	$ 6,250	$ 6,250	$ -

Teacher Leader professional development - substitute fees for participants for 5 days/year @ $125/day for substitute fees	$ -	$ 6,250	$ 12,500	$ -	$ 25,000
TOTAL	$ 481,340	$ 482,995	$ 489,245	$ 476,745	$ 25,000

Other costs include rent, office supplies, postage, tech support, and substitute costs as well as costs for rollouts (facility rental, equipment, parking, conference coordination and planning, meals).

9. Direct Costs

Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs

Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information.*

12. Supplemental Funding for Participating LEAs: Activity	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Statewide Activity Supplement (SAS): Math/ Science Center funding for specific professional development in the mathematics components of instructional unit development and implementation tailored to high need and struggling schools	$ 3,000,000	$ 2,000,000	$ 1,000,000	$ 500,000	$ -

Statewide Activity Supplement (SAS): Regional Literacy Center funding for specific professional development in the literacy components of instructional unit development and implementation tailored to high need and struggling schools	$ 1,000,000	$ 900,000	$ 900,000	$ 900,000	$ -
TOTAL	$ 4,000,000	$ 2,900,000	$ 1,900,000	$ 1,400,000	$ -

Supplemental funding will provide grants to Regional Math/Science and Literacy Centers to develop specific high quality instructional units and materials to accelerate achievement in high priority schools including the development of building level math and literacy specialists to support standards, curriculum and instructional implementation of common core standards. In-kind contributions from general fund and other federal grant funds will support additional professional development and instructional support for implementation of the common core and non-common core standards.

Budget Part II: Project-Level Budget Table
Project Name: Balanced Assessments
Associated with Criteria: Standards and Assessments (B)(2) and (B)(3)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 550,171	$ 550,171	$ 550,171	$ 550,171	$ 2,200,683
2. Fringe Benefits	$ 247,577	$ 247,577	$ 247,577	$ 247,577	$ 990,307
3. Travel	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ 392,000
4. Equipment	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 20,000
5. Supplies	$ 95,897	$ 55,000	$ 55,000	$ 55,000	$ 260,897
6. Contractual	$ 26,750,000	$ 250,000	$ 250,000	$ 250,000	$ 27,500,000
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ 74,100	$ 74,100	$ 74,100	$ 74,100	$ 296,400
9. Total Direct Costs (lines 1-8)	$ 27,820,745	$ 1,279,848	$ 1,279,848	$ 1,279,848	$ 31,660,288
10. Indirect Costs	$ 126,556	$ 107,084	$ 107,084	$ 107,084	$ 447,809
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 27,947,301	$ 1,386,932	$ 1,386,932	$ 1,386,932	$ 32,108,097

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Joseph Martineau, State Office Administrator 17 (OEAA), will provide oversight and management of balanced assessment project (Base Sal- (b)(6)	$ 22,220	$ 22,220	$ 22,220	$ 22,220	$ -
Vince Dean, Education Consultant Manager 16 - State Assessments (OEAA), will provide oversight and management of balanced assessment project (Base Sal- (b)(6)	$ 18,970	$ 18,970	$ 18,970	$ 18,970	$ -
Steve Viger, Education Consultant Manager 16 - Psychometrics and Accountability (OEAA), will provide oversight and management of balanced assessment pro- (b)(6)	$ 18,970	$ 18,970	$ 18,970	$ 18,970	$ -
Kyle Ward, Education Research Consultant 13 (OEAA), will contribute to incorporation of common core mathematics standards into the balanced assessment system (Base Salary: (b)(6)	$ 7,644	$ 7,644	$ 7,644	$ 7,644	$ -
Wendy Gould, Department Specialist 14 (OEAA), will contribute to incorporation of common core ELA standards into the balanced assessment system (Base Salary: (b)(6)	$ 7,596	$ 7,596	$ 7,596	$ 7,596	$ -

Andy Middlestead, Education Consultant Manger 15 - Development (OEAA), will provide oversight on item development (Base Salary: (b)(6)	$ 8,788	$ 8,788	$ 8,788	$ 8,788	$ -
Adam Wyse, Education Research Consultant 15b - Psychometrician (OEAA), will help ensure that the balanced assessment system is valid and reliable (Base (b)(6) FTE)	$ 9,152	$ 9,152	$ 9,152	$ 9,152	$ -
Shiqi Hao, Education Research Consultant 14 - Psychometrician (OEAA), will help ensure that the balanced assessment system is valid and reliable (Base (b)(6) FTE)	$ 8,297	$ 8,297	$ 8,297	$ 8,297	$ -
Chris Janzer, Department Analyst 12 - Accountability (OEAA), will document and validate accountability measures that support the balanced assessment system (Base Salary: (b)(6)	$ 6,321	$ 6,321	$ 6,321	$ 6,321	$ -
Jim Griffiths, Department Manager 14 - Administration and Reporting (OEAA), will facilitate the gathering of administration and reporting business rules (Base (b)(6)	$ 7,596	$ 7,596	$ 7,596	$ 7,596	$ -

Linda Howley, Education Research Consultant 14 (OEAA), will ensure that the balanced assessment system is accessible to students with disabilities (Base (b)(6)	$ 8,297	$ 8,297	$ 8,297	$ 8,297	$ -
Jennifer Paul, Education Research Consultant 12 (OEAA), will ensure that the balanced assessment system is accessible to English language learners (Base Salary: (b)(6)	$ 7,109	$ 7,109	$ 7,109	$ 7,109	$ -
Peg Manning, Department Specialist 15 - IT (OEAA), will oversee system development to support data use and application to student growth models (Base (b)(6)	$ 8,449	$ 8,449	$ 8,449	$ 8,449	$ -
New Education Research Consultant 12 (OEAA), will lead mathematics item development for the interim benchmark and formative assessments (Base Salary: $71,085 x 1.0 FTE)	$ 71,085	$ 71,085	$ 71,085	$ 71,085	$ -
New Education Research Consultant 12 (OEAA), will lead ELA item development for the interim benchmark and formative assessments (Base Salary: $71,085 x 1.0 FTE)	$ 71,085	$ 71,085	$ 71,085	$ 71,085	$ -

New Education Research Consultant 12 - Psychometrics (OEAA), will ensure that the interim benchmark and formative assessments are valid and reliable (Base Salary: $71,085 x 1.0 FTE)	$ 71,085	$ 71,085	$ 71,085	$ 71,085	$ -
New Department Analyst 12 (OEAA), will review LEA and ISD implementation of state specifications and guidelines for calculating student growth (Base Salary: $63,211 x 1.0 FTE)	$ 63,211	$ 63,211	$ 63,211	$ 63,211	$ -
New Information Technology Analyst 12 (OEAA), will assist in the development of reporting mechanisms and data use specifications in support of state specifications and guidelines for calculating student growth (Base Salary: $63,211 x 1.0 FTE)	$ 63,211	$ 63,211	$ 63,211	$ 63,211	$ -
New Education Research Consultant 12 - Composition (OEAA), will assist in the composition of interim benchmark and formative assessments (Base Salary: $71,085 x 1.0 FTE)	$ 71,085	$ 71,085	$ 71,085	$ 71,085	$ -
TOTAL	$ 550,171	$ 550,171	$ 550,171	$ 550,171	$ -

The personnel listed for this project will actively participate in the development of a high-quality balanced assessment system in support of Michigan's governing role in the SMARTER Balanced assessment consortium. Personnel listed for this project will also be involved with developing and conducting professional development on balanced assessment, and the appropriate inclusion of assessment results in high-stakes decisions such as school accountability and the Framework for Educator Evaluations.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Travel to assessment consortium/CCSSO-hosted common standards and assessments meetings; 8 meetings per year; average attendance of 5 MDE staff ($1150 per trip per person for airfare; $500 per trip per person for hotel; $100 per person per trip for rental car; $250 per person per trip for meals)	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ -
Travel to USED, National Governors' Association, or National Assessment Governing Board technical assistance meetings; 3 meetings per year; average attendance of 3 MDE staff ($1150 per trip per person for airfare; $500 per trip per person for hotel; $100 per person per trip for rental car; $250 per person per trip for meals)	$ 18,000	$ 18,000	$ 18,000	$ 18,000	$ -
TOTAL	$ 98,000	$ 98,000	$ 98,000	$ 98,000	$ -

The travel costs are intended to ensure that Michigan Department of Education staff are able to receive technical assistance from USED and organizations such as the Council of Chief State School Officers that will be regularly convening meetings to discuss and promote best practices in reform implementation. Travel costs also include resources necessary to permit state staff to interact frequently and consistency with key associations, unions and other stakeholders that are necessary to develop these initiatives in ways that will provide the most effective support to teachers and leaders.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ -
TOTAL	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ -

The only expenditure on equipment is for a copy machine necessary to help produce materials to support these efforts.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Miscellaneous books, copies, etc. for assessment leaders	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ -
Miscellaneous books, copies, etc. for professional development	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ -
MacPro for assessment composition (1 @ $3,299)	$ 3,299	$ -	$ -	$ -	$ -
MacBook Pro for assessment composition (2 @ $2,299)	$ 4,598	$ -	$ -	$ -	$ -
Composition software license	$ 3,000	$ -	$ -	$ -	$ -
Computers for new staff ($2,000 each for 6.0 new FTE)	$ 12,000	$ -	$ -	$ -	$ -
Psychometric and statistical software	$ 20,000	$ -	$ -	$ -	$ -
Office supplies @ $5000/FTE (7.6 FTE)	$ 38,000	$ 38,000	$ 38,000	$ 38,000	$ -
Psychometric and statistical software maintenance	$ -	$ 2,000	$ 2,000	$ 2,000	$ -
TOTAL	$ 95,897	$ 55,000	$ 55,000	$ 55,000	$ -

The equipment purchased for this section will be used to support the new staff hired to implement these initiatives and enhance the communication capacity of the Michigan Department of Education with stakeholders across the state.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Four-year contract for consortia of LEAs and IHEs to collaborate on the development of interim benchmark and formative assessment materials for non-common core subjects	$ 6,000,000	$ -	$ -	$ -	$ -
Four-year contract for consortia of LEAs and IHEs to collaborate on the development of accomodated and translated interim benchmark and formative assessment materials for non-common core subjects	$ 2,000,000	$ -	$ -	$ -	$ -
Four-year contract for consortia of LEAs and IHEs to collaborate on the development of psychometrics and research on scaling, equating, growth model validation, comparability studies, consequential validity studies, standard setting, etc. for non-common core subjects	$ 2,000,000	$ -	$ -	$ -	$ -
Two-year RFP for complete OEAA secure site redesign to support individual student data access and connection of assessment data to teachers on state-tested subjects	$ 5,000,000	$ -	$ -	$ -	$ -

Maintenance contracts with DTMB and/or external vendors to enhance data collection and reporting capacity to support reform efforts	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ -
Four-year RFP for third-party independent evaluation of assessment development and implementation for non-common core subjects and high school	$ 500,000	$ -	$ -	$ -	$ -
Four-year contract with vendor to provide commercially available tests aligned with college and career readiness benchmarks in grades 9 and 10	$ 11,000,000	$ -	$ -	$ -	$ -
TOTAL	$ 26,750,000	$ 250,000	$ 250,000	$ 250,000	$ -

Contractual costs include resources necessary to provide districts and institutions of higher education with opportunities to develop assessments in areas not covered by the common core. Contracts will also be provided to support the administration of all statewide assessments by redesigning key systems to be able to handle more advanced assessments, interim measures of college and career readiness to support measuring growth in high school, and independent research and evaluation of the impact of these statewide efforts, including the impact on student achievement, benefits for teachers and leaders, and any unintended consequences.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 34,960	$ 34,960	$ 34,960	$ 34,960	$ -
DTMB computer support @ $5000/FTE	$ 38,000	$ 38,000	$ 38,000	$ 38,000	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 1,140	$ 1,140	$ 1,140	$ 1,140	$ -
TOTAL	$ 74,100	$ 74,100	$ 74,100	$ 74,100	$ -

Building occupancy costs for new staff and information technology support are included in this section.

9. Direct Costs
Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs
Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

Budget Part II: Project-Level Budget Table
Project Name: Fully Implementing a Statewide Longitudinal Data System
Associated with Criteria: Data Systems to Support Instruction (C)(1), (C)(2) and (C)(3)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 108,047	$ 108,047	$ 108,047	$ 108,047	$ 432,186
2. Fringe Benefits	$ 48,621	$ 48,621	$ 48,621	$ 48,621	$ 194,484
3. Travel	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 28,000
4. Equipment	$ -	$ -	$ -	$ -	$ -
5. Supplies	$ 9,500	$ 7,500	$ 7,500	$ 7,500	$ 32,000
6. Contractual	$ 6,245,500	$ 10,070,500	$ 4,495,500	$ 5,121,071	$ 25,932,571
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ 14,400	$ 14,400	$ 14,400	$ 14,400	$ 57,600
9. Total Direct Costs (lines 1-8)	$ 6,433,067	$ 10,256,067	$ 4,681,067	$ 5,306,638	$ 26,676,841
10. Indirect Costs	$ 26,782	$ 18,928	$ 18,928	$ 18,928	$ 83,566
11. Funding for Involved LEAs	$ 242,000	$ -	$ -	$ -	$ 242,000
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 6,701,849	$ 10,274,995	$ 4,699,995	$ 5,325,566	$ 27,002,406

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
New Education Research Consultant 13, SLDS Liaison (OEII), will be responsible for ensuring that the department interests and responsibilities for participating in the P-20 Advisory Council are met and will gather department-wide feedback and input relative to the overall SLDS effort (Base Salary: $76,441 x 0.5 FTE)	$ 38,221	$ 38,221	$ 38,221	$ 38,221	$ -
Dwight Sinila, Education Consultant 13 - Education Technology (OEII), will provide technical assistance and monitoring of RT3 funds granted to LEAs for use of instructional improvement systems in the Regional Data Initiatives (Base Salary: (b)(6)	$ 38,221	$ 38,221	$ 38,221	$ 38,221	$ -
New Department Analyst 12 (OEII) will provide data analysis and desk monitoring of RT3 funds to LEAs and contractors (Base Salary: $63,211 x 0.5 FTE)	$ 31,606	$ 31,606	$ 31,606	$ 31,606	$ -
TOTAL	$ 108,047	$ 108,047	$ 108,047	$ 108,047	$ -

The Michigan Department of Education Statewide Longitudinal Data System (SLDS) Liaison will be responsible for ensuring that the department interests and responsibilities for participating in the P-20 Advisory Council are met and will gather department-wide feedback and input relative to the overall SLDS effort. It is important that one individual coordinate the department's efforts related to the SLDS grant activities and provide timely input to the Michigan Center for Educational Performance and Information (CEPI). The consultant will provide technical assistance and monitoring of RT3 funds granted to involved LEAs for the use of instructional improvement systems in the Regional Data Initiatives. The analyst will provide data analysis and desk monitoring of RT3 funds to LEAs and to contractors. All other grant staffing it contracted to CEPI.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
On-site monitoring visits and state-level coordination meetings (28 trips @ $250 each)	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ -
TOTAL	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ -

The travel will be related to monitoring visits on site, state-level coordination meetings with Universities, Community Colleges, Intermediate School Districts, Local School Districts and Public School Academies.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Office supplies @ $5000/FTE (1.5 FTE)	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ -
Computer for new staff ($2,000 each for 1.0 new FTE)	$ 2,000	$ -	$ -	$ -	$ -
TOTAL	$ 9,500	$ 7,500	$ 7,500	$ 7,500	$ -

Supply costs include general office supplies and computers for new staff that will be used to carry out daily activities related to the project.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
CEPI/DTMB - The Center for Educational Performance and Information (CEPI) and the Michigan Department of Technology, Management, and Budget (DTMB) will coordinate and oversee the project components and outcomes.	$ -	$ -	$ -	$ 1,208,516	$ 3,352,200
CEPI/DTMB-Other - As subcontractors to MDE on this project, all costs associated with contractor travel, rent, phones, office supplies & materials, equipment, software and IT hosting charges are included in this amount.	$ -	$ -	$ -	$ 717,055	$ 566,901
Data Model and Extract Transform Load Development	$ -	$ 1,000,000	$ 1,250,000	$ 250,000	$ 1,750,000
Portal and Report Development	$ -	$ 800,000	$ 500,000	$ 200,000	$ 1,000,000
Professional Development and Materials	$ -	$ 125,000	$ 100,000	$ 100,000	$ 250,000
Single "sign on" capability for the entire state that simplifies the application login process for multiple applications	$ -	$ 2,000,000	$ 500,000	$ 500,000	$ -
State Research Collaborative Studies	$ 145,500	$ 145,500	$ 145,500	$ 145,500	$ -
Teacher Certification System Enhancements	$ 100,000	$ -	$ -	$ -	$ 400,000
Researcher Access to Regional Data	$ 6,000,000	$ 6,000,000	$ 2,000,000	$ 2,000,000	$ -
TOTAL	$ 6,245,500	$ 10,070,500	$ 4,495,500	$ 5,121,071	$ 7,319,101

Contracts include:

- CEPI/DTMB - The Center for Educational Performance and Information (CEPI) and the Michigan Department of Technology, Management, and Budget (DTMB) will coordinate and oversee the project components and outcomes. CEPI's expertise is in school, staff and student data collection and tracking, and DTMB is the technology arm of state government in Michigan. Together the two state agencies will be responsible for overseeing and completing the project deliverables.
- CEPI/DTMB-Other - As subcontractors to MDE on this project, all costs associated with contractor travel, rent, phones, office supplies & materials, equipment, software and IT hosting charges are included in this amount.
- Data Model and Extract Transform Load Development - This item reflects the estimated cost of outside contractor services related to project.
- Portal and Report Development - This item reflects the estimated cost of contractor services related to project.
- Professional Development and Materials - All training materials, user guides, help aids and other web-based materials will be provided via outside contractor through this line item.
- State Research Collaborative Studies - This item reflects the estimated cost of work by post-secondary and research partners on the project.
- Teacher Certification System Enhancements - Once student to teacher connections are complete, the state licensure system will synchronize school district staff identities with licenses and allow the return of key performance indicators to postsecondary recommending institutions to help them measure effectiveness and potential need for program modifications.
- Researcher Access to Regional Data - Continued supplemental funding for the Regional Data Initiatives for two additional years under Race to the Top; partial funding to assist LEAs in sustaining systems in 2013 and 2014. Activities include supplementing per-student license fees, ISD-led professional development activities, dropout prevention programs, and regional research initiatives in line with P-20 research collaborative.
- Single Sign-On: Add single "sign on" capability for the entire state for educators, students, and parents, implemented and maintained at the ISD level, that simplifies the application login process for multiple applications, including the Regional Data Initiatives, and increases the sharing of data and resources across the network infrastructure.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Builidng occupancy @ $4600/FTE	$ 6,900	$ 6,900	$ 6,900	$ 6,900	$ -
DTMB computer support @ $5000/FTE	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ -
TOTAL	$ 14,400	$ 14,400	$ 14,400	$ 14,400	$ -

Other funding includes support for the rent for office space and technology support to support the MDE SLDS Liaison, Consultant and Analyst positions.

9. Direct Costs

Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs

Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

11. Funding for Involved LEAs: Activity	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
UIC Acceptance and Exchange with Postsecondary	$ 242,000	$ -	$ -	$ -	$ -
TOTAL	$ 242,000	$ -	$ -	$ -	$ -

Unique Identifier Code (UIC) Acceptance and Exchange with Postsecondary will provide a supplementary cost recovery stream for the postsecondary partners working on transcript and UIC exchange processes supporting the SLDS efforts. There are more expanded costs for postsecondary partners in preparing systems to accept UICs, and accept or export electronic transcripts and in standardization efforts across student registration, curriculum and financial aid systems.

Budget Part II: Project-Level Budget Table
Project Name: Teacher and Leader Pathway and Supply Enhancements
Associated with Criteria: Great Teachers and Leaders (D)(1)
(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	$ 226,548	$ 226,548	$ 226,548	$ 226,548	$ 906,193
2. Fringe Benefits	$ 101,947	$ 101,947	$ 101,947	$ 101,947	$ 407,787
3. Travel	$ 32,000	$ 32,000	$ 32,000	$ 32,000	$ 128,000
4. Equipment	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 4,000
5. Supplies	$ 120,900	$ 114,500	$ 114,500	$ 114,500	$ 464,400
6. Contractual	$ 3,634,537	$ 914,537	$ 914,537	$ 914,537	$ 6,378,149
7. Training Stipends	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 6,000
8. Other	$ 29,930	$ 29,930	$ 29,930	$ 29,930	$ 119,720
9. Total Direct Costs (lines 1-8)	$ 4,148,362	$ 1,421,962	$ 1,421,962	$ 1,421,962	$ 8,414,249
10. Indirect Costs	$ 80,358	$ 77,155	$ 77,155	$ 77,155	$ 311,824
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 4,228,720	$ 1,499,118	$ 1,499,118	$ 1,499,118	$ 8,726,073

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Flora Jenkins, State Office Administrator 17 (OPPS) will provide policy oversight and management for the project (Base Salary: (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
New Education Consultant 14 - alternative certification (OPPS) will coordinate processes for review and approval of alternate route programs (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Education Consultant 14 - teacher & leader shortages (OPPS) will work with research staff and others to develop teacher and administrator shortage models (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
Steve Stegink, Education Consultant 14 - teacher prep institution liaison (OPPS), will provide liaison support to teacher preparation institutions (Base Salary: (b)(6)	$ 8,298	$ 8,298	$ 8,298	$ 8,298	$ -
New Department Analyst 12 (OPPS) will provide technical support to consultants to develop reports and analyses (Base Salary: $63,211 x 0.5 FTE)	$ 31,606	$ 31,606	$ 31,606	$ 31,606	$ -
New Secretary 9 (OPPS) will provide administrative support to project staff (Base Salary: $47,926 x 0.2 FTE)	$ 9,585	$ 9,585	$ 9,585	$ 9,585	$ -
TOTAL	$ 226,548	$ 226,548	$ 226,548	$ 226,548	$ -

The personnel listed for this project will coordinate and provide oversight for certification pathways that will be created for teachers and leaders.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
In-State PD and TA for alternative certification providers (24 trips @ $250 each)	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ -
In-state PD and TA for shortage remediation (24 trips @ $250 each)	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ -
Quarterly USED TA meetings (2 staff) (8 trips @ $2,500 each)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
TOTAL	$ 32,000	$ 32,000	$ 32,000	$ 32,000	$ -

The travel costs are intended to ensure that Michigan Department of Education staff are able to receive technical assistance from USED-convened meetings to discuss and promote best practices in teacher preparation and shortage remediation. Travel costs also include resources necessary to permit state staff to interact frequently and consistency with alternate pathway providers and to develop these pathways in ways that will provide the most effective preparation for teachers and leaders.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease (20% of $5,000 total cost)	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -
TOTAL	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -

The only expenditure on equipment is for a copy machine necessary to help produce materials to support these efforts.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Computers for new staff ($2,000 each for 2.7 new staff	$ 5,400	$ -	$ -	$ -	$ -
LCD projectors (2 @ $500 each)	$ 1,000	$ -	$ -	$ -	$ -
Office supplies @ $5000/FTE (2.9 FTE)	$ 14,500	$ 14,500	$ 14,500	$ 14,500	$ -
Materials for PD and TA meetings	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ -
TOTAL	$ 120,900	$ 114,500	$ 114,500	$ 114,500	$ -

Supply costs include equipment for new staff and materials to be provided to teachers, leaders and alternate pathway providers that are necessary for the development, implementation, and support efforts included in this project.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Modification to the License 2000 (L2K) licensure database to account for alternative certification requirements and administrator certification requirements	$ 800,000	$ -	$ -	$ -	$ -
Development of public reporting site for alternative certification	$ 250,000	$ -	$ -	$ -	$ -
Study of shortage areas	$ 300,000	$ 100,000	$ 100,000	$ 100,000	$ -
Consequential validity studies on alternative certification & teacher shortages, and targeted production incentives	$ 200,000	$ 50,000	$ 50,000	$ 50,000	$ -
Competitive RFP for Prep Institutions to Focus on Models to Assure Adequate Production in Areas of Teacher Shortages, with Focus on STEM and Stipends for Meeting Targets	$ 900,000	$ 450,000	$ 450,000	$ 450,000	$ -

Technical Advisory Committee ongoing meetings (1 meeting/ year) to review technical quality of consequential validity studies	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ -
P-20 Council review and feedback (1 meeting/ year, $25,000 each) on alt cert, shortages, and targeted production	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ -
New DTMB Info Tech mgr (0.25 FTE * 1.45 [salary + fringe])	$ 28,803	$ 28,803	$ 28,803	$ 28,803	$ -
New DTMB IT pro- grammer analysts (0.5 FTE * 1.45 [salary & fringe])	$ 50,367	$ 50,367	$ 50,367	$ 50,367	$ -
New CEPI IT program- mer/analysts (0.5 FTE * 1.45 [salary & fringe])	$ 50,367	$ 50,367	$ 50,367	$ 50,367	$ -
Maintenance and en- hancement of L2K li- censure database	$ -	$ 100,000	$ 100,000	$ 100,000	$ -
Maintenance of public reporting for alternative certification	$ -	$ 30,000	$ 30,000	$ 30,000	$ -
LEA and PSA induction and mentoring support for alternate certification	$ 1,000,000	$ -	$ -	$ -	$ -
TOTAL	$ 3,634,537	$ 914,537	$ 914,537	$ 914,537	$ -

Contractual costs include resources necessary to develop and maintain licensure databases as well as a public reporting system for alternate certification. Contracts will also be provided to support consequential validity studies on alternative certification and teacher shortages. Funds will be provided to expand the number of teachers trained by alternate certification programs in high need areas.

7. Training Stipends	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
IHE leadership yearly training stipends on shortage models and targeted production (25 IHEs, 50 staff)	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ -
TOTAL	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ -

Stipends will be provided to faculty and staff from institutions of higher education to provide training on shortage models and targeted production.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 13,340	$ 13,340	$ 13,340	$ 13,340	$ -
DTMB computer support @ $5000/FTE	$ 14,500	$ 14,500	$ 14,500	$ 14,500	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 2,090	$ 2,090	$ 2,090	$ 2,090	$ -
TOTAL	$ 29,930	$ 29,930	$ 29,930	$ 29,930	$ -

Building occupancy costs for new staff and information technology support are included in this section.

9. Direct Costs
Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs
Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

Budget Part II: Project-Level Budget Table
Project Name: Design and Implementation of Educator Evaluations Based Significantly on Student Growth
Associated with Criteria: Great Teachers and Leaders (D)(2)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 386,045	$ 386,045	$ 386,045	$ 386,045	$ 1,544,181
2. Fringe Benefits	$ 173,720	$ 173,720	$ 173,720	$ 173,720	$ 694,882
3. Travel	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ 232,000
4. Equipment	$ 12,000	$ 2,000	$ 2,000	$ 2,000	$ 18,000
5. Supplies	$ 163,400	$ 127,500	$ 127,500	$ 127,500	$ 545,900
6. Contractual	$ 6,590,272	$ 1,890,272	$ 1,890,272	$ 1,890,272	$ 12,261,086
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ 51,040	$ 51,040	$ 51,040	$ 51,040	$ 204,160
9. Total Direct Costs (lines 1-8)	$ 7,434,477	$ 2,688,577	$ 2,688,577	$ 2,688,577	$ 15,500,209
10. Indirect Costs	$ 120,585	$ 114,373	$ 114,373	$ 114,373	$ 463,705
11. Funding for Involved LEAs	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 200,000
12. Supplemental Funding for Participating LEAs	$ 370,500	$ 370,500	$ 370,500	$ 370,500	$ 1,482,000
13. Total Costs (lines 9-12)	$ 7,975,562	$ 3,223,450	$ 3,223,450	$ 3,223,450	$ 17,645,914

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Flora Jenkins, State Office Administrator 17 (OPPS), will provide policy oversight and management for the project (Base Salary: (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
New Education Consultant 14 - teacher and leader effectiveness (OPPS) will work with OPPS and OEAA staff and field representatives to develop and report on teacher and leader effectiveness models (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Department Analyst 12 (OPPS) will provide technical support to consultants to develop reports and analyses (Base Salary: $63,211 x 0.5 FTE)	$ 31,606	$ 31,606	$ 31,606	$ 31,606	$ -
New Secretary 9 (OPPS) will provide administrative support to project staff (Base Salary: $47,926 x 0.2 FTE)	$ 9,585	$ 9,585	$ 9,585	$ 9,585	$ -
Joseph Martineau, State Offfice Administrator 17 (OEAA) will provide policy oversight and management of the teacher and leader effectiveness work (Base Sal- (b)(6)	$ 22,220	$ 22,220	$ 22,220	$ 22,220	$ -

Steve Viger, Education Consultant Manager 16 - accountability and psychometrics (OEAA), will provide technical oversight and management of the teacher and leader effectiveness work (Base Salary: (b)(6)	$ 18,970	$ 18,970	$ 18,970	$ 18,970	$ -
Vince Dean, Education Consultant Manager 16 - assessment (OEAA), will provide oversight from perspective of state assessments regarding teacher and leader effectiveness (Base Salary: (b)(6)	$ 9,485	$ 9,485	$ 9,485	$ 9,485	$ -
Vacant Education Consultant Manager 15 - accountability (OEAA) will provide operational management of the teacher and leader effectiveness projects (Base Salary: $87,880 x 0.2 FTE)	$ 17,576	$ 17,576	$ 17,576	$ 17,576	$ -
New Education Research Consultant 14 - educator effectiveness (OEAA) will provide measurement and quantitative expertise in the development, implementation, and reporting of educator effectiveness models (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Department Analyst 12 - accountability (OEAA) will provide support technical support to consultants and managers (Base Salary: $63,211 x 0.5 FTE)	$ 37,927	$ 37,927	$ 37,927	$ 37,927	$ -

David Judd, State Administrative Manager 16 (OEAA), will provide project management services (Base Salary: (b)(6)	$ 20,756	$ 20,756	$ 20,756	$ 20,756	$ -
Peg Manning, Department Specialist 15 - data quality (OEAA), will provide data quality services (Base Salary: (b)(6)	$ 16,898	$ 16,898	$ 16,898	$ 16,898	$ -
New Secretary 9 - accountability and evaluation (OEAA) will provide administrative support to project staff (Base Salary: $47,926 x 0.5 FTE)	$ 23,963	$ 23,963	$ 23,963	$ 23,963	$ -
TOTAL	$ 386,045	$ 386,045	$ 386,045	$ 386,045	$ -

Personnel costs cover salaries for existing OEAA and OPPS staff who will shift portions of their time to this project, as well as to cover salaries for new OEAA and OPPS staff who will be full-time on this project.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Quarterly USED TA meetings (2 staff) (8 trips per year @ $2,500 each)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
CCSSO SCASS memberships (for TA) (One membership @ $20,000)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -

In-state PD on conducting evaluations using the framework and guidelines/model materials/ mock evaluations produced by statewide workgroups (36 trips per year @ $250 each)	$ 9,000	$ 9,000	$ 9,000	$ 9,000	$ -
In-State PD and TA on compensation, promotion, tenure, and retaining/removing ineffective educators (36 trips per year @ $250 each)	$ 9,000	$ 9,000	$ 9,000	$ 9,000	$ -
TOTAL	$ 58,000	$ 58,000	$ 58,000	$ 58,000	$ -

Travel costs cover anticipated quarterly staff visits with USED staff for Technical Assistance and guidance regarding federal reporting responsibilities; memberships in two new anticipated State collaboratives through the Council of Chief State School Officers regarding provision of professional development around using student data, measurement of student growth, measurement of educator effects on student growth, and/or evaluation of educator preparation institutions; and staff travel to in-state professional development on enacting the reforms detailed in the application.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease (40% of $5000 total cost)	$ 2,000	$ 2,000	$ 2,000	$ 2,000	$ -
New server hardware	$ 5,000	$ -	$ -	$ -	$ -
New server software	$ 5,000	$ -	$ -	$ -	$ -
TOTAL	$ 12,000	$ 2,000	$ 2,000	$ 2,000	$ -

Requested funds will cover 40% of a copier/printer for producing professional development materials and supporting all activities under this project, as well as new server hardware and software to handle the large amount of data to be generated and used in creating state-developed measures of educator impact on student growth. Funds will also support linkages between students and teachers and educator evaluation data submitted by LEAs to the state.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Computers for new staff ($2,000 each for 3.7 new FTE)	$ 7,400	$ -	$ -	$ -	$ -
LCD projectors (2 @ $500 each)	$ 1,000	$ -	$ -	$ -	$ -
Office supplies @ $5000/FTE (5.0 FTE)	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ -
Software for statistical models of effectiveness	$ 30,000	$ -	$ -	$ -	$ -
Software maintenance costs	$ -	$ 2,500	$ 2,500	$ 2,500	$ -
Materials for PD and TA meetings	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ -
TOTAL	$ 163,400	$ 127,500	$ 127,500	$ 127,500	$ -

Requested funds for supplies will cover computers, contractual supplies and materials, computer software and computer software maintenance agreements for new staff; software and maintenance costs for some existing staff needing new software to carry out the provisions of this project; projectors for use in professional development meetings, and materials to be produced for use in professional development activities.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Modification and maintenance of CEPI systems to capture teacher evaluation labels, results, and growth data	$ 1,450,000	$ 150,000	$ 150,000	$ 150,000	$ -

Four-year RFP to host and facilitate statewide workgroups (including association and IHE staff) to develop guidelines for appropriate evidence to be used in educator evaluations (year 1); and develop or identify high-quality model evaluations protocols and materials based on those recommendations (years 2-4). Estimate 20 sets of materials for different associations at $75,000 each	$ 600,000	$ 300,000	$ 300,000	$ 300,000	$ -
Four-year RFP to independently and autonomously evaluate the conduct of annual educator evaluations	$ 250,000	$ 150,000	$ 150,000	$ 150,000	$ -
Four-year RFP to develop and maintain online repository for the guidelines and materials developed/identified by the statewide workgroups with state-level upload/edit access and public download access	$ 150,000	$ 25,000	$ 25,000	$ 25,000	$ -
Four-year RFP to enhance, expand, and maintain Individualized Professional Development Plan (IPDP) online system to support use by all teachers, principals, administrators, and central office staff	$ 500,000	$ 25,000	$ 25,000	$ 25,000	$ -
Consequential validity studies on educator effectiveness measures as used in educator evaluations	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ -
Independent evaluation of educator effectiveness models	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ -

Technical Advisory Committee ongoing meetings (2 dedicated meetings per year) to review technical quality of educator effective-ness models ($30K/ meeting)	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ -
P-20 Council review and feedback (2 meetings per year, $25,000 each)	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -
New DTMB Info Tech mgr (0.25 FTE * 1.45 [salary + fringe])	$ 28,803	$ 28,803	$ 28,803	$ 28,803	$ -
New DTMB IT pro-grammer analysts (1.0 FTE * 1.45 [salary & fringe])	$ 100,734	$ 100,734	$ 100,734	$ 100,734	$ -
New CEPI IT program-mer/analysts (1.0 FTE * 1.45 [salary & fringe])	$ 100,734	$ 100,734	$ 100,734	$ 100,734	$ -
Four-year RFP to fund the development of an annual educator evalua-tion tool in the regional data initiatives	$ 2,000,000	$ -	$ -	$ -	$ -
Four-year RFP to de-velop training materials and carry out profes-sional development meetings regarding the conduct of evaluations within the framework, and using the guidelines and model/mock materi-als produced by the statewide workgroups	$ 800,000	$ 400,000	$ 400,000	$ 400,000	$ -
TOTAL	$ 6,590,272	$ 1,890,272	$ 1,890,272	$ 1,890,272	$ -

Contracts cover the modification of state data systems to capture teacher evaluation labels, results, and growth data (including teacher/student links); statewide workgroups to develop best-practice guidelines for and examples of appropriate evidence to be used in educator evaluations; an independent evaluations of the quality, compliance, and rigor of annual educator evaluations; an online repository of the best practice guidelines identified by statewide workgroups; expansion of online professional development plan pilot to support annual evaluations; consequential validity studies of the impact of educator effectiveness measures as used in annual evaluations; independent evaluation of state-developed measures of educator impact on student growth; technical advisory committee meetings to advise the state on technical activities under this project; convening institutions of higher education for feedback on state implementation of the activities; development and delivery of professional development materials regarding the conduct of evaluations in collaboration with unions and associations; and cross-agency contractual support for information technology services.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 23,000	$ 23,000	$ 23,000	$ 23,000	$ -
DTMB computer support @ $5000/FTE	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 3,040	$ 3,040	$ 3,040	$ 3,040	$ -
TOTAL	$ 51,040	$ 51,040	$ 51,040	$ 51,040	$ -

Other costs include annual costs for Blackberries for selected staff, computer support costs, and space rent for staff assigned partially or fully to the project.

9. Direct Costs

Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs

Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information.*

11. Funding for Involved LEAs: Activity	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Data entry (evaluations)	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -
TOTAL	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -

Funding for Involved LEAs covers some costs of entering data regarding annual evaluation results into state systems.

12. Supplemental Funding for Participating LEAs: Activity	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Data entry (evaluations)	$ 370,500	$ 370,500	$ 370,500	$ 370,500	$ -
TOTAL	$ 370,500	$ 370,500	$ 370,500	$ 370,500	$ -

Funding for Participating LEAs covers some costs of entering data regarding annual evaluation results into state systems.

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

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 238,846	$ 238,846	$ 238,846	$ 238,846	$ 955,382
2. Fringe Benefits	$ 107,481	$ 107,481	$ 107,481	$ 107,481	$ 429,922
3. Travel	$ 42,000	$ 42,000	$ 42,000	$ 42,000	$ 168,000
4. Equipment	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 4,000
5. Supplies	$ 450,900	$ 422,500	$ 422,500	$ 422,500	$ 1,718,400
6. Contractual	$ 984,537	$ 384,537	$ 384,537	$ 384,537	$ 2,138,149
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ 30,985	$ 30,985	$ 30,985	$ 30,985	$ 123,940
9. Total Direct Costs (lines 1-8)	$ 1,855,748	$ 1,227,348	$ 1,227,348	$ 1,227,348	$ 5,537,793
10. Indirect Costs	$ 109,162	$ 106,265	$ 106,265	$ 106,265	$ 427,956
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 1,964,910	$ 1,333,613	$ 1,333,613	$ 1,333,613	$ 5,965,749

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Flora Jenkins, State Office Administrator 17 (OPPS), will provide policy oversight and management for the project (Base Salary: (b)(6)	$ 22,220	$ 22,220	$ 22,220	$ 22,220	$ -
New Education Consultant 14 - equitable distribution (OPPS) will work with CEPI and the Registry of Education Personnel data to develop equitable distribution reports and monitor local districts (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Education Consultant 14 - Michigan education corps (OPPS) will coordinate all activities related to Michigan Educator Corps (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Department Analyst 12 (OPPS) will provide support to the consultants in developing reports and analyses (Base Salary: $63,211 x 0.5 FTE)	$ 31,606	$ 31,606	$ 31,606	$ 31,606	$ -
New Secretary 9 (OPPS) will provide administrative support to project staff (Base Salary: $47,926 x 0.2 FTE)	$ 9,585	$ 9,585	$ 9,585	$ 9,585	$ -
Steve Viger, Education Consultant Manager 16 - accountability and psychometrics (OEAA), will provide research support for the equitable distribution reports (b)(6)	$ 9,485	$ 9,485	$ 9,485	$ 9,485	$ -
TOTAL	$ 238,846	$ 238,846	$ 238,846	$ 238,846	$ -

The personnel listed for this project will coordinate and provide oversight on teacher and leader effectiveness, assessment, accountability and data quality programs implemented within this reform area.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Quarterly USED TA meetings (1 staff) (4 trips per year @ $2,500 each)	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ -
CCSSO SCASS memberships and TA (One membership @ $20,000)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
In-state PD and TA for highly effective teachers and leaders to serve as coaches and mentors to less effective educators (24 trips per year @ $250 each)	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ -
In-state PD and TA for LEAs focused on recruitment and retention of highly effective educators in low performing schools (24 trips per year @ $250 each)	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ -
TOTAL	$ 42,000	$ 42,000	$ 42,000	$ 42,000	$ -

Travel costs are intended to ensure that Michigan Department of Education staff are able to receive technical assistance from USED and organizations such as CCSSO who will be regularly convening meetings to discuss and promote best practices in reform implementation. Travel costs also include resources necessary to permit state staff to interact frequently and consistency with key associations, unions and other stakeholders that are necessary to develop these initiatives in ways that will provide the best support in recruitment and retention of highly effective teachers and leaders. Professional development and technical assistance will also be provided to effective teachers and leaders to serve as coaches and mentors.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -
TOTAL	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -

The only expenditure on equipment is for a copy machine necessary to help produce materials to support these efforts.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Computers for new staff ($2,000 each for 2.7 new FTE)	$ 5,400	$ -	$ -	$ -	$ -
LCD projectors (One projector @ $500)	$ 500	$ -	$ -	$ -	$ -
Office supplies @ $5000/FTE (3.0 FTE)	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ -
Software for statistical models of effectiveness	$ 30,000	$ 7,500	$ 7,500	$ 7,500	$ -
Materials for balanced assessment PD and TA meetings	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ -
Materials for other PD and TA meetings	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ -
TOTAL	$ 450,900	$ 422,500	$ 422,500	$ 422,500	$ -

Supply costs include equipment for new staff and materials to be provided to teachers and leaders that are necessary for the implementation of the professional development and support efforts included in this project.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Study of equitable distribution	$ 300,000	$ 100,000	$ 100,000	$ 100,000	$ -
Consequential validity studies on incentives for equitable distribution	$ 200,000	$ 50,000	$ 50,000	$ 50,000	$ -
RFP for a 4-year grant for scholarly development of models for differentiated compensation to provide incentives for high quality educators to work in the most difficult to staff areas and to support recruitment and retention	$ 300,000	$ -	$ -	$ -	$ -
Technical Advisory Committee ongoing meetings (1 dedicated meeting per year) to review technical quality of studies of equitable distribution	$ 30,000	$ 30,000	$ 30,000	$ 30,000	$ -
P-20 Council review and feedback (1 meetings per year, $25,000 each)	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ -
New DTMB Info Tech mgr (0.25 FTE * 1.45 [salary + fringe])	$ 28,803	$ 28,803	$ 28,803	$ 28,803	$ -
New DTMB IT programmer analysts (0.5 FTE * 1.45 [salary & fringe])	$ 50,367	$ 50,367	$ 50,367	$ 50,367	$ -
New CEPI IT programmer/ analysts (0.5 FTE * 1.45 [salary & fringe])	$ 50,367	$ 50,367	$ 50,367	$ 50,367	$ -
Enhancement of differentiated compensation model development	$ -	$ 50,000	$ 50,000	$ 50,000	$ -
TOTAL	$ 984,537	$ 384,537	$ 384,537	$ 384,537	$ -

Contractual costs include resources necessary to study equitable distribution and develop models for differentiated compensation. Contracts will also be provided to support consequential validity studies on incentives for equitable distribution.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 13,800	$ 13,800	$ 13,800	$ 13,800	$ -
DTMB computer support @ $5000/FTE	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 2,185	$ 2,185	$ 2,185	$ 2,185	$ -
TOTAL	$ 30,985	$ 30,985	$ 30,985	$ 30,985	$ -

Building occupancy costs for new staff and information technology support are included in this section.

9. Direct Costs

Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs

Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

Budget Part II: Project-Level Budget Table
Project Name: Improving the Effectiveness of Teacher and Leader Preparation Programs
Associated with Criteria: Great Teachers and Leaders (D)(4)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 256,140	$ 256,140	$ 256,140	$ 256,140	$ 1,024,560
2. Fringe Benefits	$ 115,263	$ 115,263	$ 115,263	$ 115,263	$ 461,052
3. Travel	$ 49,000	$ 49,000	$ 49,000	$ 49,000	$ 196,000
4. Equipment	$ 11,000	$ 1,000	$ 1,000	$ 1,000	$ 14,000
5. Supplies	$ 43,400	$ 22,500	$ 22,500	$ 22,500	$ 110,900
6. Contractual	$ 2,290,272	$ 1,690,272	$ 1,690,272	$ 1,690,272	$ 7,361,086
7. Training Stipends	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 6,000
8. Other	$ 35,310	$ 35,310	$ 35,310	$ 35,310	$ 141,240
9. Total Direct Costs (lines 1-8)	$ 2,801,884	$ 2,170,984	$ 2,170,984	$ 2,170,984	$ 9,314,838
10. Indirect Costs	$ 71,463	$ 71,881	$ 71,881	$ 71,881	$ 287,105
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 2,873,347	$ 2,242,865	$ 2,242,865	$ 2,242,865	$ 9,601,942

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Flora Jenkins, State Office Administrator 17 (OPPS), will provide policy oversight and management for the project. (Base Salary: (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
New Education Research Consultant 14 - prep institution effectiveness (OPPS) will coordinate the teacher prep institution performance score and develop similar accountability program for alternate route programs (Base Salary: $82,975 x 1.0 FTE)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
Steve Stegink, Education Consultant 14 - prep institution preservice (OPPS), will provide leadership and assistance to the ed consultants to develop teacher prep institution effectiveness reports (b)(6)	$ 8,298	$ 8,298	$ 8,298	$ 8,298	$ -
New Department Analyst 12 (OPPS) will provide technical support to the consultants in gathering and analyzing data and preparing reports (Base Salary: $63,211 x 0.5 FTE)	$ 31,606	$ 31,606	$ 31,606	$ 31,606	$ -
New Secretary 9 (OPPS) will provide administrative support to project staff (Base Salary: $47,926 x 0.2 FTE)	$ 9,585	$ 9,585	$ 9,585	$ 9,585	$ -

Joseph Martineau, State Office Administrator 17 (OEAA), will provide policy oversight and management of the project (Base Salary: (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
Steve Viger, Education Consultant Manager 16 - accountability and psychometrics (OEAA), will provide techical oversight for development of teacher preparation institution effectiveness reports (Base Salary (b)(6)	$ 9,485	$ 9,485	$ 9,485	$ 9,485	$ -
Vacant Education Consultant Manager 15 - accountability (OEAA) will provide day to day management of preparation institution models and effectiveness reports (Base Salary: $87,880 x 0.2 FTE)	$ 17,576	$ 17,576	$ 17,576	$ 17,576	$ -
New Dept. Analyst 12 - accountability (OEAA) will provide technical support for model development and implementation reports (Base Salary: $63,211 x 0.5 FTE)	$ 31,606	$ 31,606	$ 31,606	$ 31,606	$ -
David Judd, State Administrative Manager 16 (OEAA), will provide project management services (Base Salary: (b)(6)	$ 10,378	$ 10,378	$ 10,378	$ 10,378	$ -
Peg Manning, Department Specialist 15 - data quality (OEAA), will provide data quality services (Base Salary: (b)(6)	$ 8,449	$ 8,449	$ 8,449	$ 8,449	$ -

New Secretary 9 - accountability and evaluation (OEAA) will provide administrative support to project staff (Base Salary: $47,926 x 0.5 FTE)	$ 23,963	$ 23,963	$ 23,963	$ 23,963	$ -
TOTAL	$ 256,140	$ 256,140	$ 256,140	$ 256,140	$ -

The personnel listed for this project will coordinate and provide oversight for educator preparation institution effectiveness and accountability.

2. Fringe Benefits
Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Quarterly USED TA meetings (2 staff) (8 meetings @ $2,500 each)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
CCSSO SCASS memberships and TA (One membership @ $20,000)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
In-state PD and TA for educator preparation institutions on institution scores (24 meetings @ $250 each)	$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ -
Quarterly in-state stakeholder meetings (3 staff) on prep institution performance score development (12 meetings @ $250 each)	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ -
TOTAL	$ 49,000	$ 49,000	$ 49,000	$ 49,000	$ -

The travel costs are intended to ensure that Michigan Department of Education staff are able to receive technical assistance from USED and organizations such as CCSSO who will be regularly convening meetings to discuss and promote best practices in reform implementation. Travel costs also include resources necessary to permit state staff to interact frequently and consistency with educator preparation institutions and other stakeholders on insitution performance scores.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease (20% of $5,000 total annual cost)	$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ -
New server hardware (50% of $10,000 total cost)	$ 5,000	$ -	$ -	$ -	$ -
New server software (50% of $10,000 total cost)	$ 5,000	$ -	$ -	$ -	$ -
TOTAL	$ 11,000	$ 1,000	$ 1,000	$ 1,000	$ -

The expenditure on equipment is for a copy machine necessary to help produce materials to support these efforts and new server hardware and software to support institution performance score data.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Computers for new staff ($2,000 each for 2.7 new FTE)	$ 5,400	$ -	$ -	$ -	$ -
LCD projectors (One @ $500 each)	$ 500	$ -	$ -	$ -	$ -
Office supplies @ $5000/FTE (3.5 FTE)	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ -
Software for statistical models of effectiveness (2 @ $10,000 each)	$ 20,000	$ -	$ -	$ -	$ -
Software maintenance	$ -	$ 5,000	$ 5,000	$ 5,000	$ -
TOTAL	$ 43,400	$ 22,500	$ 22,500	$ 22,500	$ -

Supply costs include equipment for new staff and materials to be provided to teachers and leaders that are necessary for the implementation of the professional development and support efforts included in this project.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Consequential validity studies on preparation institution effectiveness measures	$ 200,000	$ 100,000	$ 100,000	$ 100,000	$ -
Independent evaluation of preparation institution scores	$ 250,000	$ 150,000	$ 150,000	$ 150,000	$ -
Technical Advisory Committee ongoing meetings (2 dedicated meetings per year) to review technical quality of statistical models used in this section ($30,000/meeting)	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ -
RFP for a consortium of IHEs with high performing teacher preparation programs to develop and provide PD and technical assistance to IHEs with lower performing teacher preparation programs	$ 1,500,000	$ 750,000	$ 750,000	$ 750,000	$ -
RFP for a consortium of IHEs with high performing leadership preparation programs to develop and provide PD and technical assistance to IHEs with lower performing leadership preparation programs	$ -	$ 350,000	$ 350,000	$ 350,000	$ -
P-20 Council review and feedback (2 meetings per year, $25,000 each)	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ -
New DTMB Info Tech mgr (0.25 FTE * 1.45 [salary + fringe])	$ 28,803	$ 28,803	$ 28,803	$ 28,803	$ -

New DTMB IT programmer analysts (1.0 FTE * 1.45 [salary & fringe])	$ 100,734	$ 100,734	$ 100,734	$ 100,734	$ -
New CEPI IT programmer/analysts (1.0 FTE * 1.45 [salary & fringe])	$ 100,734	$ 100,734	$ 100,734	$ 100,734	$ -
TOTAL	$ 2,290,272	$ 1,690,272	$ 1,690,272	$ 1,690,272	$ -

Contractual costs include resources necessary to perform independent evaluations of preparation scores, as well as the development of a consortium of high performing teacher prep institutions (TPI) to provide professional development and technical assistance to low performing TPIs. Contracts will also be provided to support consequential validity studies on preparation institution effectiveness measures.

7. Training Stipends	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
IHE leadership yearly training stipends on effectiveness models, and prep institution scores (25 IHEs, 50 staff)	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ -
TOTAL	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ -

Stipends will be provided to faculty and staff from institutions of higher education on effectiveness models and prep institution scores.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 16,100	$ 16,100	$ 16,100	$ 16,100	$ -
DTMB computer support @ $5000/FTE	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 1,710	$ 1,710	$ 1,710	$ 1,710	$ -
TOTAL	$ 35,310	$ 35,310	$ 35,310	$ 35,310	$ -

Building occupancy costs for new staff and information technology support are included in this section.

9. Direct Costs
Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs
Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

Budget Part II: Project-Level Budget Table
Project Name: Providing Effective Support to Teachers and Leaders
Associated with Criteria: Great Teachers and Leaders (D)(5)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 259,233	$ 259,233	$ 259,233	$ 259,233	$ 1,036,933
2. Fringe Benefits	$ 116,655	$ 116,655	$ 116,655	$ 116,655	$ 466,620
3. Travel	$ 74,000	$ 74,000	$ 74,000	$ 74,000	$ 296,000
4. Equipment	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 20,000
5. Supplies	$ 321,900	$ 318,000	$ 318,000	$ 318,000	$ 1,275,900
6. Contractual	$ 20,141,809	$ 291,809	$ 291,809	$ 291,809	$ 21,017,236
7. Training Stipends	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 6,000
8. Other	$ 36,840	$ 36,840	$ 36,840	$ 36,840	$ 147,360
9. Total Direct Costs (lines 1-8)	$ 20,956,937	$ 1,103,037	$ 1,103,037	$ 1,103,037	$ 24,266,049
10. Indirect Costs	$ 108,133	$ 89,885	$ 89,885	$ 89,885	$ 377,789
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 21,065,070	$ 1,192,923	$ 1,192,923	$ 1,192,923	$ 24,643,838

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Flora Jenkins, State Office Administrator 17 (OPPS) will provide policy oversight and management for the project (Base Salary: (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
Existing Ed Consultant 14 (OPPS) will be a member of the cross-functional professional development team (Base Salary: $82,975 x 0.2 FTE)	$ 16,595	$ 16,595	$ 16,595	$ 16,595	$ -
New Secretary 9 (OPPS) will provide administrative support to project staff (Base Salary: $47,926 x 0.2 FTE)	$ 9,585	$ 9,585	$ 9,585	$ 9,585	$ -
Joseph Martineau, State Office Administrator 17 (OEAA), will provide policy oversight and management of the project (Base (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
Kim Young, Education Consultant 14 (OEAA) will provide leadership for the balanced assessment initiative to be scaled up state- (b)(6)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
New Secretary 8 (OEAA) will provide administrative support for the balanced assessment scale-up initiative (Base Salary: $44,883 x 1.0 FTE)	$ 44,883	$ 44,883	$ 44,883	$ 44,883	$ -
Five Existing Ed Consultants 14 (OEAA) will be a members of the cross-functional professional development team (Base Salary: $82,975 x 0.2 FTE each)	$ 82,975	$ 82,975	$ 82,975	$ 82,975	$ -
TOTAL	$ 259,233	$ 259,233	$ 259,233	$ 259,233	$ -

The personnel listed for this project will coordinate and provide oversight for the professional development opportunities that will be created to support teachers and leaders in implementing reform.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Quarterly USED TA meetings (2 staff) (8 trips @ $2,500 each)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
CCSSO SCASS memberships and TA (One membership at $20,000 each)	$ 20,000	$ 20,000	$ 20,000	$ 20,000	$ -
Quarterly management meetings (3 staff) with contractors for scaling up balanced assessment initiative (12 meetings @ $2,000 each)	$ 24,000	$ 24,000	$ 24,000	$ 24,000	$ -
Quarterly in-state meetings (7 staff) with stakeholders to improve scaling up balanced assessment initiative	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ -
In-state PD and TA for preparation institutions on pre-service balanced assessment literacy and data use training (12 meetings @ $250 each)	$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ -
TOTAL	$ 74,000	$ 74,000	$ 74,000	$ 74,000	$ -

The travel costs are intended to ensure that Michigan Department of Education staff are able to receive technical assistance from USED and organizations such as CCSSO who will be regularly convening meetings to discuss and promote best practices in reform implementation. Travel costs also include resources necessary to permit state staff to interact frequently and consistently with key associations, unions and other stakeholders that are necessary to develop these initiatives in ways that will provide the most effective support to teachers and leaders.

4. Equipment	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Copy machine lease ($5,000 per year for one copier)	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ -
TOTAL	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ -

The only expenditure on equipment is for a copy machine necessary to help produce materials to support these efforts.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Computers for new staff ($2,000 each for 1.2 new FTE)	$ 2,400	$ -	$ -	$ -	$ -
LCD projectors ($500 each x 3 projectors)	$ 1,500	$ -	$ -	$ -	$ -
Office supplies @ $5000/FTE (3.6 FTE)	$ 18,000	$ 18,000	$ 18,000	$ 18,000	$ -
Materials for balanced assessment PD and TA meetings	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ -
TOTAL	$ 321,900	$ 318,000	$ 318,000	$ 318,000	$ -

Supply costs include equipment for new staff and materials to be provided to teachers and leaders that are necessary for the implementation of the professional development and support efforts included in this project.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
P-20 Council review and feedback (1 meetings per year, $25,000 each)	$ 25,000	$ 25,000	$ 25,000	$ 25,000	$ -
CEPI data systems PD coordinator (1.45 FTE to cover fringe)	$ 116,809	$ 116,809	$ 116,809	$ 116,809	$ -
RFP for four-year contract to scale up and enhance balanced assessment literacy initiative including effects on student achievement and teacher and leader effectiveness to reach the approximately 45,000 teachers and principals in Michigan.	$ 7,500,000	$ -	$ -	$ -	$ -
RFP for a four-year consequential validity study of scaling up statewide initiatives to support teachers and leaders, including field interviews, observations, and other quantitative and qualitative methods. Includes especially impact of fidelity of practice on teacher and leader effectiveness, and the use of fidelity of practice in hiring and evaluations.	$ 500,000	$ 150,000	$ 150,000	$ 150,000	$ -
RFP for four-year contract to develop a clearinghouse of materials and assessment strategies to support teachers and leaders in the implementation of formative assessment practices.	$ 5,000,000	$ -	$ -	$ -	$ -

RFP for four-year contract to develop best practices in the implementation and use of common planning time to provide on-going support for educators in the creation of goals and use of data in the Evaluation Framework.	$ 2,000,000	$ -	$ -	$ -	$ -
RFP for four-year contract for independent research and evaluation of the impact of common planning time on student achievement.	$ 500,000	$ -	$ -	$ -	$ -
RFP for four-year contract to develop best practices in the implementation and use of Professional Learning Communities to provide ongoing support for teachers and leaders in the implementation of reform in all core areas (i.e., Teacher and Leader Effectiveness, Data, Standards & Assessments, and Persistently Low-Achieving Schools).	$ 2,000,000	$ -	$ -	$ -	$ -
RFP for four-year contract for independent research and evaluation of the impact of Professional Learning Communities on student achievement.	$ 500,000	$ -	$ -	$ -	$ -
4-year RFP for a consortium of ISDs, IHEs, and/or other entities to build an online test delivery and reporting platform	$ 2,000,000	$ -	$ -	$ -	$ -
TOTAL	$ 20,141,809	$ 291,809	$ 291,809	$ 291,809	$ -

Contractual costs include resources necessary to develop professional development and supportive materials in the areas of professional learning communities, balanced assessment to inform instruction, common planning time, and resources to implement formative assessment effectively. Contracts will also be provided to support independent research and evaluation of the impact of these statewide efforts, including the impact on student achievement, benefits for teachers and leaders, and any unintended consequences.

7. Training Stipends	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
IHE leadership yearly training stipends on balanced assessment and data use literacy pre-service training (25 IHEs, 50 staff)	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ -
TOTAL	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ -

Stipends will be provided to faculty and staff from institutions of higher education to ensure that these critical stakeholders are included in all efforts to support teachers and leaders.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Building occupancy @ $4600/FTE	$ 16,560	$ 16,560	$ 16,560	$ 16,560	$ -
DTMB computer support @ $5000/FTE	$ 18,000	$ 18,000	$ 18,000	$ 18,000	$ -
Blackberry support @ $950/FTE for management and supervisory personnel	$ 2,280	$ 2,280	$ 2,280	$ 2,280	$ -
TOTAL	$ 36,840	$ 36,840	$ 36,840	$ 36,840	$ -

Building occupancy costs for new staff and information technology support are included in this section.

9. Direct Costs
Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs
Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

Budget Part II: Project-Level Budget Table
Project Name: Breakthrough for Learning
Associated with Criteria: Turning Around the Lowest Achieving Schools (E)(2)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Total (e)
1. Personnel	$ 216,029	$ 216,029	$ 216,029	$ 216,029	$ 864,114
2. Fringe Benefits	$ 97,213	$ 97,213	$ 97,213	$ 97,213	$ 388,851
3. Travel	$ 53,750	$ 20,000	$ 20,000	$ 20,000	$ 113,750
4. Equipment	$ -	$ -	$ -	$ -	$ -
5. Supplies	$ 20,500	$ 14,500	$ 14,500	$ 14,500	$ 64,000
6. Contractual	$ 1,775,000	$ 1,753,500	$ 1,753,500	$ 1,753,500	$ 7,035,500
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ 81,970	$ 81,970	$ 81,970	$ 81,970	$ 327,880
9. Total Direct Costs (lines 1-8)	$ 2,244,461	$ 2,183,211	$ 2,183,211	$ 2,183,211	$ 8,794,095
10. Indirect Costs	$ 55,535	$ 49,288	$ 49,288	$ 49,288	$ 203,398
11. Funding for Involved LEAs	$ 4,000,000	$ 2,000,000	$ 1,000,000	$ -	$ 7,000,000
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 6,299,996	$ 4,232,499	$ 3,232,499	$ 2,232,499	$ 15,997,493

All applicants must provide a break-down by the applicable budget categories show 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.

1. Personnel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
New Education Consultant 13 (OEII) will support the work of turning around low-performing schools, closing schools, and newly chartered public school academies (Base Salary: $76,441 x 1.0 FTE per year)	$ 76,441	$ 76,441	$ 76,441	$ 76,441	$ -
New Education Consultant 13 (OEII) will work as a liaison with the State Reform Office in turning around low-performing schools and ensuring alignment between the School Improvement Grant and state reform efforts (Base Salary: $76,441 x 1.0 FTE per year)	$ 76,441	$ 76,441	$ 76,441	$ 76,441	$ -
New Secretary 8 (OEII) will provide administrative support to project staff (Base Salary: $44,883 x 0.5 FTE per year)	$ 22,442	$ 22,442	$ 22,442	$ 22,442	$ -
New State School Redesign/Reform Officer - unclassified will report to Superintendent of Public Instruction and is responsible for oversight of all schools identified as persistently lowest achieving (Base Salary: $130,000 x 0.1 FTE per year, includes fringe benefits @ 45% of salary)	$ 13,000	$ 13,000	$ 13,000	$ 13,000	$ 702,000

Linda Forward, State Office Administrator 17 (OEII), will direct and administer School Improvement Grants and statewide system of support for struggling schools (Base Salary: (b)(6)	$ 11,110	$ 11,110	$ 11,110	$ 11,110	$ -
Bill Witt, Education Consultant 14 (OEII), will coordinate school turnaround efforts and School Improvement Grant activities (Base (b)(6)	$ 16,595	$ 16,595	$ 16,595	$ 16,595	$ -
TOTAL	$ 216,029	$ 216,029	$ 216,029	$ 216,029	$ 702,000

Funding is provided for staff to support coordination efforts between the Office of Education Improvement and Innovation (OEII) and the State Reform Officer to ensure smooth functioning and communication for the turnaround efforts that are part of three initiatives: state school reform legislation, federal Race to the Top initiatives, and federal School Improvement Grant funds. Support funding will also be provided for 10% of the State Reform Officer, 10% of the Office of Education Improvement and Innovation Director, and 20% of an Education Consultant assisting with the coordination between both offices.

2. Fringe Benefits

Fringe benefits are calculated as 45% of all project salaries as determined in the personnel section above.

3. Travel	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Professional learning communities development for school leaders using turnaround models - 25 people each ($6,250 per trip x 5 trips in FY 2011 and 2 trips in FY 2012—2014)	$ 31,250	$ 12,500	$ 12,500	$ 12,500	$ -

external provider training - 30 people each ($7500 per trip x 3 trips in FY 2011 and 1 trip in FY 2012—2014)	$ 22,500	$ 7,500	$ 7,500	$ 7,500	$ -
TOTAL	$ 53,750	$ 20,000	$ 20,000	$ 20,000	$ -

Travel costs above reflect offset of travel expenditures for statewide meetings for struggling schools and training meetings for external providers.

5. Supplies	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Office supplies @ $5000/FTE (2.9 FTE)	$ 14,500	$ 14,500	$ 14,500	$ 14,500	$ -
Computers for new staff ($2,000 each for 2.6 new FTE)	$ 5,200	$ -	$ -	$ -	$ -
Conference phone ($300 for one phone)	$ 300	$ -	$ -	$ -	$ -
Printers ($250 each for 2 printers)	$ 500	$ -	$ -	$ -	$ -
TOTAL	$ 20,500	$ 14,500	$ 14,500	$ 14,500	$ -

Funds for supplies cover expenses to establish the 2.6 new positions with computers and printers. Basic office supplies are also included for all staff and a conference phone to save travel costs for regional meetings.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
RFP for grant to develop training for external providers	$ 25,000	$ -	$ -	$ -	$ -

RFP for a 4-year Grant for a consortium of ISDs to develop and implement a Turnaround Academy and a socially networked clearinghouse for effective turnaround practices (in conjunction with professional associations)	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000
RFP for a 4-year Grant for a consortium of ISDs and Higher Education Institution (s) to develop and implement a Principal's Academy and a socially networked clearinghouse for effective practices to ensure highly effective leaders in high-need schools (in conjunction with professional associations). This will be an enhancement of the current Principals Academy that is part of the statewide system of support to Title I schools identified for improvement.	$ 750,000	$ 750,000	$ 750,000	$ 750,000
RFP for grant to deliver training for external providers	$ -	$ 3,500	$ 3,500	$ 3,500
TOTAL	$ 1,775,000	$ 1,753,500	$ 1,753,500	$ 1,753,500

This section of the budget includes four contracts: an RFP/grant to develop training for all external providers; an RFP/grant for someone to deliver the training to external providers annually; an RFP/grant for a consortium of Intermediate School Districts to develop and implement a Turnaround Academy to develop a pipeline of leaders for struggling schools; and an RFP/grant for a consortium of Intermediate School Districts and Institutions of Higher Education to develop and deliver an enhanced Principal's Academy as part of the statewide system of support for low performing Title I schools.

8. Other	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
Conference calls/ webinars	$ 1,750	$ 1,750	$ 1,750	$ 1,750	$ -
Printing	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ -
Equipment rental	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ -
Webinar hosting fees	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ -
Building occupancy @ $4600/FTE	$ 13,340	$ 13,340	$ 13,340	$ 13,340	$ -
DTMB computer support @ $5000/FTE	$ 14,500	$ 14,500	$ 14,500	$ 14,500	
Blackberry support @ $950/FTE for management and supervisory personnel	$ 380	$ 380	$ 380	$ 380	
TOTAL	$ 81,970	$ 81,970	$ 81,970	$ 81,970	$ -

Other costs include annual expenditures for building occupancy and technology support, including Blackberry support, provided through the Department of Technology, Management, and Budget. Expenditures also cover conference calls, webinars, and hosting fees for various meetings and trainings provided through the project. Printing and equipment rental cover costs for print materials to support the project.

9. Direct Costs
Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs
Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

11. Funding for Involved LEAs: Activity	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
School turnaround grants for schools not eligible for Title I funding	$ 4,000,000	$ 2,000,000	$ 1,000,000	$ -	$ -
TOTAL	$ 4,000,000	$ 2,000,000	$ 1,000,000	$ -	$ -

Funding is provided for school turnaround grants to schools that are not eligible for Title I funding and therefore not eligible for School Improvement Grant funds. $7,000,000 will be disbursed over the four years of the grant in declining amounts: $4,000,000 in FY 2011; $2,000,000 in FY 2012; and $1,000,000 in FY 2013. If any funds are not granted out, they will be carried forward to the next year or used to supplement School Improvement Grant funds if those are insufficient to fund all persistently lowest-achieving schools.

Budget Part II: Project-Level Budget Table
Project Name: Promise Zones
Associated with Criteria: (F)(3)
(Evidence for selection criterion (A)(2)(i)(d))

Budget Categories	**Project Year 1 (a)**	**Project Year 2 (b)**	**Project Year 3 (c)**	**Project Year 4 (d)**	**Total (e)**
1. Personnel	$ -	$ -	$ -	$ -	$ -
2. Fringe Benefits	$ -	$ -	$ -	$ -	$ -
3. Travel	$ -	$ -	$ -	$ -	$ -
4. Equipment	$ -	$ -	$ -	$ -	$ -
5. Supplies	$ -	$ -	$ -	$ -	$ -
6. Contractual	$ 500,000	$ -	$ 500,000	$ -	$ 1,000,000
7. Training Stipends	$ -	$ -	$ -	$ -	$ -
8. Other	$ -	$ -	$ -	$ -	$ -
9. Total Direct Costs (lines 1-8)	$ 500,000	$ -	$ 500,000	$ -	$ 1,000,000
10. Indirect Costs	$ 2,550	$ -	$ 2,550	$ -	$ 5,100
11. Funding for Involved LEAs	$ -	$ -	$ -	$ -	$ -
12. Supplemental Funding for Participating LEAs	$ -	$ -	$ -	$ -	$ -
13. Total Costs (lines 9-12)	$ 502,550	$ -	$ 502,550	$ -	$ 1,005,100

All applicants must provide a break-down by the applicable budget categories show 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.

6. Contractual	FY 2011	FY 2012	FY 2013	FY 2014	Total Non-Grant Funds
One-time competitive grant for districts to complete the work already underway to bring the promise zones into full operational status	$ 500,000	$ -	$ 500,000	$ -	$ -
TOTAL	$ 500,000	$ -	$ 500,000	$ -	$ -

To accelerate implementation in the Promise Zones, the Michigan Department of Education will offer a competitive grant in years one and three of the Race to the Top grant. The funding will be offered as a one-time grant, or seed money, to complete the work already underway to bring the "Promise" into full operational status as demonstrated by the awarding of scholarships within one year of receipt of the grant.

9. Direct Costs
Direct costs are calculated as the sum of all expenditures above for each year in the budget.

10. Indirect Costs
Indirect costs are calculated as 10.2% of all direct costs above less equipment and any amount in excess of the first $25,000 of individual contracts. Please see attached *Indirect Cost Information*.

Budget: Indirect Cost Information

Does the State have an Indirect Cost Rate Agreement approved by the Federal government?

YES ●

NO ○

If yes to question 1, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement (mm/dd/yyy):

From: 10/01/2009 To: 09/30/2010

Approving Federal agency: _X_ ED ___ Other

(Please specify agency): ____________________