TEA Mathematics Curriculum Update

July 10, 2013

Texas Education Agency

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Agenda

- STAAR Results
- New TEKS
- Graduation Requirements
- Texas Algebra Readiness
- Resources
- PAEMST

STAAR Results

Texas Education Agency

STAAR EOC – First Administration Only (First Time Testers)

End of Course Exam	Percent Passing	Students Tested
Algebra I	82.1%	336,437
Geometry	86.2%	295,877
Algebra II	97.1%	92,810

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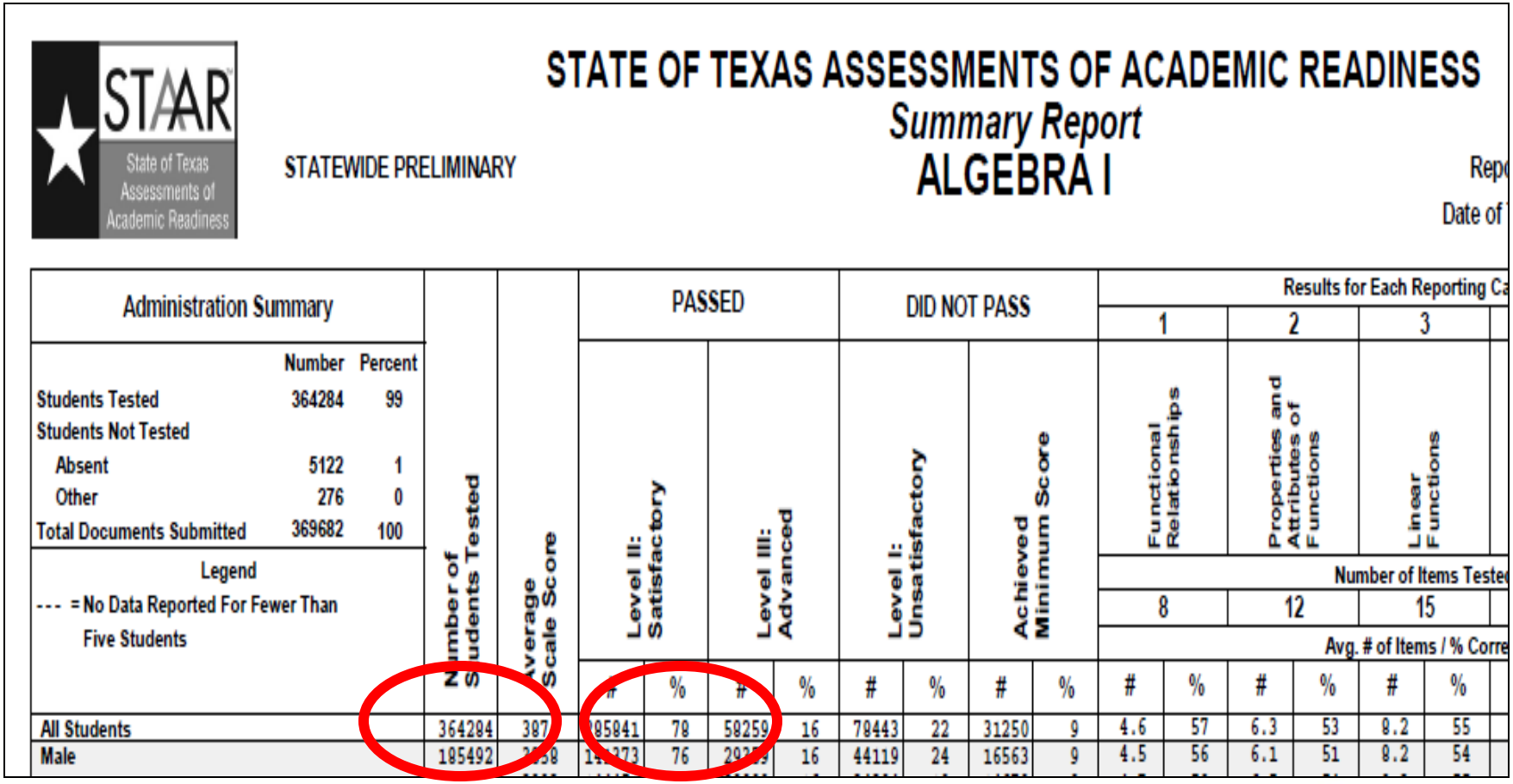
STAAR EOC – Statewide Preliminary



STAAR State of Texas Assessments of Academic Readiness

STATEWIDE PRELIMINARY

STATE OF TEXAS ASSESSMENTS OF ACADEMIC READINESS

Summary Report

ALGEBRA I

Repo

Date of

Administration Summary	Number	Percent
Students Tested	364284	99
Students Not Tested		
Absent	5122	1
Other	276	0
Total Documents Submitted	369682	100

Legend

--- = No Data Reported For Fewer Than Five Students

	Number of Students Tested	Average Scale Score	PASSED				DID NOT PASS				Results for Each Reporting Ca					
			Level II: Satisfactory		Level III: Advanced		Level I: Unsatisfactory		Achieved Minimum Score		1		2		3	
											Functional Relationships		Properties and Attributes of Functions		Linear Functions	
											Number of Items Teste					
											8		12		15	
											Avg. # of Items / % Corre					
			#	%	#	%	#	%	#	%	#	%	#	%	#	%
All Students	364284	387	285841	78	58259	16	78443	22	31250	9	4.6	57	6.3	53	8.2	55
Male	185492	[illegible]	141273	76	29[illegible]	16	44119	24	16563	9	4.5	56	6.1	51	8.2	54

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STAAR – Spring Administration Only

Grade Level Exam	Percent Passing	Cumulative
6	73.7%	
7	71.4%	
8	77.2%	86%

STAAR – Spring Administration Only

Grade Level Exam	Percent Passing	Cumulative
3	69.5%	
4	68.3%	
5	75.1%	87%

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New TEKS

Implementation Timelines Kindergarten – Grade 8

- No later than August 31, 2013, the Commissioner of Education must determine whether funding for instructional materials that cover the revised mathematics TEKS for Kindergarten – Grade 8 has been made available.

- If the commissioner makes the determination that instructional materials funding has been made available, the revised mathematics TEKS for Kindergarten – Grade 8 will be implemented beginning with the 2014-2015 school year.

http://ritter.tea.state.tx.us/rules/tac/chapter111/ch111a.html#111.1

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Revised Mathematics TEKS

- The Revised Mathematics can be found at http://ritter.tea.state.tx.us/rules/tac/chapter111/index.html.
- Current TEKS are also available at that link and will continue to be until they are superseded by the new TEKS.
- Current TEKS look like this:
  - §111.17. Mathematics, Grade 5.
- New TEKS look like this:
  - §111.7. Grade 5, Adopted 2012.

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TEXAS EDUCATION AGENCY

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teacher resources

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standards, college prep & programs

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data, statistics & research

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communications & calendars

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stimulus, stabilization, & ed jobs

Alternative Schooling
About TEA
Commissioner
Complaints
Copyrights/Royalties
Dropout Information
Early Childhood Education
Education Laws & Rules
Educator Certification
Educator Login/Account Set Up
Educator Preparation
Enroll Your Child
Fingerprinting
GED ®
Health and Safety
No Child Left Behind
Principal Survey
State Board for Educator Certification

Texas Essential Knowledge and Skills

This site will provide you with information on the Texas Essential Knowledge and Skills (TEKS), which are the state standards for what students should know and be able to do.

Announcements

Applications for the SBOE languages other than English TEKS review committees will be accepted through January 18, 2013. Please visit the Languages Other Than English TEKS page for an application.

Subject Area Reviews

Languages Other Than English

Fine Arts TEKS review

Mathematics TEKS review

Technology Applications TEKS review

Social Studies TEKS review

English Language Arts Electives TEKS review

Career and Technical Education TEKS

Recommendations of the Career and Technical Education Review Panel (PDF, 95KB)

TEKS Documents

State Board of Education Process for Review of Texas Essential Knowledge and Skills (PDF, 25KB)

TEKS and Instructional Materials Working Document (PDF, 40KB) (Updated April 2012)

To join a subject specific listserv and receive information and updates rel
please visit: http://miller.tea.state.tx.us/list/.

- Click on "Select a List" for pop-up menu of listserv names
- Scroll down, select the subject area you would like to join,
- Enter your e-mail address
- Enter your name
- A confirmation e-mail will be sent to e-mail address listed
- Respond to confirmation e-mail with "OK"

Go back to http://miller.tea.state.tx.us/list/ if you want to chan
e-mail address to the mailing list.

Texas Essential Knowledge and Skills by Chapter

Chapter 110. English Language Arts and Reading
Chapter 111. Mathematics
Chapter 112. Science
Chapter 113. Social Studies

Includes new and current

Search
Advanced Search

Educator Login
(Internet Explorer required)

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Revised Mathematics TEKS

Texas Administrative Code (TAC), Title 19, Part II
Chapter 111. Texas Essential Knowledge and Skills for Mathematics

Link to Subchapters from Subchapter Titles - Link to Sections from Icons
Links to PDF Versions of the files are available at the end of the page

Subchapter A. Elementary

- §111.1. Implementation of Texas Essential Knowledge and Skills for Mathematics, Elementary, Adopted 2012.
- §111.2. Kindergarten, Adopted 2012.
- §111.3. Grade 1, Adopted 2012.
- §111.4. Grade 2, Adopted 2012.
- §111.5. Grade 3, Adopted 2012.
- §111.6. Grade 4, Adopted 2012.
- §111.7. Grade 5, Adopted 2012.
- §111.11. Implementation of Texas Essential Knowledge and Skills for Mathematics, Grades K-5.
- §111.12. Mathematics, Kindergarten.
- §111.13. Mathematics, Grade 1.
- §111.14. Mathematics, Grade 2.
- §111.15. Mathematics, Grade 3.
- §111.16. Mathematics, Grade 4.
- §111.17. Mathematics, Grade 5.

Subchapter B. Middle School

- §111.21. Implementation of Texas Essential Knowledge and Skills for Mathematics, Grades 6-8.
- §111.22. Mathematics, Grade 6.
- §111.23. Mathematics, Grade 7.
- §111.24. Mathematics, Grade 8.
- §111.25. Implementation of Texas Essential Knowledge and Skills for Mathematics, Middle School, Adopted 2012.
- §111.26. Grade 6, Adopted 2012.
- §111.27. Grade 7, Adopted 2012.
- §111.28. Grade 8, Adopted 2012.

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Texas Essential Knowledge and Skills by Chapter

Chapter 110. English Language Arts and Reading
Chapter 111. Mathematics
Chapter 112. Science
Chapter 113. Social Studies
Chapter 114. Languages Other Than English
Chapter 115. Health Education
Chapter 116. Physical Education
Chapter 117. Fine Arts
Chapter 118. Economics with Emphasis on the Free Enterprise System and Its Benefits
Chapter 126. Technology Applications
Chapter 127. Career Development
Chapter 128. Spanish Language Arts and English as a Second Language
Chapter 130. Career and Technical Education

English Language Proficiency Standards

Prekindergarten Guidelines

College Readiness Standards (outside source)

TEKS in Spanish

Includes only current

Texas Essential Knowledge and Skills by Grade Level (Elementary)

Please visit the TEKS by Chapter to view all Texas Essential Knowledge and Skills.

Kindergarten (PDF, 144KB)
Grade 1 (PDF, 162KB)
Grade 2 (PDF, 168KB)
Grade 3 (PDF, 186KB)
Grade 4 (PDF, 188KB)
Grade 5 (PDF, 192KB)

Curriculum Di...
curriculum@tea.state.tx.us
Texas Education Agency
1701 North Congress Avenue
Austin, TX 78701-1401
(512) 463-9581

Page last modified on 5/17/2013.

Newly Adopted Math TEKS: A New Generation of TEKS

- The Texas College and Career Readiness Standards set a high bar for preparing all Texas students for success in the workplace.
- With a targeted focus on college and career readiness for all students, TEA will continue to support students and teachers in reaching higher academic standards.

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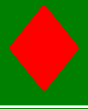
Newly Adopted Math TEKS Process Standards

- The intent of the SBOE is that the process standards should not be addressed nor assessed in isolation.
- The instructional materials and assessment items for mathematics must integrate the process standards into the rest of the student expectations for each grade level and high school course.

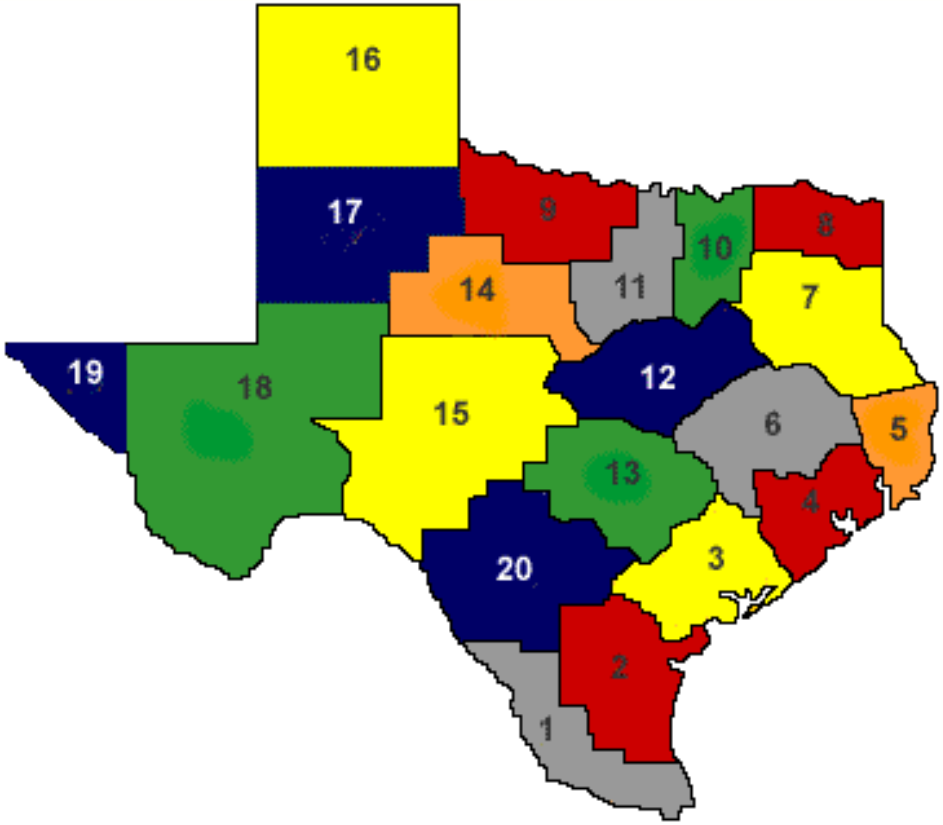
Transitioning to the TEKS

Grade	2012-2013	2013-2014	2014-2015	2015-2016
K	◆			
1	○	◆		
2	★	○	◆	
3		★	○	◆
4			★	○
5				★

Transitioning to the TEKS

Grade	2012 – 2013	2013 – 2014	2014 – 2015	2015 - 2016
6				
7				
8				
9				
10				
11				

New Math TEKS Training



- Contact your ESC for times and locations of trainings for grades K - 8.
- Training for grades 9 - 12 will be addressed in 2014.

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New Professional Development

Four modules that address the following:

- The Revised TEKS (2012) with Supporting Documents
- Applying the Mathematical Process Standards
- Completing a Gap Analysis
- Achieving Fluency and Proficiency

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Side By Side Documents

Side by Side Documents

- Current TEKS to Revised TEKS (2012), grades K-8
- http://www.projectsharetexas.org/resource-index?field_resource_keywords_tid=&sort_by=title&sort_order=ASC&items_per_page=50&page=1

Side By Side Documents

Grade 3 – Mathematics

	Current TEKS: Measurement	Revised TEKS (2012)	Supporting Information
–	3(11)(A) **Measurement.** The student directly compares the attributes of length, area, weight/mass, and capacity, and use comparative language to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass. **The student is expected to use linear measurement tools to estimate and measure lengths using standard units.**		This skill is not included explicitly within the Revised TEKS (2012). This SE is subsumed within revised SE 3(1)(C) as linear measurement tools may be among the tools that students select to solve problems.
●+	3(11)(B) **Measurement.** The student directly compares the attributes of length, area, weight/mass, and capacity, and use comparative language to solve problems and answer questions. The student selects and uses standard units to describe length, area, capacity/volume, and weight/mass. **The student is expected to use standard units to find perimeter of a shape.**	3(7)(B) **Geometry and measurement.** The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving customary and metric measurement. **The student is expected to determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems.**	Students may measure the side lengths of a polygon to determine its perimeter using inches or centimeters. Side lengths should be whole numbers. Students may be expected to determine a missing side length of a polygon when given the perimeter of the polygon and the remaining side lengths.

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Vertical Alignment Charts

Vertical Alignment Charts

- Revised TEKS (2012): K - 3, K - 6, K - Algebra I, and 5 - Algebra I
- http://www.projectsharetexas.org/resource/revised-mathematics-teks-vertical-alignment-charts?field_resource_keywords_tid=&sort_by=title&sort_order=ASC&items_per_page=50&page=2

Vertical Alignment Charts

Kindergarten	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6
Adding and Subtracting Whole Numbers, Decimals, and Rational Numbers						
(3) Number and operations. The student applies mathematical process standards to develop an understanding of addition and subtraction situations in order to solve problems. The student is expected to:	(3) Number and operations. The student applies mathematical process standards to develop and use strategies for whole number addition and subtraction computations in order to solve problems. The student is expected to:	(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:	(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to:	(4) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations and decimal sums and differences in order to solve problems with efficiency and accuracy. The student is expected to:	(3) Number and operations. The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:	
(A) model the action of joining to represent addition and the action of separating to represent subtraction.	(B) use objects and pictorial models to solve word problems involving joining, separating, and comparing sets within 20 and unknowns as any one of the terms in the problem such as 2 + 4 = [ ]; 3 + [ ] = 7; and 5 = [ ] - 3.		(A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction.	(A) add and subtract whole numbers and decimals to the hundredths place using the standard algorithm.	(A) estimate to determine solutions to mathematical and real-world problems involving addition, subtraction, multiplication, or division.	
(B) solve word problems using objects and drawings to find sums up to 10 and differences within 10.	(C) compose 10 with two or more addends with and without concrete objects.					
(C) explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences.	(E) explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences.	(B) add up to four two-digit numbers and subtract two-digit numbers using mental strategies and algorithms based on knowledge of place value and properties of operations.				
	(A) use concrete and pictorial models to determine the sum of a multiple of 10 and a one-digit number in problems up to 99.	(C) solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms.				

Texas Response to the Curriculum Focal Points

Texas Response to the Curriculum Focal Points, Revised TEKS (2012)

- **Clear, consistent instructional grade-level priorities** can help teachers understand the points in the curriculum at which important mathematical topics must be **taught in depth at each grade level**, thus providing the foundation for connections across grade levels.
- http://www.txar.org/docs/txrcfprevised2013v2.1.pdf

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Instructional Materials

- The Proclamation 2014 review is occurring now.
- The acceptable materials will be adopted in November.
- They will then be available for district review and purchase in the spring/summer.

Instructional Materials Adoption

Proclamation 2013 – not to be issued	Proclamation 2014 State Adoption 2013 Implementation 2014-2015 • Science, K–12 • Math, K–8 • Technology Applications
Proclamation 2015 State Adoption 2014 Implementation 2015-2016 • Social Studies, K–12 • Math, 9–12 • Fine Arts	Proclamation 2016 State Adoption 2015 Implementation 2016-2017 •Languages Other Than English
Proclamation 2017 State Adoption 2016 Implementation 2017-2018 • Career and Technical Education	Proclamation 2018 State Adoption 2017 Implementation 2018-2019 • English Language Arts and Reading, K–5 • Prekindergarten Systems

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Graduation Requirements

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Education Legislation Status

- More than 100 education-related bills were passed during the regular session of the 83rd Texas Legislature. Most of those were signed into law by Gov. Rick Perry. A list providing information about education-related bills is available at http://www.tea.state.tx.us/index4_wide.aspx?id=25769805205.

  NOTE: To view the final version of the bill (including all revisions agreed on by both the House and Senate), click on the bill number and view the "ENROLLED" version. Earlier versions will not be reflective of the version sent to the Governor for final action.

- To see all legislation introduced during the 83rd regular session or to search for a specific bill, visit Texas Legislature Online.

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House Bill 5

- Work to transition and implement the requirements of House Bill 5 is under way.
- The bill gives the SBOE decision-making authority on a number of issues. The SBOE has scheduled a work session on Thursday, August 1 to receive a briefing and begin planning next steps.
- There will be opportunities for districts to provide input and feedback once the SBOE begins the rulemaking process.
- The Commissioner must adopt a transition plan to implement the bill and replace the MHSP, RHSP, and DAP with the foundation program **beginning with the 2014-15 school year**.

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State Graduation Requirements

This site will provide you with information regarding the Texas high school graduation requirements.

The State Board of Education adopted changes to the high school graduation requirements in January 2012. The new requirements are effective beginning with students who enter grade 9 in the 2012-13 school year. View the new graduation requirements.

An updated set of dual credit frequently asked questions (PDF, 203KB) is now available.

Information Regarding Minimum High School Program (MHSP)

Information regarding automatic college admission

The State Board of Education adopted changes to the high school graduation requirements in January 2010. The new requirements are effective beginning in the 2010-11 school year.

Correspondence to Districts

2012-2013 Side by Side Graduation Program Requirements (for students entering high school in 2012-2013 and later) (PDF, 120KB)

2011-2012 Side by Side Graduation Program Requirements (for students who entered high school prior to 2012-2013) (PDF, 77KB)

Frequently Asked Questions (PDF, 311KB)

House Bill 3

House Bill (HB) 3, passed by the 81st Texas Legislature, includes changes to graduation requirements effective Sept. 1, 2009. The legislation does not permit the State Board of Education to designate a specific course or a specific number of credits in the enrichment curriculum as requirements for the recommended program, except as explicitly allowed in statute.

How Do I...

- Become a teacher?
- Enroll my child in school?
- Find AEIS reports?
- Find curriculum standards (TEKS)?
- Find graduation requirements?
- Find how my school is doing?
- Find information about STAAR?
- Find Preliminary Criminal History Evaluation?
- Find Released Tests
- Find student assessment information?

SBOE: Proposed Courses for Math Credit

Each of these courses is proposed as an additional option to satisfy the fourth math graduation requirement.

- Discrete Mathematics, Adopted 2013
  (One-Half to One Credit) **§** 111.46
- Robotics Programming and Design
  (One-Half to One Credit) **§** 126.40

Please see http://www.tea.state.tx.us/index4.aspx?id=2296 to view rules. You may submit comments on proposed rules to rules@tea.state.tx.us through Monday, July 15, 2013.

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Texas Algebra Readiness

TEA™
TEXAS EDUCATION AGENCY

Texas Algebra Ready (TXAR) Initiative

Intended to increase the preparedness of students to meet standards and pass assessments in algebra

Follow us on Twitter at: @mstartexas

TXAR Initiative Components

ESTAR

- Academies
  - Introduction
  - Academy Part I (K-2 and 3-4): Core instruction
  - Academy Part II: Supplemental Instruction
- Assessments
  - Universal Screener
- Intervention Project
  - Sample Intervention Lessons

MSTAR

- Academies
  - Introduction
  - Academy I
  - Academy II
  - Implementation Tools
- Assessments
  - Universal Screener
  - Diagnostic Assessment
- Intervention Project
  - Sample Intervention Lessons

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Universal Screener Windows

The Universal Screener is administered three times during the school year to all students.

The purpose is to determine

- if a student is at risk and
- to what degree a student is at risk.

ESTAR and MSTAR	
Fall	**Aug 26 - Sept 27, 2013**
Winter	**Jan 8 - Feb 14, 2014**
Spring	**Apr 7 - May 9, 2014**

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Diagnostic Screener Windows

The Diagnostic Assessment is administered after the Universal Screener to students who are identified to be at risk.

The purpose is to determine

- to what degree a student is at risk and
- to monitor the risk status.

MSTAR	
Fall	**Sept 2 - Oct 4, 2013**
Winter	**Jan 15 - Feb 21, 2014**
Spring	**Apr 14 - May 16, 2014**

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Resources

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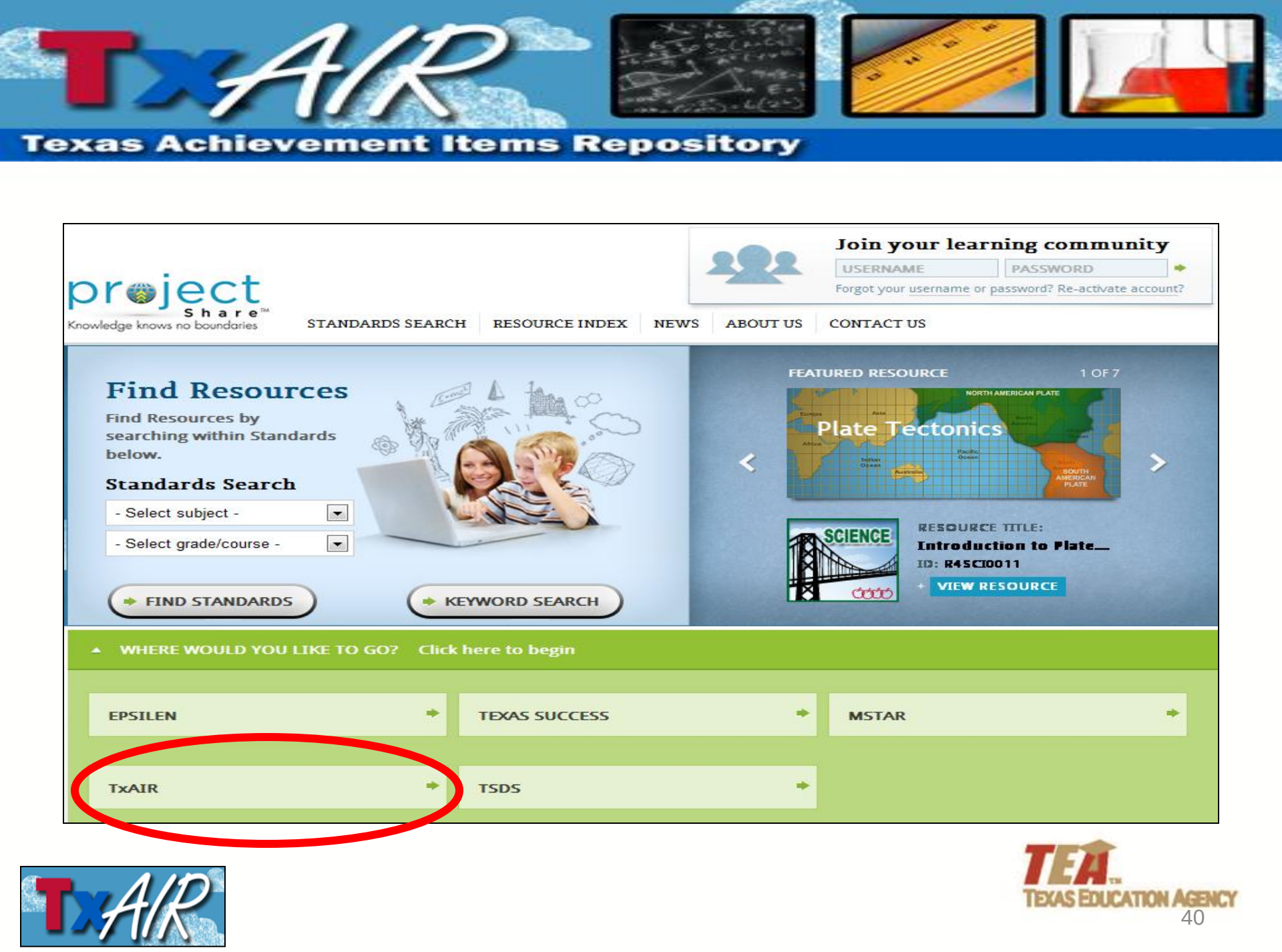
TxAIR is now available through Project Share.

Enhancements to the program will be available in the near future.

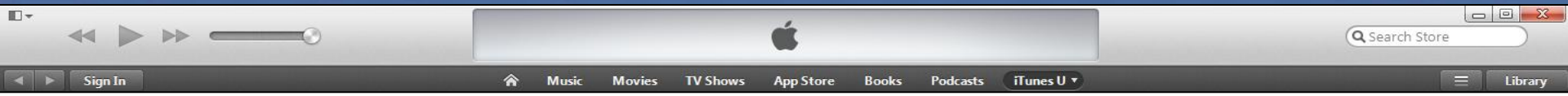
- Share questions created by a teacher
- Share tests created by a teacher
- Student Expectation list will automatically appear

Follow us on Twitter at: @txairtexas


TxAIR
Texas Achievement Items Repository
project Share
Knowledge knows no boundaries
Join your learning community
USERNAME
PASSWORD
Forgot your username or password? Re-activate account?
STANDARDS SEARCH
RESOURCE INDEX
NEWS
ABOUT US
CONTACT US
Find Resources
Find Resources by searching within Standards below.
Standards Search
- Select subject -
- Select grade/course -
FIND STANDARDS
KEYWORD SEARCH
FEATURED RESOURCE
1 OF 7
Plate Tectonics
SCIENCE
RESOURCE TITLE:
Introduction to Plate...
ID: R4SCI0011
VIEW RESOURCE
WHERE WOULD YOU LIKE TO GO? Click here to begin
EPSILEN
TEXAS SUCCESS
MSTAR
TxAIR
TSDS

Resources – iTunes U

Resources – iTunes U



Texas Education
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OnTRACK for college readiness

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★★★½☆ (7)
Video
Algebra

Algebra II Kid2KId Videos - OnTRACK for College Readiness

Texas Education Agency/Institute for Public School Initiatives >

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Description

The Texas Education Agency's OnTRACK project focuses on providing additional resources to supplement instruction and intervention in secondary math, science, English language arts, and social studies classrooms in Texas public schools. The Algebra II OnTRACK Kid2Kid videos are a collection of Algebra II concepts taught to a student by a student. Complete and interactive OnTRACK Lessons are available to districts through Project Share, the Texas Education Agency's online learning community. For more information on OnTRACK Lessons, contact your Regional Education Service Center. For more information on Project Share, go to www.projectsharetexas.org. Watch for upcoming OnTRACK content on Texas Education on iTunes U.

	Name	Time	Released	Description	Popularity	Price
1	Domain and Range	13 min	Nov 9, 2011	K2K Video on domain and range, from OnTRAC...		Free
2	Domain and Range Transcript		Nov 18, 2011	Transcript of Kid2Kid videos on domain and ran...		Free
3	Identifying Functions to Model Scatterplots	7 min	Nov 9, 2011	Kid2Kid video on identifying functions to model ...		Free
4	Identifying Functions to Model Scatterplots Transcript		Nov 18, 2011	Transcript of Kid2Kid video on identifying functi...		Free
5	Modeling Data With Linear Functions	10 min	Nov 9, 2011	Kid2Kid video on modeling data with linear func...		Free
6	Modeling Data with Linear Functions Transcript		Nov 18, 2011	Transcript of Kid2Kid video on modeling data wi...		Free
7	Formulating Systems of Equations	9 min	Nov 9, 2011	Kid2Kid video on formulating systems of equati...		Free
8	Formulating Systems of Equations Transcript		Nov 18, 2011	Transcript of Kid2Kid video on formulating syste...		Free
9	Solving Systems of Equations Using Tables Part 1	9 min	Nov 9, 2011	Kid2Kid video on solving systems of equations u...		Free
10	Solving Systems of Equations Using Tables Part 1 Transcript		Nov 18, 2011	Transcript of Kid2Kid video on solving systems ...		Free
11	Solving Systems of Equations Using Tables Part 2	7 min	Nov 9, 2011	Kid2Kid video on solving systems of equations u...		Free
12	Solving Systems of Equations Using Tables Part 2 Transcript		Nov 18, 2011	Transcript of Kid2Kid video on solving systems ...		Free
13	Solving Systems of Equations Using Graphs	6 min	Nov 9, 2011	Kid2Kid video on solving systems of equations u...		Free
14	Solving Systems of Equations Using Graphs Transcript		Nov 18, 2011	Transcript of Kid2Kid video on solving systems ...		Free
15	Identifying Parent Functions	9 min	Nov 9, 2011	Kid2Kid video on identifying parent functions, fr...		Free
16	Identifying Parent Functions Transcript		Nov 18, 2011	Transcript of Kid2Kid video on identifying paren...		Free
17	Quadratics	4 min	Nov 11, 2011	Kid2Kid video on quadratics, from OnTRACK Alg...		Free

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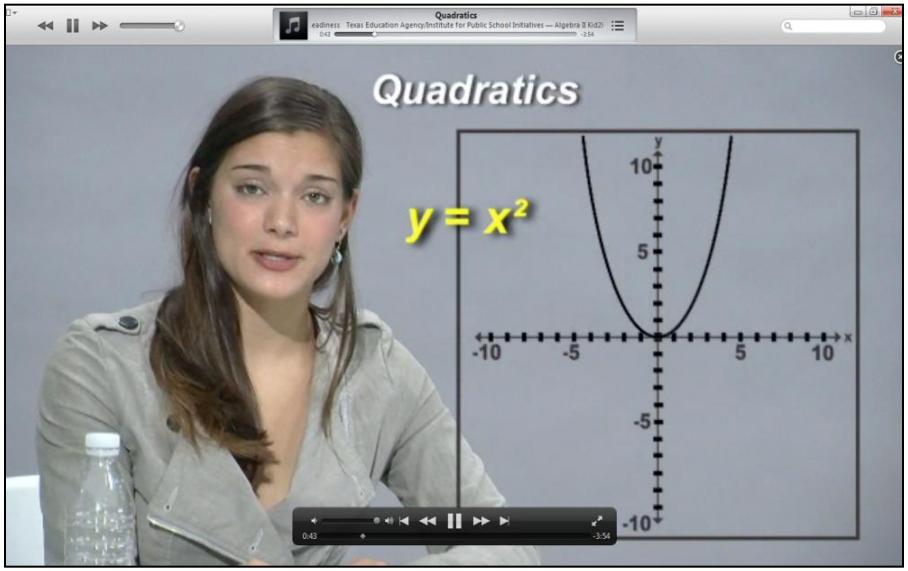
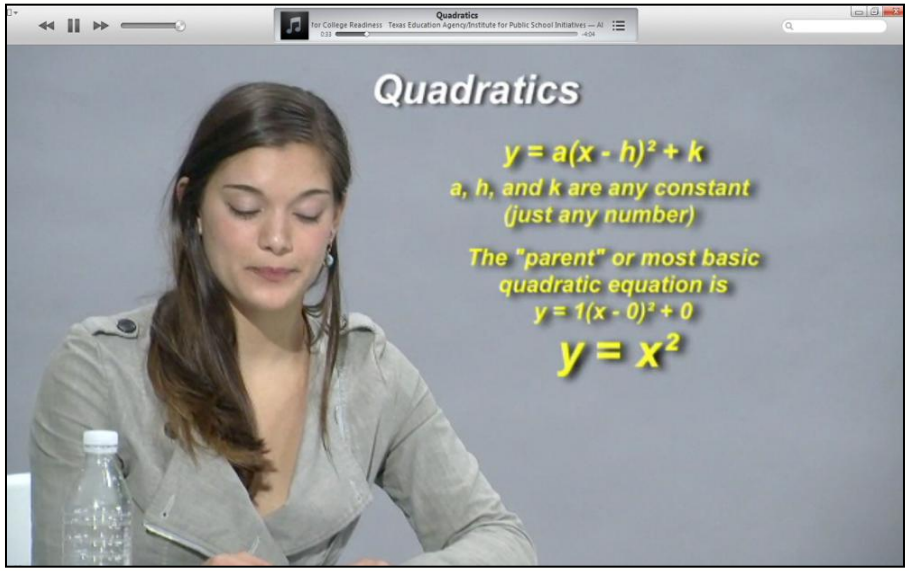
Resources – iTunes U

OnTRACK for college readiness

Algebra II Kid2KId Videos - OnTRACK for College Readiness

Texas Education Agency/Institute for Public School Initiatives ›





TEA Texas Education Agency

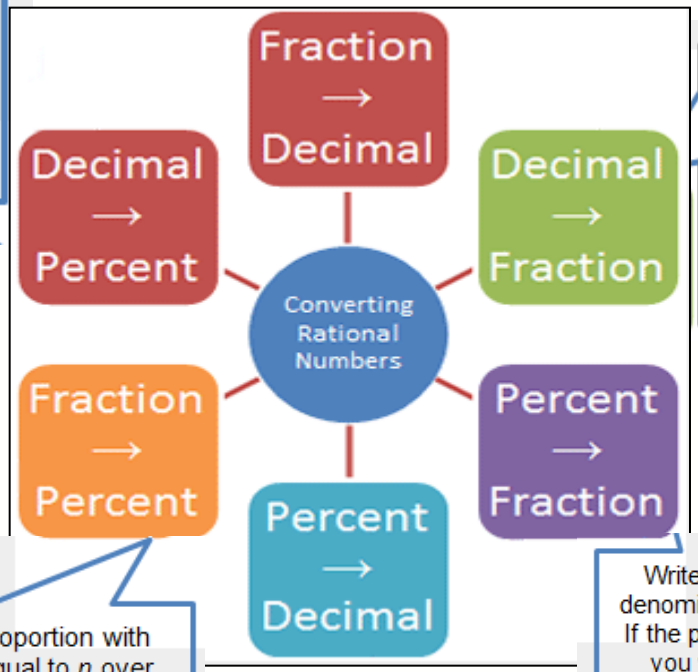
- Math 8 — This course was released in Spring 2013.
- Algebra I — New lessons are in development.
- Geometry — New lessons are in development.
- Algebra II — New lessons are in development.

Resources – OnTRACK

Math 8

(2) Number and operations and quantitative reasoning. The student selects and uses appropriate operations to solve problems and justify solutions. The student is expected to:

Resources – OnTRACK



Multiply the decimal by 100, or move the decimal two places to the right.

$0.65 = 65\%$

Use the last decimal place to write the fraction with a denominator equal to that place value. Reduce the fraction.

$$0.95 = \frac{95}{100} \overset{\div 5}{=} \frac{19}{20}$$

Set up and solve a proportion with the original fraction equal to n over 100.

$$\frac{5}{20} \overset{\times 5}{=} \frac{n}{100} \qquad n = 25, \text{ so } \frac{5}{20} = 25\%$$

Write the percent as a fraction with a denominator of 100. Reduce the fraction. If the percent is greater than 100%, then you will have a mixed number or an improper fraction.

$$40\% = \frac{40}{100} \overset{\div 20}{=} \frac{2}{5}$$

$$125\% = \frac{125}{100} \overset{\div 25}{=} \frac{5}{4} = 1\frac{1}{4}$$

Resources – OnTRACK

Resources – OnTRACK

Resources – OnTRACK

Algebra I

(6) Linear functions. The student understands the meaning of the slope and intercepts of the graphs of linear functions and zeros of linear functions and interprets and describes the effects of changes in parameters of linear functions in real-world and mathematical situations.

Resources – OnTRACK

At a time of 0 minutes, the airplane has an altitude of 10,000 feet.	After 10 weeks, the loan is paid in full.	The airplane will land after 10 seconds.	At the beginning of the loan, there is $1,000 owed.
At a time of 0 minutes, the airplane has an altitude of 11,000 feet.	Two weeks ago, there was a balance of $0 in savings.	The airplane will land after 11 seconds.	Today, there is a $200 balance in savings.

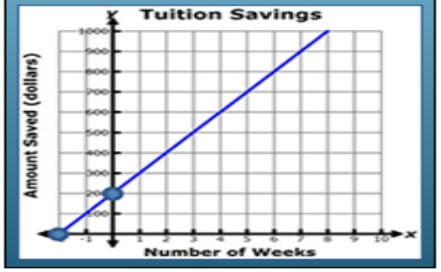
Reset

Warren owes $1,000 for a new laptop. He pays $100 each week.

Description of *x*-intercept: ?

Description of *y*-intercept: ?

Sheila saves $100 each week from her part-time job. Today, she learned that she must save $1,000 for tuition.



Description of *x*-intercept: ?

Description of *y*-intercept: ?

An airplane is at an altitude of 10,000 feet and descends 1,000 feet per minute.

Description of *x*-intercept: ?

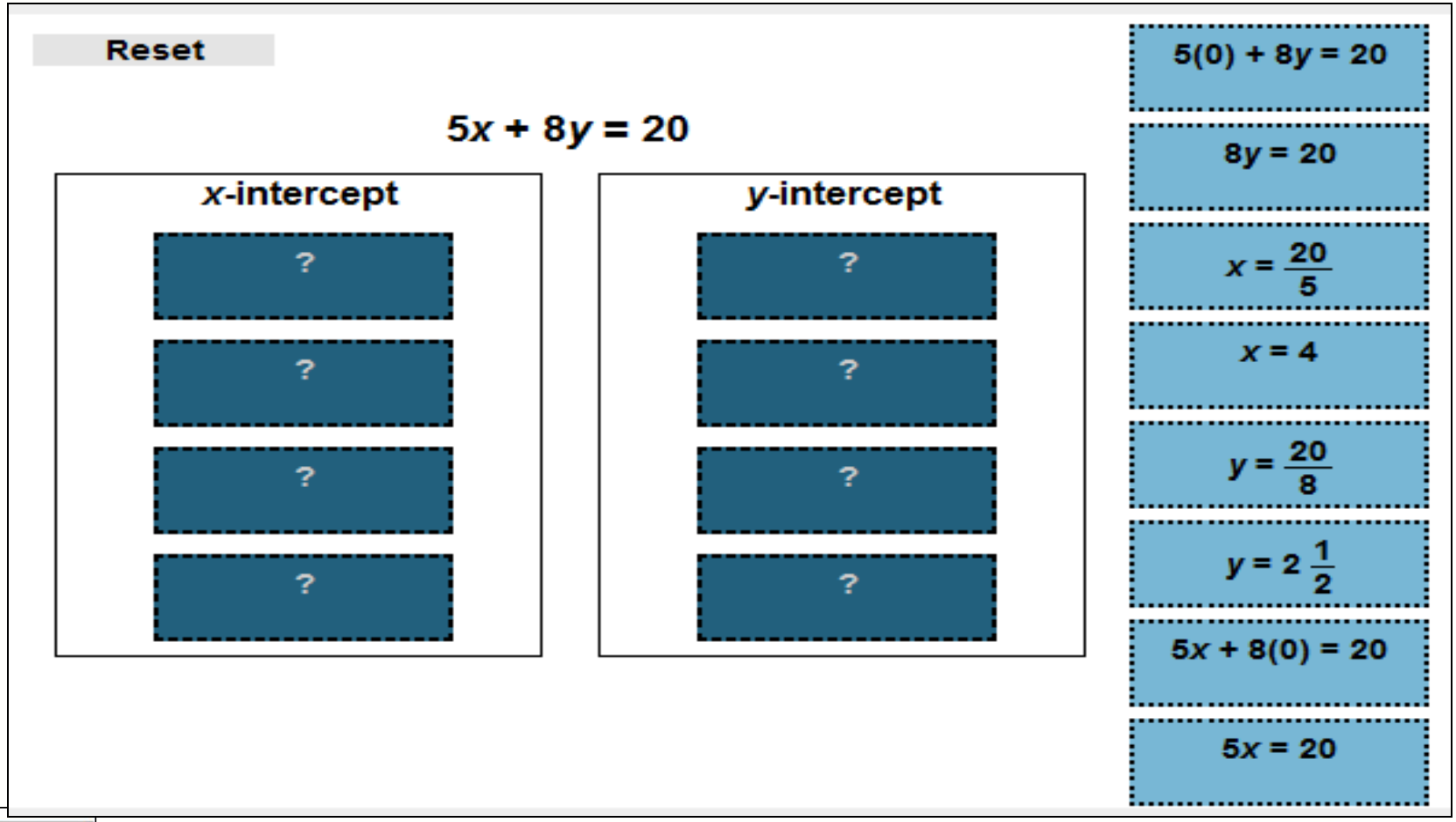
Description of *y*-intercept: ?

An airplane is at an altitude of 11,000 feet and descends 1,000 feet per minute.

Description of *x*-intercept: ?

Description of *y*-intercept: ?

Resources – OnTRACK



Resources – OnTRACK

Reset

Time (hours, x)	Labor Charge (dollars, y)
0.5	103.75
1	126.25
$1\frac{1}{2}$	148.75
2.25	182.5
3	216.25

?

The service fee is increased by $25.

Time (hours, x)	Labor Charge (dollars, y)
0.5	107.50
1.75	163.75
$2\frac{1}{2}$	197.50
3	220.00
4	265

?

The service fee is increased by 25%.

Time (hours, x)	Labor Charge (dollars, y)
1	135.00
1.5	157.50
1.75	168.75
$2\frac{3}{4}$	213.75
$3\frac{1}{4}$	236.25

?

The service fee is increased by $20.

Resources – OnTRACK

Enchanted Rock State Natural Area

$$y = 8x + 1{,}400$$

Base = 1,400 ft above sea level

Reset

$y = 8x + 5{,}600$	?	Guadalupe Peak has a starting elevation that is 1,400 yards higher than Enchanted Rock.
$y = -8x + 3{,}500$	?	The El Paso Tin Mines Trail in Franklin Mountains State Park begins at an elevation 3 times higher than the base of Enchanted Rock.
$y = -8x + 3{,}200$	?	Caprock Canyons State Park hikes begin at an elevation 1,800 feet higher than Enchanted Rock.
$y = 8x + 4{,}200$	?	Palo Duro Canyon hikes begin at an elevation 2.5 times higher than the base of Enchanted Rock.

OnTRACK for college readiness

TEA Texas Education Agency

Resources – OnTRACK

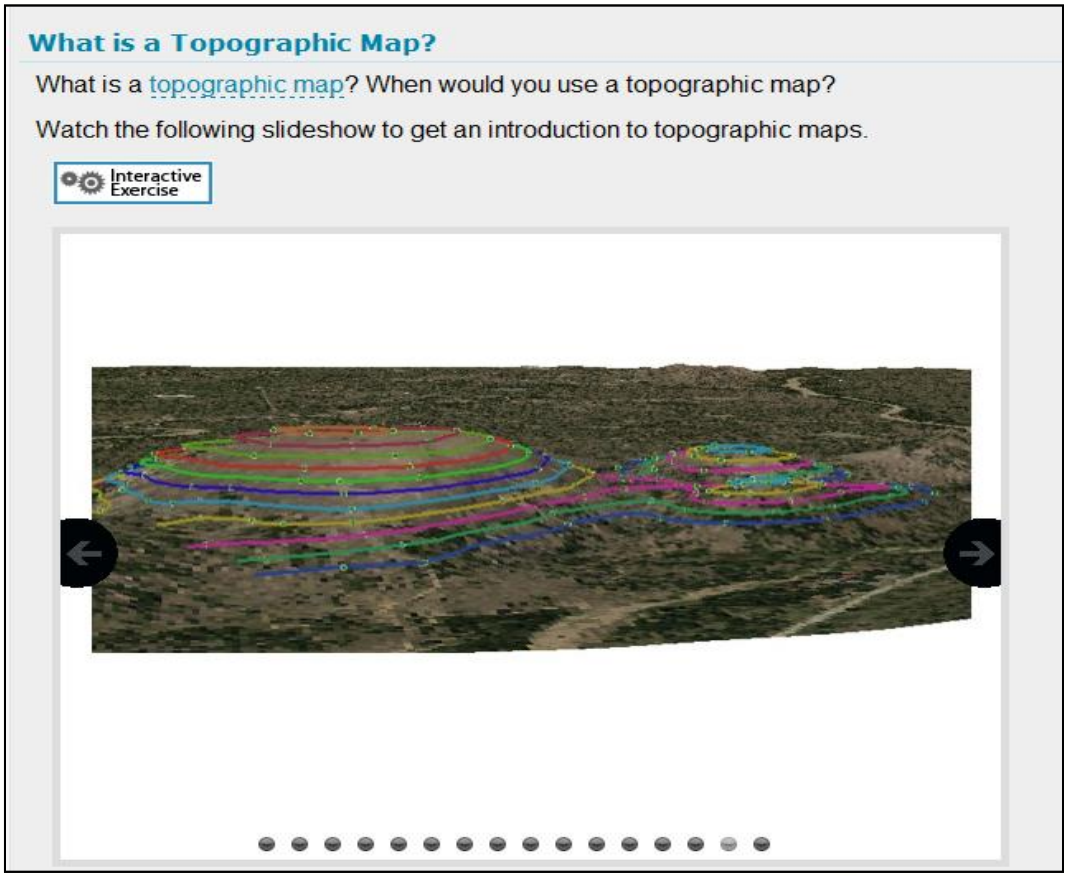
Math – Science Connection

Science 8

Maps and Satellite Imagery

(9) Earth and space. The student knows that natural events can impact Earth systems. The student is expected to:

(C) interpret topographic maps and satellite views to identify land and erosional features and predict how these features may be reshaped by weathering.



Resources – Texas SUCCESS

TEXAS SUCCESS
TEXASSUCCESS.ORG

Grades 3-8

TTM
Think Through Math

SIGN UP
for Free 24/7 Access

TexasSUCCESS provides **STATE-FUNDED** access to interactive **MATH AND READING PROGRAMS** for Texas public school students in grades 3-8. These online programs support students at all skill levels and, most importantly, encourage and enable progress and achievement as students move through the activities and curriculum.

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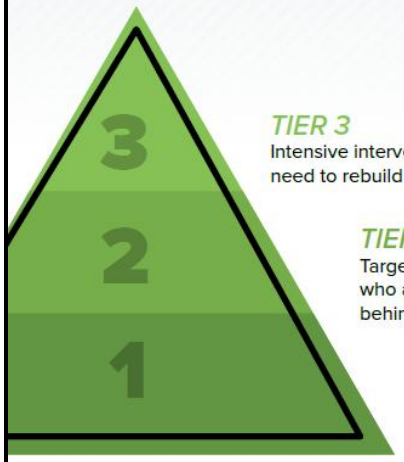
Resources – Texas SUCCESS

Focus and Coherence

Think Through Math provides all the precursor lessons necessary for success at grade-level and anticipates the rigor of the upcoming STAAR assessment. From basic platform skills to the foundations of algebra-readiness to Algebra I, each student's learning path is individualized, relentlessly focused, and designed to meet students where they are.

Support Your RTI Strategy

Response to Intervention (RTI) supports the practice of providing high-quality instruction and interventions that match students' learning needs. Think Through Math is the perfect companion to RTI, supporting students in each tier with adaptive placement, ongoing assessment, and instruction that meets students in their zone of proximal development.

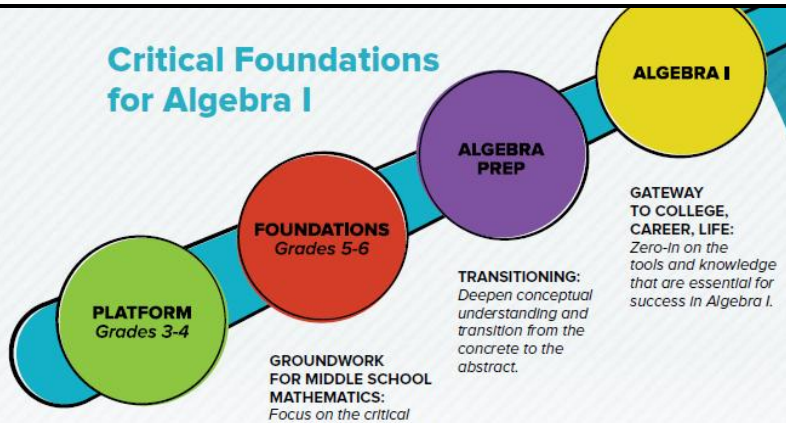


TIER 3
Intensive intervention for students who need to rebuild their math foundation

TIER 2
Targeted remediation for students who are working a year or two behind (on some or all concepts)

TIER 1
Supplemental instruction and practice for students working on or close to grade-level

Critical Foundations for Algebra I



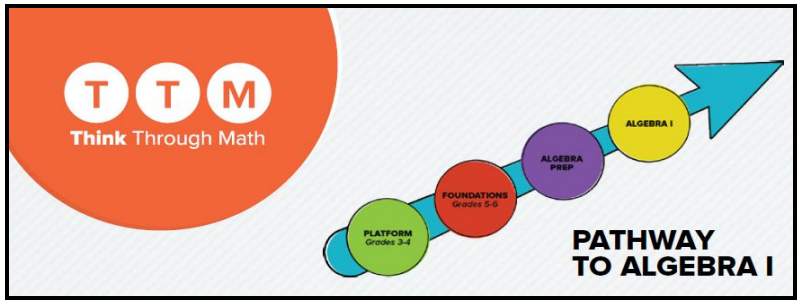
UNDERSTANDING THE SYSTEM: *Develop a comprehensive understanding of whole number operations and fractions.*

GROUNDWORK FOR MIDDLE SCHOOL MATHEMATICS: *Focus on the critical competencies, cement understanding and prepare for the rigor of advanced topics.*

TRANSITIONING: *Deepen conceptual understanding and transition from the concrete to the abstract.*

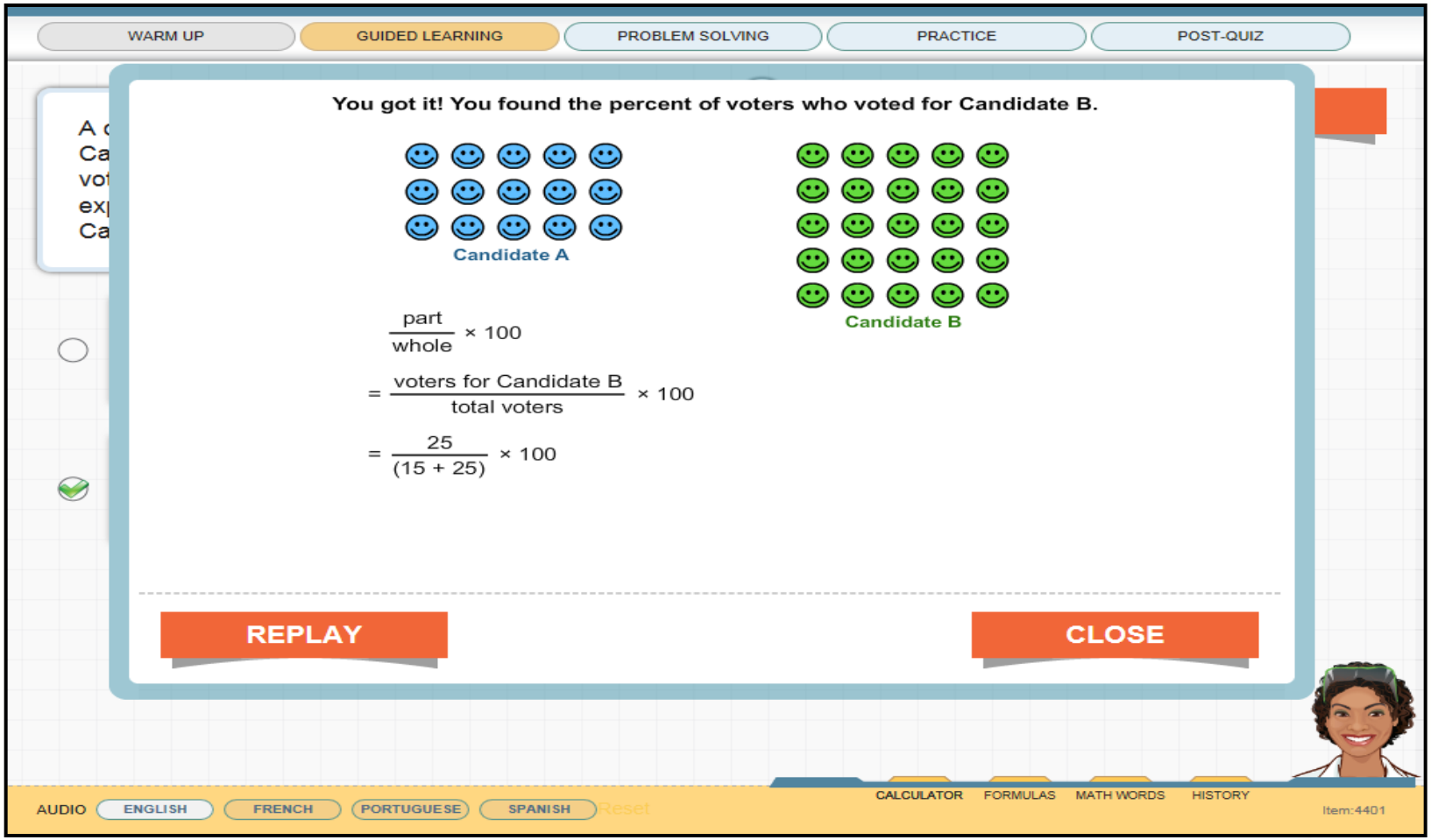
GATEWAY TO COLLEGE, CAREER, LIFE: *Zero-in on the tools and knowledge that are essential for success in Algebra I.*

Resources – Texas SUCCESS



UNIT	LESSON	SECTION
MEASUREMENT AND DATA	Concept of Area	PLATFORM
	Area of Rectangles	
	Perimeter	
	Area and Perimeter of Rectangles	
	Angles	FOUNDATION
	Volume of Rectangular Prisms	
	Line Plots	
OPERATIONS AND ALGEBRAIC THINKING	Estimate Sums and Differences	PLATFORM
	Concept of Multiplication	
	Properties of Addition and Multiplication	
	Concept of Division	
	Relationship Between Multiplication and Division	
	Solve Multiplication and Division Equations	
	Multiplication and Division Word Problems	
	Solve Two-Step Word Problems	
	Describe Patterns	
	Interpret Remainders	
	Relate Factors and Multiples I	
	Relate Factors and Multiples II	FOUNDATION
	Use Addition and Subtraction Expressions	
	Arithmetic Sequences: Closed Form	
	Geometric Sequences: Closed Form	
	Arithmetic Sequences: Recursive Form	ALGEBRA PREP
	Geometric Sequences: Recursive Form	
REASONING WITH EQUATIONS AND INEQUALITIES	Use the Quadratic Formula	ALGEBRA PREP
	Solve Equations: One Variable	ALGEBRA
	Solve One-Step Equations	
	Solve Multistep Equations	
	Inequalities	
	Graph Inequalities	
	Solve Systems of Equations	

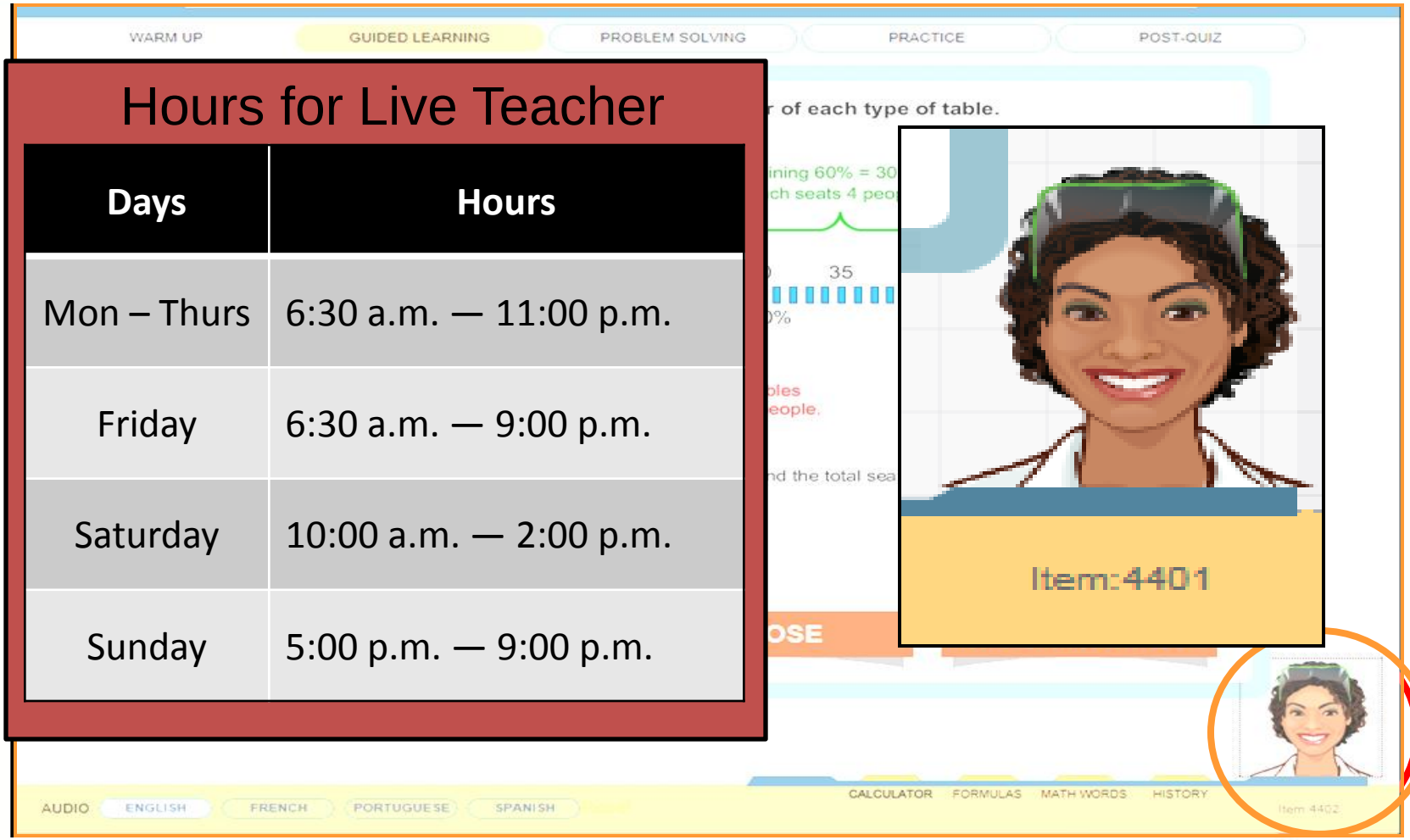
Resources – Texas SUCCESS



Resources – Texas SUCCESS

Hours for Live Teacher

Days	Hours
Mon – Thurs	6:30 a.m. — 11:00 p.m.
Friday	6:30 a.m. — 9:00 p.m.
Saturday	10:00 a.m. — 2:00 p.m.
Sunday	5:00 p.m. — 9:00 p.m.



Resources – Texas SUCCESS

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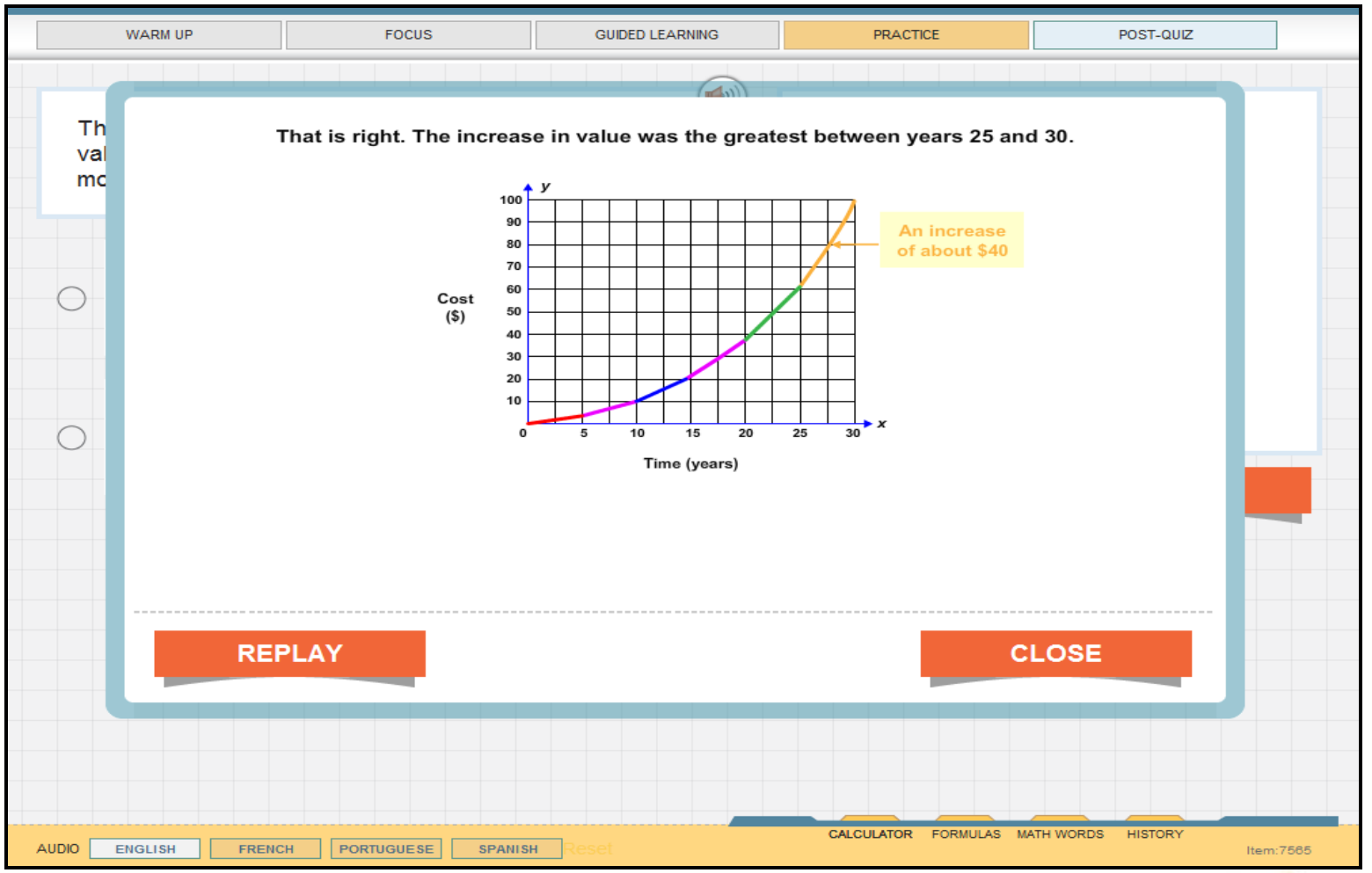

Presidential Award for Excellence in Mathematics and Science Teaching

Texas Education Agency

Presidential Awards for Excellence in Mathematics and Science Teaching

PAEMST Recognition Program

The National Science Foundation, under the direction of the White House, approves the Texas candidates as finalists for the national Presidential Awards for Excellence in Math and Science Teaching (PAEMST) award. If chosen as a national winner, the state finalists will receive $10,000 and an all-expense-paid trip for two to Washington D.C. for ceremonies that include recognition from the President of the United States.

Nominations for teachers of grades K - 6 will open in December 2013.

TEA Texas Education Agency

Jessica Caviness teaches Geometry at Coppell High School in Coppell ISD.

Amy Ferguson teaches Pre-AP Algebra II at Winston Churchill High School in North East ISD.

Penny Smeltzer teaches AP Statistics at Westwood High School in Round Rock ISD.

Ruth Westbrook teaches ESL Math Grades 6 - 8 at McMath Middle School in Denton ISD.

Presidential Awards for Excellence in Mathematics and Science Teaching

PAEMST Recognition Program

Dixie Ross

Pflugerville, TX - Mathematics

"The Presidential Award provides validation for my decision to remain in the classroom in daily, direct contact with students while simultaneously finding opportunities to impact the larger math education community. I want young teachers to know that there is a career path that allows them to lead and exert influence without giving up the classroom. The award also recognizes my wonderful students, who have accepted the challenge and devoted the hard work necessary to master advanced mathematics."

Dixie Ross has been a mathematics teacher for 28 years, teaching Advanced Placement (AP) Calculus and Algebra 2 at Pflugerville High School and serving as the Lead Teacher for AP mathematics in the Pflugerville Independent School District for the last 10 years. She also taught at Round Rock High School and Taylor High School.

For more than 15 years, Dixie has shared instructional strategies and teaching resources with thousands of teachers through workshops, conferences, and summer institutes. Her particular interest is in helping teachers develop challenging and supportive programs that will encourage underrepresented populations to tackle advanced mathematics. She served on the development committee for the AP Vertical Teams Guide for Mathematics and Statistics and has authored curriculum modules for AP Central. She was also a project director for the Lighthouse Initiative and Laying the Foundation. When not with her own students, Dixie teaches students at other schools through the National Math and Science Initiative.

Dixie has a B.A. in English and a B.S. in education from the University of Texas at Austin. She is certified to teach English and mathematics at the secondary level, and she is National Board Certified in adolescence and young adulthood mathematics.

- High-resolution version of the official portrait photograph
- Awardee holding Presidential certificate between U.S. Secretary of Education, Arne Duncan and Deputy Director of the National Science Foundation, Cora Marrett.
- High-resolution version of the teacher profile photograph

TEA TEXAS EDUCATION AGENCY

Contact Information

Texas Education Agency

TEA Contact Information

Curriculum: curriculum@tea.state.tx.us

Jo Ann Bilderback,
Math/Science Content Specialist:
joann.bilderback@tea.state.tx.us