



# **TNReady Design and Instructional Implications**

# Agenda

- TNReady Overview
- Math Design
- Math Findings
- ELA Design
- ELA Findings
- Science Design
- Social Studies Design
- Closing

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# **TNReady Overview**

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# TNReady helps all of us know how students are mastering TN's standards

- TNReady is **big-picture, annual check** on how students are **progressing** based on our state's expectations.
- TNReady is aligned to Tennessee's **rigorous, college- and career-ready standards** in math and English language arts.
  - Designed to adapt to new standards in science and social studies
  - Focus on critical thinking, writing, and problem solving
- TNReady has a variety of question types and isn't able to be "gamed."
  - The **best test prep is strong teaching and learning every day.**
  - We are providing additional resources to help students and teachers become more familiar with the type of questions on the test.

# Online Testing

School Year	Operational Testing	Field Testing
2016-17	<ul style="list-style-type: none"> <li>Online testing was <i>optional</i> for high schools</li> </ul>	<ul style="list-style-type: none"> <li>Field testing for all grades and subjects was administered via paper and pencil.</li> </ul>
2017-18	<ul style="list-style-type: none"> <li>Online testing is <u>required</u> for high schools</li> <li>Online testing is <i>optional</i> for grades 5–8</li> </ul>	<ul style="list-style-type: none"> <li><b>Field testing for grades 5–12 in all subjects will be administered online only.</b></li> <li><b>Field testing for grades 3 and 4 will be administered via paper and pencil only.</b></li> </ul>
2018-19 and beyond	<ul style="list-style-type: none"> <li>Online testing is required for grades 5–12</li> <li>Online testing is optional for grades 3 and 4. There will continue to be a paper option for these grades.</li> </ul>	<ul style="list-style-type: none"> <li>Field testing for grades 5–12 in all subjects will be administered online only.</li> <li>Field testing for grades 3 and 4 will be administered via paper and pencil only.</li> </ul>

# TNReady answer documents

- Grades 2 and 3 students record their answers in the test booklets on paper test.
- Answers placed in the testing booklet do not count on grades 4–8.
  - Test booklets will *not* be scanned or scored.
  - ***Students need to make sure that all final answers are recorded on the answer document, which is also a multiple page booklet in all subject areas.***
  - For the mathematics test, practice grids and graphs are provided in the testing booklet.

# Practice Items

- Practice tests for all grades and subjects are available on [EdTools](#).
- Classroom Assessment Builder (CAB) will be available on the Nextera platform.
  - Practice items
  - Customize your own practice test
- Limited item release of previous test items
  - Late fall 2017
  - More items released in future years

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**Math Design**

# 2017–18 TNReady math

- The 2017–18 math portion of TNReady will have the same structure as last school year.
  - Students are allowed to have scratch paper. Scratch paper may be lined, blank, or graph paper.
  - Students are allowed to have rulers. Protractors are not needed at any grade level.
- In response to educators' feedback, we have provided [additional guidance](#) on the calculator-prohibited section of TNReady to ensure students and teachers understand the expectations for that part of the test.

# TNReady Calculator Prohibited Subpart Guidance



## TNReady Mathematics Calculator Prohibited Subpart (Subpart I)

The TNReady mathematics calculator prohibited subpart (currently subpart 1) is designed to measure number sense, conceptual understanding, and fluency. The overarching goal is to measure how efficiently students work with mathematics without a calculator. In order to be successful, students need to be equipped with a deep, conceptual understanding of Tennessee's grade-level standards, strong number sense, and strategies that allow them to work mathematics fluently. This document includes **frequently asked questions** and **key concepts and standards connections** to clarify important information about the mathematics calculator prohibited subpart.

[http://www.tn.gov/assets/entities/education/attachments/TNReady\\_Mathematics\\_Calculator\\_Prohibited\\_Subpart\\_1.pdf](http://www.tn.gov/assets/entities/education/attachments/TNReady_Mathematics_Calculator_Prohibited_Subpart_1.pdf)

# Conceptual Understanding

Which expression has a value greater than 32,978?

A.  $32,978 \times \frac{1}{2}$

B.  $32,978 \times \frac{7}{3}$

C.  $32,978 \times \frac{5}{16}$

D.  $32,978 \times \frac{8}{8}$

Standard Alignment: 5.NF.B.5a

Compare the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

# TNReady math structure

## Overview of Grades 3–5 Mathematics Testing Structure

As in the past, each year the state assessment includes both operational and field test items. The testing structure outlined below reflects both the number of operational assessment items and the number of field test items.

For scheduling purposes, subparts can be combined.

<b>Subpart 1* (No Calculator)</b>	<b>Subpart 2 (Calculator)</b>	<b>Subpart 3 (Calculator)</b>
<ul style="list-style-type: none"><li>• 45 Minutes</li><li>• 21–31 Items</li></ul>	<ul style="list-style-type: none"><li>• 30 Minutes</li><li>• 10–17 Items</li></ul>	<ul style="list-style-type: none"><li>• 40 Minutes</li><li>• 12–17 Items</li></ul>

For scheduling purposes, subparts can be combined.

# TNReady math 2-point items

- **Type 1:** These are multiple part items. They work independently of one another. The two are scored independently. They can get 1 point for getting only part A correct, 1 point for only getting part B correct, or 2 points for both.
- **Type 2:** These are dependent items. These occur when a student must use their answer from part A to create their answer for part B. If a student misses part A, but uses their answer correctly to solve part B, they would get 1 point for their part B answer.

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**Math Findings**

# Math for Postsecondary Readiness

GOAL:  
Postsecondary  
Readiness

Major Work of the  
Grade

Conceptual  
Understanding

Computation  
Fluency

Procedural  
Fluency

Number Sense

# Tying Performance to Standards: 3–5

Grade	Strength	Weakness
3	Computational understanding of multiplication and division	Measurement and Data standards: calculating area (application of multiplication)
4	Working with fractions (like denominator) with a limited set of denominators	Geometry standards: working with lines and angles and classifying shapes
5	Graphing on the coordinate plane	Working with fractions (unlike denominators)  Measurement and Data standards: calculating volume

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# Tying Performance to Standards: 6–8

Grade	Strength	Weakness
6	Understanding ratios	Geometry: real-world application of area, surface area, volume with fractional edge lengths
7	Statistics	<ul style="list-style-type: none"><li>• Equations and Expressions</li><li>• Standards involving APPLICATION with fractions:<ul style="list-style-type: none"><li>• Proportions</li><li>• Scale drawings</li><li>• Real-world area, volume, and surface are many of which involve fractional measures</li></ul></li></ul>
8	Statistics	<ul style="list-style-type: none"><li>• Equations and Expressions</li><li>• Congruence</li><li>• Pythagorean Theorem</li><li>• Solving real-world problems with volume of cylinders, cones, and spheres (fractions)</li><li>• Translations and dilations (fractions)</li></ul>

# Tying Performance to Standards: 6–8

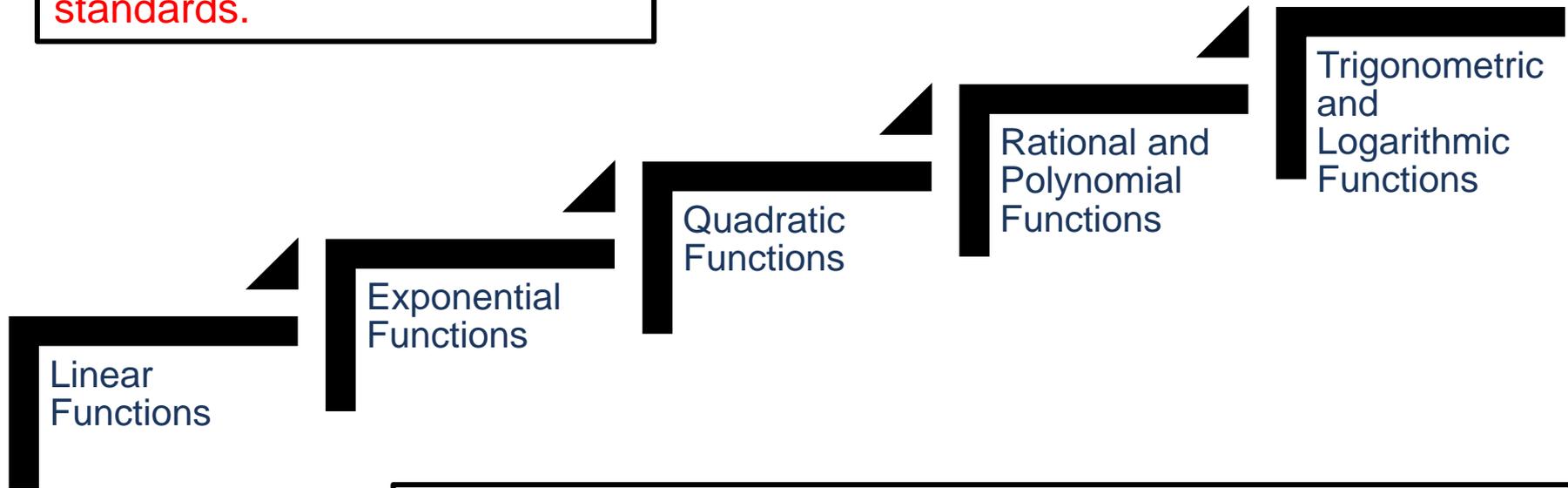
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# Tying Performance to Standards: EOC Algebra Based

EOC students struggled the most with the algebra standards.



For postsecondary success, students need a deep conceptual understanding of the inner workings of each function family. **There was not a single function family that even half of our students mastered.**

# Tying Performance to Standards: EOC Geometry

- Students performed the highest on congruence.
- Students performed well on proof items.
- Geometry students struggled with using geometric concepts in modeling.
  - Focus-applying previously learned concepts (e.g., area, volume, surface area) in a modeling situation
- Integrated math students outperformed geometry students on the geometry standards.

# Math Item Types

- Students struggle (especially in the upper grades) with **non-multiple choice items**.
- **Text entry items** were specifically challenging (IDK).
- In grades 3–5, students struggled to answer **30 percent** of text entry items.
- In grades 6–8, students struggled to answer **50 percent** of text entry items.
- In EOC Int. pathway, students struggled to answer **76 percent** of text entry items.
- In EOC Trad. pathway, students struggled to answer **82 percent** of text entry items.

# Math Successes

- Students performed well on the **non-calculator portion** of the assessment. In nine out of the 12 grades/courses, the non-calculator portion had the highest student performance. In the other three, it ranked second highest.
- There is evidence that major work of the grade is a focus of learning.
- Our youngest students did well with **varying item types**. **Grade 4 had the highest performance of any grade or course on text entry items (fill in the blank).**

# Math Challenges We Still Face

- **Procedural standards outperformed conceptual standards** across the board.
- Students demonstrated the **most success on multiple choice items**. Students found text entry items the most challenging—especially in the upper grades.
- Students are **not mastering fractions** in fifth grade.
  - Conceptual understanding is not being built in grades 3 and 4.
  - Instruction **MUST** be conceptually focused in grades 3–5; procedural focus will not help student understanding.
  - Weakness in computing with fractions is a common theme in grades/courses beyond grade 5.

# Math Challenges We Still Face

- In grades 3–8, students holistically are struggling with **Geometry**.
  - In grades 3–5, volume and area are not being mastered.
  - Grades 3–8: Many geometry standards are not major work of the grade and are not being mastered.
  - Geometric modeling in high school is major work of the grade. This modeling very often has a foundation area, volume, or surface area. These items were the lowest performing items throughout all EOC courses.
- In EOC courses, students are **struggling with modeling standards**. Additionally, they are **not mastering the algebraic content** needed to set them up to truly be postsecondary ready.

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**ELA Design**

# 2017-18 TNReady ELA

Overall structure in 5-EOC is similar to last year, but there are some adjustments for ELA in grades 3–4

- Grades 3 and 4
  - 4 subparts
  - Comprehension
  - Foundational Literacy Skills, including language (conventions/grammar/spelling)
  - Editing
  - Listening
  - Foundational Literacy Fluency
  - Writing
  - Consumable books for math and ELA in grade 3
  
- **Scaffolded** writing and listening expectations throughout grades 2–5

# TNReady ELA structure

## Overview of Grades 6–8 English Language Arts Testing Structure

As in the past, each year the state assessment includes both operational and field test items. The testing structure outlined below reflects both the number of operational assessment items and the number of field test items.

For scheduling purposes, subparts can be combined.

Subpart 1	Subpart 2	Subpart 3	Subpart 4
<ul style="list-style-type: none"><li>• 85 minutes</li><li>• 1 passage set*</li><li>• 3–5 passage-based items</li><li>• 1 writing prompt</li></ul>	<ul style="list-style-type: none"><li>• 50 minutes</li><li>• 2 passage sets*</li><li>• 5–10 items per passage set</li></ul>	<ul style="list-style-type: none"><li>• 50 minutes</li><li>• 2 passage sets*</li><li>• 5–10 items per passage set</li></ul>	<ul style="list-style-type: none"><li>• 45 minutes</li><li>• 1 passage set*</li><li>• 5–10 items per passage set</li><li>• 8–16 editing items</li></ul>

For scheduling purposes, subparts can be combined.

\*A passage set may be comprised of one or more passages. The word count across all passage sets is comparable.

# TNReady ELA 2-point items

- **EBSR:** Evidence-Based Selected Response
- Two parts: A and B
- The answer a student chooses for **part B is justifying their choice for part A**. Students cannot receive credit for part B without getting part A correct.
- They can receive 1 point by correctly answering part A even if they miss part B.

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**ELA Findings**

# ELA Results From Spring 2017

- Findings were **consistent** across all grades 3–EOC.
- There is evidence that there is an **overall shift in instruction.**
- There is evidence that the **shifts are a focus** of instruction.
- Students are showing success in **2 of the 3** shifts.

# Focus of the Three Instructional Shifts

- **Knowledge:** Building knowledge through content-rich literary and informational text
  - Students are demonstrating an ability to grapple with more complex texts.
- **Vocabulary:** Regular practice with complex text and its academic vocabulary
  - Students are showing improvement with determining the meaning of unknown words from context.
- **Evidence:** Reading and writing grounded in evidence from both literary and informational text
  - Students continue to struggle with identifying the **strongest** textual evidence used to support an idea or argument.

# ELA Successes

## Reading

- Because we use only authentic texts, students are encountering **much more complex texts** on TNReady than they did on the previous TCAP Achievement tests. **Students are demonstrating an ability to grapple with more complex texts**, evidence of another instructional shift.
- Students show success with **determining the meaning of unknown words using context**. One of the three shifts places a heavy focus on academic vocabulary. That shift in instruction is evident in the assessment.

# ELA Successes

## Writing

- Students show success in using narrative techniques when composing narrative stories. Students likely encounter more literary texts than they do informational texts in ELA instruction. Because of this exposure to mentor narrative texts and because of a natural preference for storytelling (research supports this), **students show comfort and skill with composing narratives.**

# ELA Challenges We Still Face

## Reading

- Students continue to **struggle with determining the central idea** of texts. They have trouble discerning what information is a detail; what information is an idea; and how details contribute to making an idea. These are difficult skills to master.
- Students continue to struggle with identifying the **best textual evidence** used to support an idea or argument. Students often can point to textual evidence, but they do not always select the **strongest evidence** from the reading to support their interpretation.

# ELA Challenges We Still Face

## Writing

- Students struggle to acknowledge and **address the counterclaim** in argumentative writing.
- Students struggle to write **informational essays** that enhance the reader's understanding of the stimulus texts. The essays often resort to summarizes or regurgitating facts from the text.
- Students struggle with answering or **adhering to the specific prompt**.

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# Science grades 3–8

- In grades 3–4, the test has been **cut in half** for 2017–18:
  - One subpart, 30 questions, 50 minutes
  - Multiple choice and multiple select items
  - Raw data only for grades 3–4. No score reports due to need for standard setting in these grades
- Grades 5–8 will be similar to last year:
  - Two subparts
    - Subpart 1: 35 questions (48 minutes)
    - Subpart 2: 34 questions (47 minutes)
  - Multiple choice and multiple select items
  - There will be score reports for these grades

# Biology and Chemistry EOCs

- Similar to last year:
  - One subpart
  - 60 questions
  - 75 minutes
  - Multiple choice and multiple select
- Chemistry EOC requires the use of a calculator
  - Refer to the TNReady High School Mathematics Calculator Policy (found in the math assessment blueprints) for a list of approved calculators
  - No calculators are necessary for any other TNReady science assessment

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# **Social Studies Design**

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# 2017–18 TNReady social studies

- In grades 3–4, the test has been **cut in half** from last year
  - 30 questions
  - 50 minutes
  - Multiple choice and multiple select items
  - Two performance levels (on grade level and approaching grade level)
- Grades 5–8
  - 45-55 items
  - 100 minutes
  - 2 subparts (50 minutes each)
  - Multiple Choice, Multiple Select, 2pt and 4pt written response
- U.S. history and geography EOC will be structured the same as 2016–17

# 2-pt. written response

- Grade 6 item:

Based on your knowledge of history,  
list two reasons why Sargon and  
Hammurabi were significant leaders  
in ancient Mesopotamia.

# 4-pt. written response

Students will read a stimulus, answer a multiple-choice question, and then respond to a short writing prompt.

**These excerpts provide evidence that the Freedmen's Bureau was responsible for**

- A** managing abandoned plantations and giving the lands to freedmen.
- B** providing necessities for the freedmen and poor in war-stricken areas.
- C** helping freedmen find work and receive payment for their livelihood.
- D** administering punishment in cases concerning the abuses of freedmen.

**Based on the provided sources and your background knowledge, describe two major goals of the Freedmen's Bureau and evaluate the success of the Freedmen's Bureau in achieving its goals. Use complete sentences and evidence to support your answer.**

# U.S. History and Geography EOC

## U.S. History & Geography Testing Structure

As in the past, each year the state assessment includes both operational and field test items. The below testing structure for U.S. history and geography reflects both the number of operational assessment items and the number of field test assessment items.

Subpart 1	Subpart 2	Subpart 3
<ul style="list-style-type: none"><li>• 50 minutes</li><li>• 1 Written Response</li></ul>	<ul style="list-style-type: none"><li>• 45 minutes</li><li>• 30 items</li></ul>	<ul style="list-style-type: none"><li>• 45 minutes</li><li>• 30 items</li></ul>

- Item types:
  - Multiple choice
  - Multiple select
  - Technology enhanced
  - Writing prompt

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**Closing**

# Educator Assessment Opportunities

- Item writer workshops
- Passage review
- Item content review
- Passage/item bias review
- Rangefinding
- Standard setting

# Questions?

- **TNReady.gov**
  - FAQ
  - Blueprints
  - Item types document
  - Grade-level overviews
- **TNED.Assessment@tn.gov**
- **TNStandards.Questions@tn.gov**



Department of  
**Education**

*Districts and schools in Tennessee will exemplify excellence and equity such that all students are equipped with the knowledge and skills to successfully embark on their chosen path in life.*

**Excellence | Optimism | Judgment | Courage | Teamwork**