

TEA MATHEMATICS UPDATE

TRC Math Directors Meeting

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- Graduation Requirements
- TEKS Revisions
- Texas Mathematics & Science Diagnostic Assessment System
- Algebra Readiness Initiative
- Assessment

- Entered high school before 2007–2008
 - 3 math credits required for the Recommended High School Program (RHSP): Algebra I, Geometry, and Algebra II
- Entered high school in 2007–2008 and thereafter
 - Graduating under the 4 X 4 RHSP

4 X 4 RHSP Mathematics Requirements

- Algebra I, Geometry, Algebra II, and a 4th math credit
- If Mathematical Models with Applications is chosen as the 4th math credit, it must be taken prior to Algebra II.
- For the list of courses approved to serve as a fourth math credit for the RHSP, please visit <http://ritter.tea.state.tx.us/rules/tac/chapter074/ch074f.html>.

Additional Courses Approved for 4th Math Credit

- New Career and Technical Education (CTE) courses approved for math credit by the State Board of Education:
 - Mathematical Applications in Agriculture, Food, and Natural Resources (If this course is chosen as the 4th math credit, then it must be taken prior to Algebra II.)
 - Statistics and Risk Management
 - Engineering Mathematics
- AP Computer Science for the Distinguished Achievement Plan (already on RHSP)

House Bill 3 and Graduation Requirements

- Number of total credits for each degree plan remains unchanged
- 4 X 4 requirements unchanged
- Created additional flexibility in the choice of electives for Texas students on the RHSP
- For more information about HB 3 Graduation Requirements, please visit <http://www.tea.state.tx.us/graduation.aspx>.

Minimum Plan

- In order to opt into the minimum program, a student must
 - be at least 16 years of age;
 - have completed two credits required for graduation in each subject of the foundation curriculum; ***or***
 - have failed to be promoted to the tenth grade one or more times as determined by the school district.
- Permission for this plan must be in writing and signed by the student, the student's parent or guardian, and the school's counselor or administrator.

Where are they now?

- Eleventh Graders
First class to have 4 X 4 RHSP
- Tenth Graders
First 8th grade class affected by SSI grade advancement requirements
- Seventh graders
First class to have end-of-course assessments as a graduation requirement

- The Texas Higher Education Coordinating Board and TEA collaborated to create the College and Career Readiness Standards (CCRS).
- A committee completed a limited scope review of the secondary math TEKS in fall 2008 and recommended additions and clarifying language to better align the TEKS with the College and Career Readiness Standards (CCRS).
- The SBOE adopted the revised secondary math TEKS that incorporated the CCRS in January 2009.

TEKS Revisions

Grade Level/Course TEKS	#of Edited Student Expectations or Knowledge Statements	# of New Student Expectations
6	0	0
7	3	0
8	2	1
Algebra I	0	0
Geometry	0	2
Algebra II	1	0
Mathematical Models with Applications	1	0

- The revised math TEKS are currently being implemented.
- Clarifying activities will be available in the future.
- Math TEKS professional development will be delivered in summer 2010.
- Math college readiness online student materials will be available in fall 2010.
- The updated math TEKS can be found at <http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html>.

- Grades 3–8, Algebra I & II and Geometry
- 3 diagnostic tests available for each grade level/course; 30 questions each
- 5-question “mini-assessments” available for most student expectations
- Now partnering with Core K12
- Provided at no cost to school districts and charter schools
- Contact ESCs for technical assistance

Algebra Readiness Components

- Texas Response to Curriculum Focal Points (TxRCFP)
- Professional Development
- Grants to districts
- Technology based supplemental math instruction
- Math supplemental diagnostic screening instrument

Texas Response to Curriculum Focal Points K-8

- Alignment of student expectations to key topics necessary to prepare students to be mathematically proficient
- Identification of critical areas that connect and integrate mathematical proficiency and understanding

Professional Development: MSTAR Academies

Middle School Students in Texas Algebra Ready (MSTAR)

Targeted at grades 5-8 (summer 2010)

- MSTAR Foundations (Grades 5-6)
- MSTAR Foundations (Grades 7-8)
- MSTAR Geometric Approach to Algebra Readiness (Grades 6-8)



Professional Development: Math EOC Success Academies

Targeted for teachers teaching courses that will have an End of Course (EOC) test

- Algebra I (Summer 2010)
- Geometry (Summer 2011)
- Algebra II (Summer 2011)



Professional Development: ESTAR Academies

Elementary School Students in Texas
Algebra Ready (ESTAR)
Grades K-5

Mathematics Professional Development Academies

MSTAR

**Goal:
Algebra
Readiness**

ESTAR

EOC

- Current
 - Algebra Readiness Grants, Cycle 1
 - Planning phase
 - Implementation phase

- Planned
 - Algebra Readiness Grants, Cycle 2
 - Algebra Readiness Grants, Small and Rural

- **Use of extended learning time for math**
80-100 minutes a day
- **Instructional coaching**
Support educators in classroom
- **Effective professional development**
 - MSTAR Academies 5-6, 7-8
 - Algebra EOC
 - MSTAR
- **Common planning time**
Development of professional learning communities

- **Effective supplemental resources**
Problem-solving, higher-level thinking skills
- **Administrator training**
Effective instructional strategies, interventions and assessments to increase student achievement
- **Appropriate technology**
Support student learning
- **Active ongoing student engagement**
Challenging learning of rigorous content
- **Guidance and communication for parents**
Engage parents opportunities

Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)

The National Science Foundation administers PAEMST on behalf of
the White House Office of Science and Technology Policy

- Highest recognition that a mathematics or science teacher may receive for outstanding teaching
- Recognizes teachers for their contributions to teaching and learning and their ability to help students make progress in mathematics and science
- Given to mathematics and science teachers from each of the 50 states and four U.S. jurisdictions
- Alternates between K–6 and 7–12 teachers

2008 Texas PAEMST Awardee in Mathematics



Barbara Kelley

Grapevine-Colleyville ISD
Cannon Elementary School

2009 PAEMST State Finalists for Mathematics

- Lara Scheumack
Rockport Fulton Middle School
Aransas County ISD
- Mallory Zimmerman
Uvalde Junior High School
Uvalde CISD
- Vicki Peters
Duncanville High School
Duncanville ISD

2010 PAEMST Applications

- Grades K–6
- Nomination Deadline: April 1, 2010
- Application Deadline: May 1, 2010

- Nomination forms, eligibility criteria, and applications available at www.paemst.org

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STUDENT ASSESSMENT UPDATE

Changes to the Assessment Program—House Bill 3

Release Plan for Assessment

- In 2007 legislation changed the release of tests to every three years.
- In 2009 legislation changed the release of tests to exclude retests.

Changes to the Assessment Program—House Bill 3

Release Plan for Assessment

- In August 2009 TEA released all primary forms of TAKS that were administered during the 2008–2009 school year.
- In 2010 TEA plans to release a set of TAKS items to include about 3–5 items per objective per grade and subject.
- Prior to 2012 TEA hopes to release a small set of EOC assessment items.

Changes to the Assessment Program—House Bill 3

New Assessments at Grades 3–8 & High School

- Must be linked to college readiness
- Will have “fewer, clearer, deeper” focus
- Begins in 2011–2012



State of Texas Assessments of Academic Readiness

Changes to the Assessment Program—House Bill 3

New Assessments at Grades 3–8 & High School

- Convene educator advisory committees in early 2010
- Review curriculum to determine what should be eligible for assessment
- Review assessed curriculum to determine what should be the focus of the assessment

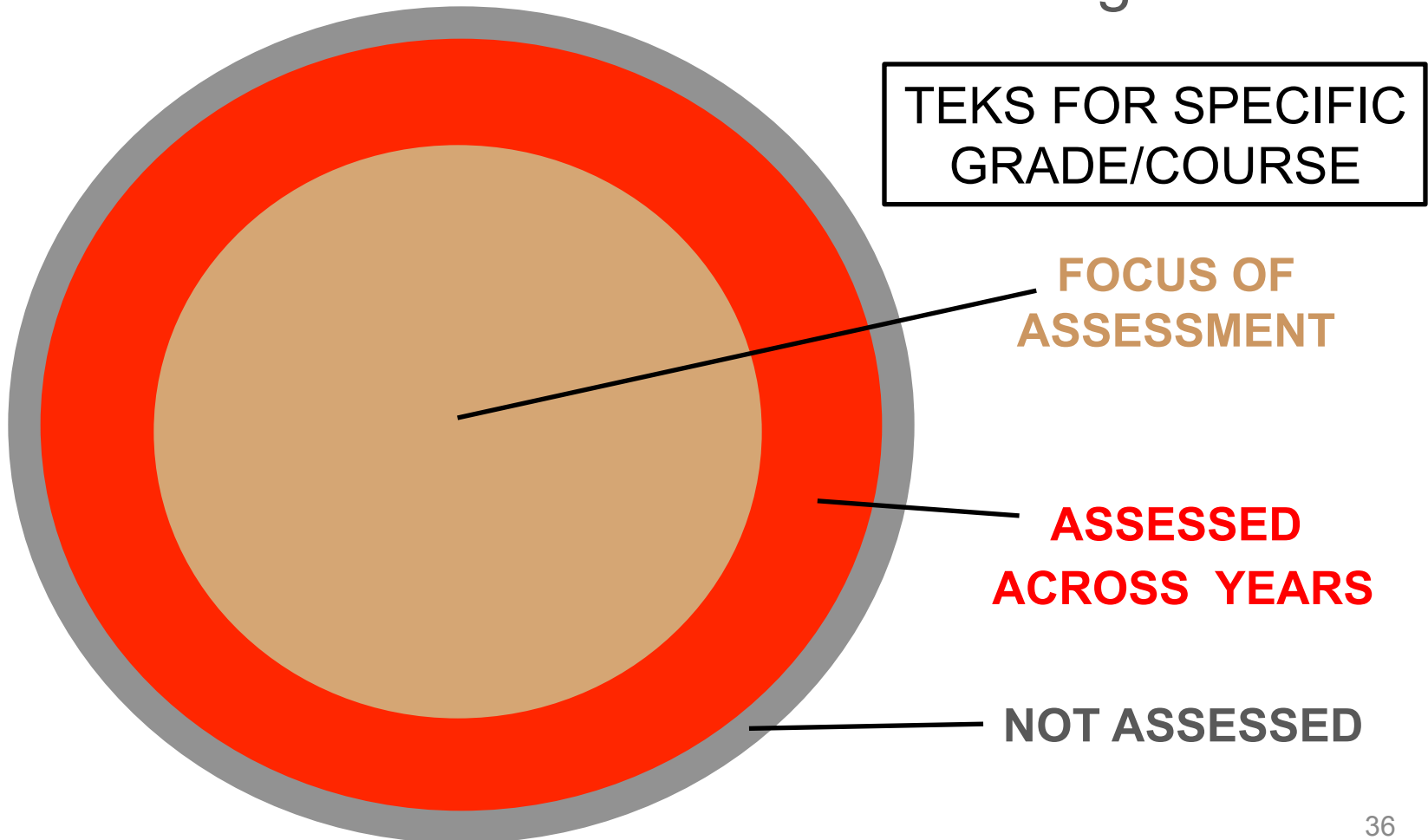
Changes to the Assessment Program—House Bill 3

New Assessments at Grades 3–8 & High School

- Focus on the knowledge and skills that are considered critical for success in that grade/course and are important for preparedness in the next grade/course
- Focus on these specific knowledge and skills each year with others rotating into the assessments across years

Changes to the Assessment Program—House Bill 3

New Assessments at Grades 3–8 & High School



Changes to the Assessment Program—House Bill 3

New Assessments at Grades 3–8 & High School

- New assessment blueprints
- New reference materials
- New information booklets

Changes to the Assessment Program—House Bill 3

New Assessments at Grades 3–8 & High School

Setting performance standards

- Standards for EOC assessments planned for fall 2011
- Standards for grades 3–8 assessments planned for fall 2012

- Current legislation requires the phase out of high school TAKS and replaces it with EOC assessments:
 - English I, English II, English III
 - Algebra I, Geometry, Algebra II
 - U.S. History, World History, World Geography
 - Biology, Chemistry, Physics

- Freshman class of 2011–2012 is first group to have EOC as a graduation requirement.
- That is the current 7th graders.
- All 12 EOC assessments will be available in 2011–2012.

EOC Assessments

Plan for phase-out of HS TAKS and phase-in of EOC assessments

	2009–2010	2010– 2011	2011– 2012	2012–2013	2013– 2014	2014–2015
GR 9	TAKS	TAKS	EOC	EOC	EOC	EOC
GR 10	TAKS	TAKS	TAKS	EOC	EOC	EOC
GR 11	TAKS	TAKS	TAKS	TAKS	EOC	EOC
GR 12	TAKS*	TAKS*	TAKS*	TAKS*	TAKS*	EOC or TAKS*

*Out-of-school testers and 12th grade re-testers

Math Similarities between TAKS and EOC

- Aligned to TEKS
- Untimed
- Graphing calculators must be provided
- Mostly multiple-choice questions
- After first year, field-test questions will be embedded in operational test

Math Differences between TAKS and EOC

Current coverage of Algebra I TEKS

- TAKS grade 9 covers about **74%** of Algebra I TEKS
- TAKS grade 10 covers about **90%** of Algebra I TEKS
- TAKS exit level covers about **90%** of Algebra I TEKS
- Algebra I EOC assessment covers about **95%** of Algebra I TEKS

Math Differences between TAKS and EOC

Current coverage of geometry TEKS

- TAKS grade 9 covers **0%** of geometry TEKS; it includes geometry skills from grade 8
- TAKS grade 10 covers **0%** of geometry TEKS; it includes geometry skills from grade 8
- TAKS exit level covers about **57%** of geometry TEKS
- Geometry EOC assessment covers about **89%** of geometry TEKS

Math Differences between TAKS and EOC

Current coverage of Algebra II TEKS

- TAKS grade 9 covers **0%** of Algebra II TEKS
- TAKS grade 10 covers **0%** of Algebra II TEKS
- TAKS exit level covers **0%** of Algebra II TEKS
- Algebra II EOC assessment covers about **91%** of Algebra II TEKS

- Algebra I
 - First tested in 1995
 - Available in current form since 2005
- Geometry
 - Field tested in spring 2007
 - First operational test in spring 2008
- Algebra II
 - Field test scheduled for spring 2010
 - First operational test scheduled for spring 2011

- Not grade specific
- Not required to be part of student's grade
- Not included in state or federal accountability
- No retests available until 2011–2012

Resources available

- Assessed curriculum
- Assessment blueprint
- Assessment reference materials

Can be found at http://www.tea.state.tx.us/index3.aspx?id=3302&menu_id3=793

Algebra I EOC Assessment Performance

YEAR	MET STANDARD	COMMENDED PERFORMANCE	NUMBER TESTED
2005	49%	6%	20,844
2006	50%	7%	21,206
2007	53%	8%	32,812
2008	56%	11%	52,462
2009	57%	11%	78,419

2009 Algebra I Results

- Total number of questions—50
- Mean raw score—32
- Mean percent correct—64%

2009 Geometry Results

- Total number of questions—44
- Mean raw score—23
- Mean percent correct—53%

Development of EOC assessments

- Follows the Test Development Process posted on the TEA student assessment website
- Involves educator committees such as focus groups, advisory committees, item reviews, and data reviews
- Involves the Texas Higher Education Coordinating Board
- Includes higher-education faculty

Your Input Is Needed

- Educator involvement in the test development is critical to the process.
- Highly qualified educators are needed to serve on educator committees, especially at the high school level.
- The Educator Recommendation Form can be found at <http://ritter.tea.state.tx.us/student.assessment/develop/recform.pdf>.

- Texas Education Code chapter 39 at <http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.39.htm>
- House Bill 3 at <http://www.capitol.state.tx.us/tlodocs/81R/billtext/pdf/HB00003F.pdf>

For More Information Go To ...

- Letter dated 09/02/09 about field testing and related activities for the Texas assessment program: http://ritter.tea.state.tx.us/student.assessment/resources/letters/2010/090209_fieldtest_notification.pdf.
- Letter dated 09/18/09 about student assessment program updates for 2009–2010: http://ritter.tea.state.tx.us/student.assessment/resources/letters/2010/091809_assessment_updates.pdf

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