Grade 7: Year at a Glance 2018-2019

Q1		Q2		Q3		Q4
Module 1 Aug. 6-Sept. 7	Module 2 Sept. 12- Oct. 25	Module 3 Oct. 25-Nov 29	Module 4 Nov. 30- Jan. 18	Module 5 Topics A-C Grade 6 Module 6 Topic B Jan. 23- March 8	Grade 6 Module 6 Topic C Module 5 Topic D Jan. 23- March 8	Grade 7 Module 6 Mar. 18 – April 12 Review after TNReady April 29-May 24
Ratios and Proportional Relationships	Rational Numbers	Expressions and Equations	Percent and Proportional Relationships	Statistics & Probability	Statistics & Probability	Geometry
7.RP.1	7.NS.1	7.EE.1	7.RP.1	7.SP.1	7.SP.3	7.G.2
7.RP.2	7.NS.2	7.EE.2	7.RP.2	7.SP.2	7.SP.4	7.G.4
7.RP.3	7.NS.3	7.EE.3a	7.RP.3	7.SP.5	7.SP.8	7.G.5
7.EE.4a	7.EE.2	7.EE.3b	7.EE.3	7.SP.6		After TNReady Review Standards
7.G.1	7.EE.4a	7.EE.4	7.G.1	7.SP.7		**7.RP 2**
		7.G.3		7.SP.8		**7.EE.3**
		7.G.4				**7.EE.4**
		7.G.5				

Key:

■ **Major Content**	➢ **Supporting Content**

Note: Please use the suggested pacing as a guide. It is understood that teachers may be up to one week ahead or one week behind depending on the needs of their students.

Eureka Grade 7 Pacing and Preparation Guide

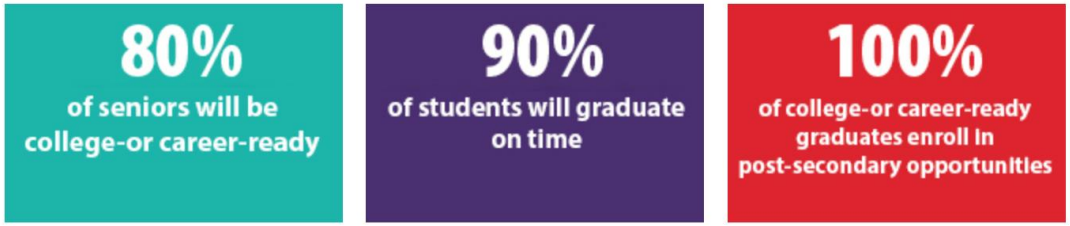
SCS 2018/2019
Revised 9/19/18 CSH

■Major Content ➢ Supporting Content

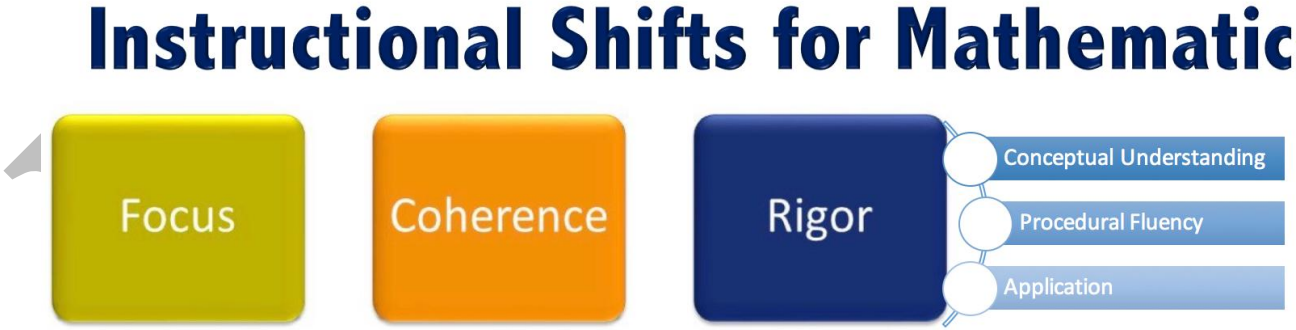
Introduction

Destination 2025, Shelby County Schools' 10-year strategic plan, is designed not only to improve the quality of public education, but also to create a more knowledgeable, productive workforce and ultimately benefit our entire community.

What will success look like?



In order to achieve these ambitious goals, we must collectively work to provide our students with high quality, college and career ready aligned instruction. The Tennessee State Standards provide a common set of expectations for what students will know and be able to do at the end of a grade. The State of Tennessee provides two sets of standards, which include the Standards for Mathematical Content and The Standards for Mathematical Practice. The Content Standards set high expectations for all students to ensure that Tennessee graduates are prepared to meet the rigorous demands of mathematical understanding for college and career. The eight Standards for Mathematical Practice describe the varieties of expertise, habits of mind, and productive dispositions that educators seek to develop in all students. The Tennessee State Standards also represent three fundamental shifts in mathematics instruction: **focus, coherence and rigor**.



■Major Content ➢ Supporting Content

Curriculum and Instruction – Mathematics

Quarter 4 Grade 7

The **Standards for Mathematical Practice** describe varieties of expertise, habits of minds and productive dispositions that mathematics educators at all levels should seek to develop in their students. These practices rest on important National Council of Teachers of Mathematics (NCTM) "processes and proficiencies" with longstanding importance in mathematics education. Throughout the year, students should continue to develop proficiency with the eight Standards for Mathematical Practice. The following are the eight Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of them.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

This curriculum map is designed to help teachers make effective decisions about what mathematical content to teach so that ultimately our students can reach Destination 2025. Throughout this curriculum map, you will see resources as well as links to tasks that will support you in ensuring that students are able to reach the demands of the standards in your classroom. In addition to the resources embedded in the map, there are some high-leverage resources around the content standards and mathematical practice standards that teachers should consistently access. For a full description of each, click on the links below.

- Tennessee Mathematics Content Standards
- Standards for Mathematical Practice
- Literacy Skills for Mathematical Proficency

■ Major Content ➢ Supporting Content

Structure of the Standards

Structure of the TN State Standards include:

- **Content Standards** - Statements of what a student should know, understand, and be able to do.
- **Clusters** - Groups of related standards. Cluster headings may be considered as the big idea(s) that the group of standards they represent are addressing. They are therefore useful as a quick summary of the progression of ideas that the standards in a domain are covering and can help teachers to determine the focus of the standards they are teaching.
- **Domains** - A large category of mathematics that the clusters and their respective content standards delineate and address. For example, Number and Operations – Fractions is a domain under which there are a number of clusters (the big ideas that will be addressed) along with their respective content standards, which give the specifics of what the student should know, understand, and be able to do when working with fractions.
- **Conceptual Categories** – The content standards, clusters, and domains in the 9th-12th grades are further organized under conceptual categories. These are very broad categories of mathematical thought and lend themselves to the organization of high school course work. For example, Algebra is a conceptual category in the high school standards under which are domains such as Seeing Structure in Expressions, Creating Equations, Arithmetic with Polynomials and Rational Expressions, etc.

How to Use the Maps

Overview
An overview is provided for each quarter and includes the topics, focus standards, intended rigor of the standards and foundational skills needed for success of those standards.

Your curriculum map contains four columns that each highlight specific instructional components. Use the details below as a guide for information included in each column.

Tennessee State Standards
TN State Standards are located in the left column. Each content standard is identified as Major Content or Supporting Content. A key can be found at the bottom of the map.

Content
This section contains learning objectives based upon the TN State Standards. Best practices tell us that clearly communicating measurable objectives lead to greater student understanding. Additionally, essential questions are provided to guide student exploration and inquiry.

Instructional Support
District and web-based resources have been provided in the Instructional Support column. You will find a variety of instructional resources that align with the content standards. The additional resources provided should be used as needed for content support and scaffolding.

Vocabulary and Fluency
The inclusion of vocabulary serves as a resource for teacher planning and for building a common language across K-12 mathematics. One of the goals for Tennessee State Standards is to create a common language, and the expectation is that teachers will embed this language throughout their daily lessons. In order to aid your planning, we have also included a list of fluency activities for each lesson. It is expected that fluency practice will be a part of your daily instruction. (Note: Fluency practice is not intended to be speed drills, but rather an intentional sequence to support student automaticity. Conceptual understanding must underpin the work of fluency.

Instructional Calendar
As a support to teachers and leaders, an instructional calendar is provided ***as a guide***. Teachers should use this calendar for effective planning and pacing, and leaders should use this calendar to provide *support* for teachers. Due to variances in class schedules and differentiated support that may be needed for students' adjustment to the calendar may be required.

Grade 7 Quarter 4 Overview

Module 6: Geometry

The chart below includes the standards that will be addressed in this quarter, the type of rigor the standards address, and foundational skills needed for mastery of these standards. Consider using these foundational standards to address student gaps during intervention time as appropriate for students.

Grade Level Standard	Type of Rigor	Foundational Standards
7.G.B.4	Conceptual Understanding	4.MD.C.7
7.G.B.2	Conceptual Understanding and Procedural Fluency	
7.G.B.5	Application	6.G.1, 6.G.2, 6.G.4
7.G.A.1	Conceptual Understanding	6.SP.1, 6.SP.2

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY
Grade 7 Module 6 Geometry **Grade 7 Pacing and Preparation Guide** **(Allow approximately 4 weeks for instruction, review and assessment)**			
Domain: Geometry **Cluster:** Solve real-life and mathematical problems involving angle measure, area, surface area and volume. ➢ **7.G.B.4** (formerly 7.G.B.5) Know and 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.	**Essential Question(s):** • What is the total number of degrees in supplementary and complementary angles? **Topic A Objectives:** **Lesson 1** • Students solve for unknown angles in word problems and in diagrams involving complementary and supplementary angles. **Lesson 2** • Students solve for unknown angles in word problems and in diagrams involving complementary, supplementary, vertical, and adjacent angles. **Lesson 3** • Students solve for unknown angles in word problems and in diagrams involving all learned angle facts. **Lesson 4** • Students solve for unknown angles in word problems and in diagrams involving all learned angle facts.	**Topic A: Unknown Angles** **Lesson 1** **Lessons 2 & 3, Combine** • Lessons 2 and 3 of this module can be consolidated or omitted depending on the level of proficiency students demonstrated in Module 3 Lessons 10 and 11. These lessons use the same angle relationships introduced in Module 3 but also include supplementary and complementary angles, which were introduced in Module 6 Lesson 1. To combine lessons 2 & 3, choose problems throughout these two lessons that students need to practice more based on students' strengths and weaknesses from previous lessons. Example 4 and Exercise 4, of lesson 3, involve solving an equation with a variable on both sides of the equal sign, which is an 8th grade skill. **Lesson 4** **For Topic A, you may use the resources from the following Teacher Toolbox lesson for review, remediation, and/or assessment to meet the needs of your students.** • **Lesson 18: *Problem Solving with Angles*** **Topic B: Unknown Angles in Triangles** **Lesson 5** **Lesson 6** **Lesson 7** **Lesson 8** **Lesson 9** **Lesson 10** **Lesson 11** **Topic C: Unknown Angles in Figures** **Lesson 12** **Lesson 13** **Topic D: Unknown Angles in Figures** **Lesson 14** **Lesson 15** **Lesson 16** **Lesson 17** **Topic E: Unknown Angles in Figures** **Lesson 18** **Lesson 19** **Lesson 20** **Lesson 21** **Topic F: Unknown Angles in Figures** **Lesson 22** **Lesson 23** **Lesson 24** **Lesson 25** **Topic G: Unknown Angles in Figures** **Lesson 26** **Lesson 27** **Lesson 28** **Lesson 29** **Topic H: Unknown Angles in Figures** **Lesson 30** **Lesson 31** **Lesson 32** **Lesson 33** **Topic I: Unknown Angles in Figures** **Lesson 34** **Lesson 35** **Lesson 36**	**Vocabulary for Module 6** Right Rectangular Pyramid Surface of a Pyramid Three Sides Condition Triangle Correspondence Triangles with Identical Measures Two Angles and the Included Side Condition Two Angles and the Side Opposite a Given Angle Condition Two Sides and the Included Angle Condition **Familiar Terms and Symbols for Module 6** Adjacent Angles Angles at a Point Angles on a Line Complementary Angles Right Rectangular Prism Supplementary Angles Vertical Angles

		Additional Resources: *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Better Lesson: So Many Angle Relationships Cpalms: What's Your Angle?	
Domain: Geometry **Cluster:** Draw, construct and describe geometrical figures and describe the relationships between them. ➢ **7.G.B.2** Draw geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.	**Essential Question(s):** • How are sketching, drawing, and constructing a figure different? **Topic B Objectives** **Lesson 5** • Students use a triangle correspondence to recognize when two triangles match identically. Students use notation to denote a triangle correspondence and use the triangle correspondence to talk about corresponding angles and sides. Students are able to label equal angles and sides of triangles with multiple arcs or tick marks. **Lesson 8** • Students draw triangles under different criteria to explore which criteria result in many, a few, or one triangle. **Lesson 9** • Students understand that two triangles are identical if all corresponding sides are equal under some correspondence; three side lengths of a triangle determine a unique triangle. • Students understand that two triangles are identical if two corresponding sides and the included angle are equal under some correspondence; two sides and an	**Topic B: Constructing Triangles** **Lesson 5** **Lesson 6 Omit** **Lesson 7 Omit** **Lesson 8** **Lesson 9** **Lesson 10** **Lesson 11** **Lesson 12** **Teacher Toolbox Lesson 19 covers all of the triangles conditions presented in these 5 Eureka Math lessons. Watch the videos and do problems from this Teacher Toolbox lesson and from Lesson 11 of Eureka Math. If you choose to do each lesson separately, there are enough available days.** **For Topic B, you may use the resources from the following Teacher Toolbox lesson for review, remediation, and/or assessment to meet the needs of your students.** • **Lesson 19: *Understanding Conditions for Drawing Triangles*** **Topic B Module 6 Assessment & Review of Assessment** ***(Complete by 4/1/19)***	

	included angle of a triangle determine a unique triangle. **Lesson 10** • Students understand that two triangles are identical if two pairs of corresponding angles and one pair of corresponding sides are equal under some correspondence; two angle measurements and a given side length of a triangle determine a unique triangle. • Students understand that the two angles and any side condition can be separated into two conditions: (1) the two angles and included side condition and (2) the two angles and the side opposite a given angle condition. **Lesson 11** • Students understand that three given lengths determine a triangle, provided the largest length is less than the sum of the other two lengths; otherwise, no triangle can be formed. • Students understand that if two side lengths of a triangle are given, then the third side length must be between the difference and the sum of the first two side lengths. • Students understand that two angle measurements determine many triangles, provided the angle sum is less than 180°; otherwise, no triangle can be formed. **Lesson 12** • Students understand that two sides of a triangle and an acute angle not included between the two sides may not determine a unique triangle.	**Additional Resources:** *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Illustrative Math: 7.G.B.2 Task Formative Assessment Items to Support 7.G.B.2 Building Bridges Task: p.12	

	• Students understand that two sides of a triangle and a 90° angle (or obtuse angle) not included between the two sides determine a unique triangle. •		
		Omit Topic C (Slicing Solids) because it addresses a standard that is no longer a TN Standard for Gr. 7	
Domain: Geometry **Cluster:** Solve real-life and mathematical problems involving angle measure, area, surface area and volume. ➢ **7.G.B.5** (formerly 7.G.B.6) Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	**Essential Question(s):** • What units are appropriate for area, surface, area, and volume? **Topic D Objectives:** **Lesson 20** • Students determine the area of composite figures in real-life contextual situations using composition and decomposition of polygons and circular regions. **Lesson 22** • Students determine the area of composite figures and of missing regions using composition and decomposition of polygons. **Lesson 23** • Students determine the surface area of three-dimensional figures, including both composite figures and those missing sections.	**Topic D: Problems Involving Area and Surface Area** **Lesson 20** **Lesson 21 Omit** **Lesson 22** **Lesson 23** **Lesson 24 Omit** **For Topic D, you may use the resources from the following Teacher Toolbox lessons for review, remediation, and/or assessment to meet the needs of your students.** • **Lesson 20: *Area of Composed Figures*** • **Lesson 21: *Area and Circumference of a Circle*** • **Lesson 24: *Surface Area of Solids*** **Additional Resources:** *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Illustrative Math: Sand Under the Swing Set	

Domain: Geometry **Cluster:** Solve real-life and mathematical problems involving angle measure, area, surface area and volume. **7.G.B.5** (formerly 7.G.B.6) Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	**Topic E: Problems Involving Volume** **Lesson 25** • Students use the formula $V = bh$ to determine the volume of a right prism. Students identify the base and compute the area of the base by decomposing it into pieces. **Lesson 26** • Students compute volumes of three-dimensional objects composed of right prisms by using the fact that volume is additive. **Lesson 27** • Students use the volume formula for a right prism ($V = Bh$) to solve volume problems involving rate of flow. **Grade 7 Module 3 Topic C:** ***Lesson 20*** • *Students find the area of regions in the coordinate plane with polygonal boundaries by decomposing the plane into triangles and quadrilaterals, including regions with polygonal holes.* • *Students find composite areas of regions in the coordinate plane by decomposing the plane into familiar figures (triangles, quadrilaterals, circles, semicircles, and quarter circles).* ***Lessons 21-22*** • *Students find the surface area of three-dimensional objects whose surface area is composed of triangles and quadrilaterals. They use polyhedron nets to understand that surface area is simply the sum of the area of the lateral faces and the area of the base(s).*	**Topic E: Problems Involving Volume** **Lesson 25** **Lesson 26** **Lesson 27** **For Topic E, you may use the resources from the following Teacher Toolbox lesson for review, remediation, and/or assessment to meet the needs of your students.** • **Lesson 23: Volume of Solids** **Additional Resources:** *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Formative Assessment Items to Support Surface Area and Volume ***The standard 7.G.B.5 was previously covered in Module 3 Lessons 20-26. Please refer to these lessons if students need additional practice. See the lesson outcomes to the left to determine which lesson(s) to reference.*** **End of Module 6 Assessment & Review of Assessment** (Omit #8 because it addresses a standard that is no longer a TN Standard for Gr. 7) ***(Complete by 4/12/19)***	

	Lessons 23-24 • *Students use the known formula for the volume of a right rectangular prism (length × width × height).* • *Students understand the volume of a right prism to be the area of the base times the height.* • *Students compute volumes of right prisms involving fractional values for length.* ***Lessons 25-26*** • *Students solve real-world and mathematical problems involving volume and surface areas of three-dimensional objects composed of cubes and right prisms.*		

After TNReady Assessment

This section lists standards that are recommended to be reviewed after The State assessment. The Teacher Toolbox is a great resource to use to cover the standards and you may also use the web resources that are provided below and in each of the instructional maps.

Module 1: Ratios and Proportional Relationships

■ **7.RP.A.2a:** Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. ■ **7.RP.A.2b**: Identify the constant of proportionality (unit rate) in tables, graphs and equations, diagrams and verbal descriptions of proportional relationship. ■ **7.RP.A.2c:** Represent proportional relationships by equations. For example, if		**Topic A: Proportional Relationships** **Lessons 3-4** Identifying Proportional and Non-Proportional Relationships in Tables **Lessons 5-6** Identifying Proportional and Non-Proportional Relationships in Graphs **Topic B: Unit Rate and the Constant of Proportionality**	

total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn. ■ **7.RP.A.2d:** Explain what a point (*x*, *y*) on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r*) where r is the unit rate.		**Lesson 7** Unit Rate as the Constant of Proportionality **Lessons 8-9** Representing Proportional Relationships with Equations **Lesson 10** Interpreting Graphs of Proportional Relationships Performance Task: First Rate Level B 7.RP.2 Tennessee PBS Video Lesson	
Module 3: Expressions and Equations			
■ **7.EE.B.3:** Solve multi-step real-world and mathematical problems posed with positive and negative rational numbers presented in any form (whole numbers, fractions, and decimals). a. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate. b. Assess the reasonableness of answers using mental computation and estimation strategies. ■ **7.EE.B.4:** Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. ■ **7.EE.B.4a:** Solve contextual problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach.		**Topic B: Solve Problems Using Expressions, Equations and Inequalities** **Lessons 8-9** Using If-Then Moves in Solving Equations **Lessons 10-11** Angle Problems and Solving Equations **Lesson 13** Inequalities **Lesson 14** Solving Inequalities **Lesson 15** Graphing Solutions to Inequalities Performance Task: Toy Trains 7.EE.3 & 7.EE.4a Performance Task: Speedy Texting 7.EE.3 & 7.EE.4a Tennessee Task Arc: Investigating Inequalities (Tasks 4 & 8)	

■ **7.EE.B.4b:** Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions. (Note that inequalities using >, <, ≤, ≥ are included in this standard).			

RESOURCE TOOLBOX The Resource Toolbox provides additional support for comprehension and mastery of grade-level skills and concepts. While some of these resources are imbedded in the map, the use of these categorized materials can assist educators with maximizing their instructional practices to meet the needs of all students.		
NWEA MAP Resources: https://teach.mapnwea.org/assist/help_map/ApplicationHelp.htm#UsingTestResults/MAPReportsFinder.htm - Sign in and Click the Learning Continuum Tab – this resources will help as you plan for intervention, and differentiating small group instruction on the skill you are currently teaching. (Four Ways to Impact Teaching with the Learning Continuum) https://support.nwea.org/khanrit - These Khan Academy lessons are aligned to RIT scores.		
Textbook Resources www.greatminds.org Eureka Math Grade 7 Remediation Guide	**Standards Support** TN Math Standards Grade 7 Instructional Focus Document Achieve the Core Edutoolbox	**Videos** Learn Zillion Khan Academy
Calculator Activities TI-73 Activities CASIO Activities TI-Inspire for Middle Grades	**Interactive Manipulatives** **Glencoe Virtual Manipulatives** National Library of Interactive Manipulatives	**Additional Sites** **Embarc Online** PBS: Grades 6-8 Lesson Plans Grade 7 Flip Book (This book contains valuable resources that help develop the intent, the understanding and the implementation of the state standards.)

Shelby County Schools – Grade 7 – March 2019					
Mon	**Tue**	**Wed**	**Thu**	**Fri**	
				1	
4	**5**	**6**	**7**	**8**	
11 **Spring Break**	**12** **Spring Break**	**13** **Spring Break**	**14** **Spring Break**	**15** **Spring Break**	
18 **Q4 Begins** **Begin Module 6**	**19**	**20**	**21**	**22**	
25	**26**	**27**	**28**	**29** **Mid-Module 6 Assessment & Review of Assessment**	

Shelby County Schools – Grade 7 – April 2019					
Mon	**Tue**	**Wed**	**Thu**	**Fri**	
1 **Mid-Module 6 Assessment & Review of Assessment**	**2**	**3**	**4**	**5**	
8	**9**	**10**	**11** **End-of Module 6 Assessment & Review of Assessment**	**12** **End-of Module 6 Assessment & Review of Assessment**	
15 **State Assessment Week**	**16**	**17**	**18**	**19** Good Friday (no school)	
22 **State Assessment Week**	**23**	**24**	**25**	**26**	
29 **Begin Review Lessons for 7.RP.2**	**30**				

Shelby County Schools – Grade 7 – May 2019					
Mon	**Tue**	**Wed**	**Thu**	**Fri**	
		1	**2**	**3**	
6 **Begin Review Lessons for 7.EE.3 & 7.EE.4**	**7**	**8**	**9**	**10**	
13	**14**	**15**	**16**	**17**	
20	**21** **Semester Exams**	**22** **Semester Exams**	**23** **Semester Exams**	**24** **Last Day of School**	
27 **Memorial Day**	**28**	**29**	**30**	**31**	

SCS 2018/2019
Revised 9/19/18 CSH

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