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**

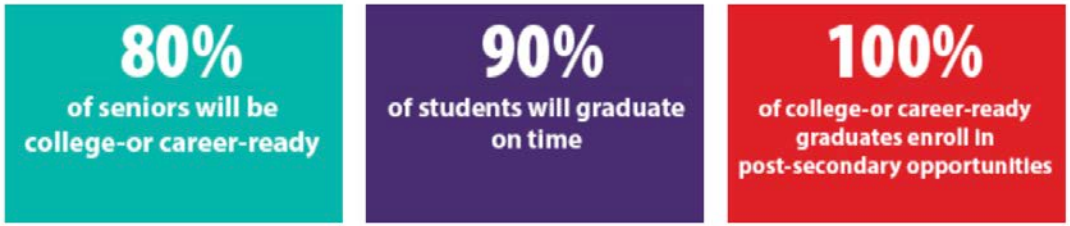
Note: Please use the suggested pacing as a guide. It is understood that teachers may be up to one week ahead or one week behind depending on the needs of their students.

Eureka Grade 7 Pacing and Preparation Guide

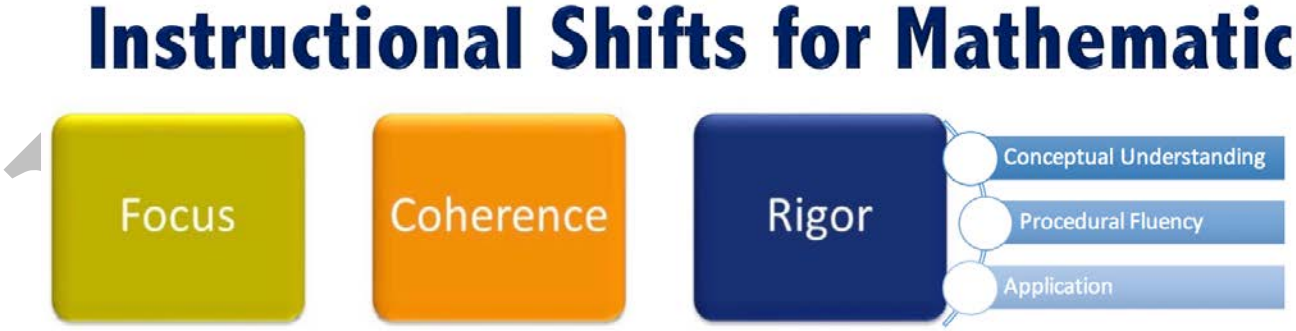
Introduction

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

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

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 2 Overview

Module 2: Rational Numbers
Module 3: Expressions & Equations
Module 4: Percent & Proportional Relationships

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.NS.A.3	Procedural Fluency & Application	6.NS.B.3
7.EE.A.2	Conceptual Understanding	
7.EE.B.4a	Conceptual Understanding, Procedural Fluency & Application	6.EE.B.7
7.EE.A.1	Application	6.EE.3, 6.EE.4
7.EE.B.3	Procedural Fluency	7.NS.3
7.EE.B.4	Procedural Fluency	6.EE.6, 6.EE.7, 6.EE.8
7.G.B.4	Conceptual Understanding	6.G.1, 6.G.4
7.G.B.5	Conceptual Understanding	
7.G.B.6	Application	6.G.1, 6.G.2, 6.G.4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY
Module 2 Rational Numbers, Cont'd Grade 7 Pacing and Preparation Guide (Allow approximately 1 week for instruction, review and assessment)			
Domain: The Number System Cluster: Apply and extend previous understandings of operations with fractions to add, subtract, multiply and divide rational numbers. ■ 7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers. (Computations with rational numbers extend the rules for manipulating fractions to complex fractions.) Cluster: Use properties of operations to generate equivalent expressions. ■ 7.EE.A.2 Understand that rewriting an expression in different forms in a contextual problem can provide multiple ways of interpreting the problem and how the quantities in it are related. For example, shoes are on sale at a 25% discount. How is the discounted price P related to the original cost C of the shoes? C - .25C = P. In other words, P is 75% of the original cost for C - .25C can be written as .75C. Cluster: Solve real-life and mathematical problems using numerical and algebraic expressions and equations and inequalities. ■ 7.EE.B.4a Solve contextual problems leading to equations of the form px + q = r	Essential Question(s): • How are rational numbers used and applied in real-life and mathematical situations? Topic A Objectives: Lesson 17: • Students use tape diagrams to solve equations of the form $px + q = r$ and $p(x + q) = r$ (where p, q, and r are small positive integers) and identify the sequence of operations used to find the solution. • Students translate word problems to write and solve algebraic equations using tape diagrams to model the steps they record algebraically. Lesson 18: • Students create equivalent forms of expressions in order to see structure, reveal characteristics, and make connections to context. • Students compare equivalent forms of expressions and recognize that there are multiple ways to represent the context of a word problem. • Students write and evaluate expressions to represent real-world scenarios. Lessons 19: • Students create equivalent forms of expressions in order to see structure, reveal characteristics, and make connections to context.	Topic C: Applying Operations with Rational Numbers to Expressions and Equations Lesson 17 Lesson 18 Lesson 19 Lesson 20 Omit Lesson 21 Omit Lessons 22-23, Combine Suggestion for combining • Lesson 22 Examples 1 and 2 • Lesson 23 Exercise 2 and the Exit Ticket For Topic C, 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 8: *Solve Problems with Rational Numbers* • Lesson 15: *Writing Linear Expressions* • Lesson 16: *Solve Problems with Equations* End-of-Module 2 Assessment & Review of Assessment (omit #5; #3 is optional) *(Complete by 10/24/18)* Additional Resources: *These optional resources may be used for extension,*	Vocabulary for Module 2: Additive Identity, Additive Inverse, Formula for the Distance Between Two Numbers, Multiplicative Identity, Repeating Decimal Expansion, Terminating Decimal Expansion Familiar Terms and Symbols for Module 2: Absolute Value, Associative Property (of Multiplication and Addition), Commutative Property (of Multiplication and Addition), Credit, Debit, Deposit, Distributive Property (of Multiplication Over Addition), Equation, Expression, Integer, Inverse, Multiplicative Inverse, Negatives, Opposites, Overdraft, Positives, Rational Numbers, Withdraw

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. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?	• Students compare equivalent forms of expressions and recognize that there are multiple ways to represent the context of a word problem. • Students write and evaluate expressions to represent real-world scenarios. Lessons 22-23: • Students use algebra to solve equations (of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers), using techniques of making zero (adding the additive inverse) and making one (multiplying by the multiplicative inverse) to solve for the variable. • Students identify and compare the sequence of operations used to find the solution to an equation algebraically, with the sequence of operations used to solve the equation with tape diagrams. They recognize the steps as being the same. • Students solve equations for the value of the variable using inverse operations, by making zero (adding the additive inverse) and making one (multiplying by the multiplicative inverse).	*enrichment and/or additional practice, as needed.* Illustrative Math: Sharing Pizza Money 7.NS.A.3 Illustrative Math Ticket to Ride 7.EE.A.2 Performance Task Toy Trains 7.EE.B.4a	

Module 3 Expressions and Equations

Grade 7 Pacing and Preparation Guide

(Allow approximately 6 weeks for instruction, review and assessment)

Domain: Expressions and Equations Cluster: Use properties of operations to generate equivalent expressions ■ 7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. ■ 7.EE.A.2 Understand that rewriting an expression in different forms in a contextual problem can provide multiple ways of interpreting the problem and how the quantities in it are related. For example, shoes are on sale at a 25% discount. How is the discounted price P related to the original cost C of the shoes? C - .25C = P. In other words, P is 75% of the original cost for C - .25C can be written as .75C.	Essential Questions: • How do algebraic representations relate and compare to one another? • How can you justify that multiple representations in the context of a problem are equivalent expressions? Topic A Objectives Lessons 1-2: • Students generate equivalent expressions using the fact that addition and multiplication can be done in any order (commutative property) and any grouping (associative property). • Students recognize how any order, any grouping can be applied in a subtraction problem by using additive inverse relationships (adding the opposite) to form a sum and likewise with division problems by using the multiplicative inverse relationships (multiplying by the reciprocal) to form a product. • Students recognize that any order does not apply to expressions mixing addition and multiplication, leading to the need to follow the order of operations. Lesson 3: • Students use area and rectangular array models and the distributive property to write products as sums and sums as products. • Students use the fact that the opposite of a number is the same as multiplying by −1 to write the opposite of a sum in standard form.	Topic A Use Properties of Operations to Generate Equivalent Expressions Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5 Lesson 6 For Topic A, you may choose to use the resources from the following Teacher Toolbox lessons for review, remediation, and/or assessment to meet the needs of your students. • Lesson 14: *Equivalent Linear Expressions* • Lesson 15: *Writing Linear Expressions* Additional Resources: *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Illustrative Math: Writing Expressions 7.EE.1 Illustrative Math: Ticket to Ride 7.EE.2 TN Task: Fixing Up the Yard	Vocabulary for Module 3: An Expression in Expanded Form, An Expression in Factored Form, An Expression in Standard Form, Circle, Circular Region or Disk., Circumference, Coefficient of a Term, Diameter of a Circle, Interior of a Circle Pi, Term Familiar Terms and Symbols for Module 3: Adjacent Angles, Cube, Distribute, Equation, Equivalent Expressions, Expression, Factor, Figure, Identity, Inequality, Length of a Segment, Linear Expression, Measure of an Angle, Number Sentence, Numerical Expression, Properties of Operations, Right Rectangular Prism, Segment, Square, Surface of a Prism, Term, Triangle

	• Students recognize that rewriting an expression in a different form can shed light on the problem and how the quantities in it are related. Lesson 4: • Students use an area model to write products as sums and sums as products. • Students use the fact that the opposite of a number is the same as multiplying by −1 to write the opposite of a sum in standard form. • Students recognize that rewriting an expression in a different form can shed light on the problem and how the quantities in it are related. Lesson 5: • Students recognize the identity properties of 0 and 1 and the existence of inverses (opposites and reciprocals) to write equivalent expressions. Lesson 6: • Students rewrite rational number expressions by collecting like terms and combining them by repeated use of the distributive property.		
Domain: Expressions and Equations Cluster: Solve real-life and mathematical problems using numerical and algebraic 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	Essential Questions • How can algebraic expressions and equations be used to model, analyze and solve mathematical situations? • Why is it important to interpret the solutions for equations and inequalities in the context of the problem? Topic B Objectives: Lesson 7: • Students understand that an equation is a statement of equality between two	Topic B: Solve Problems Using Expressions, Equations, and Inequalities Lesson 7 Lesson 8 Lesson 9 Lessons 10-11, Combine Suggestion for combining • Lesson 10 Opening, Example 2, Exercises 3 & 4 • Lesson 11 Exercise 1, Example 4 and Exit Ticket Lesson 12 (It is suggested that teachers use	

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. ■ 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). ➢ 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.	expressions. • Students build an algebraic expression using the context of a word problem and use that expression to write an equation that can be used to solve the word problem. Lessons 8-9: • Students understand and use the addition, subtraction, multiplication, division, and substitution properties of equality to solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ where p, q, and r are specific rational numbers. • Students understand that any equation with rational coefficients can be written as an equation with expressions that involve only integer coefficients by multiplying both sides by the least common multiple of all the rational number terms. Lessons 10-11: • Students use vertical angles, adjacent angles, angles on a line, and angles at a point in a multistep problem to write and solve simple equations for an unknown angle in a figure. Lesson 12: • Students justify the properties of inequalities that are denoted by < (less than), ≤ (less than or equal to), > (greater than), and ≥ (greater than or equal to). Lesson 13: • Students understand that an inequality is a statement that one expression is less than (or equal to) or greater than (or equal to) another expression, such as $2x + 3 < 5$ or $3x + 50 \geq 100$. • Students interpret a solution to an inequality as a number that makes the	practice problems from Teacher Toolbox Lesson 17 instead of the Problem Set for Lesson 12) Lesson 13 Lesson 14 Lesson 15 . For Topic B, you may choose to use the resources from the following Teacher Toolbox lessons for review, remediation, and/or assessment to meet the needs of your students. • Lesson 16: *Solve Problems with Equations* • Lesson 17: *Solve Problems with Inequalities* • Lesson 18: *Problem Solving with Angles* Mid-Module 3 Assessment & Review of Assessment *(Complete by 11/14/18)* Additional Resources: *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* TN Task: Shipping Rates Illustrative Math: Discounted Books (7.EE.B.3) Illustrative Math: Gotham City Taxes Illustrative Math: Sports Equipment Set Edutoolbox Resources for 7.G.B.4 Reminder: *It is recommended that teachers should begin preparing for Module 4 by 11/13/18*	

	inequality true when substituted for the variable. • Students convert arithmetic inequalities into a new inequality with variables (e.g., 2 × 6 + 3 > 12 to $2m$ + 3 > 12) and give a solution, such as m = 6, to the new inequality. They check to see if different values of the variable make an inequality true or false. Lesson 14: • Students solve word problems leading to inequalities that compare $px + q$ and r, where p, q, and r are specific rational numbers. • Students interpret the solutions in the context of the problem. Lesson 15: • Students graph solutions to inequalities taking care to interpret the solutions in the context of the problem.		
Domain: Geometry Cluster: Solve real-life and mathematical problems involving angle measure, area, surface area and volume. ➢ 7.G.B.3 (formerly 7.G.B.4) Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle. ➢ 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 Questions(s): • How do you find the surface area and volume of 2D and 3D figures? • What is the relationship between the circumference and area of a circle? Topic C Objectives: Lesson 17: • Students give an informal derivation of the relationship between the circumference and area of a circle. • Students know the formula for the area of a circle and use it to solve problems. Lesson 19:	Topic C: Use Equations and Inequalities to Solve Geometry Problems Lesson 16 Omit Lesson 17 (The Exploratory Challenge is optional; Include Lesson 16 Problem Set items with this lesson) Lesson 18 Omit (You may use some problems from this lesson for additional practice for Lesson 17.) Lesson 19 Lesson 20 Continued below	

	• Students find the areas of triangles and simple polygonal regions in the coordinate plane with vertices at grid points by composing into rectangles and decomposing into triangles and quadrilaterals. 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, specifically focusing on pyramids. 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). Lesson 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. Lesson 25-26: • Students solve real-world and mathematical problems involving volume	For the following lessons, it may be helpful to have nets/flat patterns of the figures available for students to use. Lessons 21-22, Combine Suggestion for combining • Lead students through Example 1 of Lesson 21 to introduce a new formula that can be used to determine the surface area of a variety of right prisms. • The first two Examples of Lesson 22 should also be presented. The Exit Ticket from Lesson 22 should be presented to conclude the lesson. Lessons 23-24, Combine Suggestion for combining: • Lead students through Example 1 from Lesson 23 and Examples 1 and 3 from Lesson 24. • Students can then complete the Exercise and Exit Ticket in Lesson 23. • The Exit Ticket from Lesson 24 can be used as the formative assessment for these two lessons. Lessons 25-27, Combine Suggestion for combining: • Lesson 25 – Example 1 • Lesson 26 – Example 1, Exercise 1, Exit Ticket For Topic C, you may choose to use the resources from the following Teacher Toolbox lessons for review, remediation, and/or assessment to meet the needs of your students.	

	and surface areas of three-dimensional objects composed of cubes and right prisms.	• Lesson 20: *Area of Composed Figures* • Lesson 21: *Area and Circumference of a Circle* • Lesson 23: *Volume of Solids* • Lesson 24: *Surface Area of Solids* End-of-Module 3 Assessment & Assessment Review *(Complete by 11/29/18)* Additional Resources: *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Illustrative Math: Illustrate the Area of a Circle 7.G.3 Illustrative Math: Sand Under the Swing Set 7.G.5 & 7.RP.3	

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY
Module 4 Percent and Proportional Relationships Grade 7 Pacing and Preparation Guide (Allow approximately 2 weeks for instruction, review and assessment)			
Domain: Ratios and Proportional Relationships Cluster: Analyze proportional relationships and use them to solve real-world and mathematical problems. ■ 7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. ■ 7.RP.A.2c Represent proportional relationships by equations. For example, if 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.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Essential Question(s): • Why are multiplicative relationships proportional? • What is the difference between a unit rate and a ratio? • How can you apply ratios and proportional reasoning to real-world situations? Topic A Objectives: Lesson 1: • Students understand that P percent is the number $P/100$ and that the symbol % means percent. • Students convert between a fraction, decimal, and percent, including percents that are less than 1% or greater than 100%. • Students write a non-whole number percent as a complex fraction. Lesson 2: • Students understand that the whole is 100% and use the formula Part = Percent × Whole to problem-solve when given two terms out of three from the part, whole, and percent. • Students solve word problems involving percent using expressions, equations, and numeric and visual models. Lessons 3: • Students use the context of a word problem to determine which of two quantities represents the whole. • Students understand that the whole is 100%	Topic A: Finding the Whole Lesson 1 Lesson 2 Lesson 3 Lesson 4 Lesson 5 Lesson 6 Omit (You may use problems from this lesson for additional practice) For Topic A, you may choose to use the resources from the following Teacher Toolbox lessons for review, remediation, and/or assessment to meet the needs of your students. • Lesson 11: *Equations for Proportional Relationships* • Lesson 12: *Problem Solving with Proportional Relationships* Additional Resources: *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Illustrative Math: Molly's Run 7.RP.A.1 Illustrative Math: Proportionality 7.RP.A.2c Illustrative Math Tasks: 7.RP.3 TN Task: Plant Species 7.RP.A. 1-3 TNCore Assessment Tasks: Car Wash, Deshawn's Run, Digging a Ditch, Lemonade Stand, Orange Juice for Sale, Snack Mix, Amusement Park, Babysitting Fees or Basketball Scores (Choose from this list)	Vocabulary for Module 4: Absolute Error, Percent Error Familiar Terms and Symbols for Module 4: Area; Circumference; Coefficient of the Term; Complex Fraction; Constant of Proportionality; Discount Price; Equation; Equivalent Ratios; Expression; Fee; Fraction; Greatest Common Factor; Length of a Segment; One-to-One Correspondence; Original Price; Percent; Perimeter; Pi; Proportional Relationship; Proportional To; Rate; Ratio ; Rational Number ; Sales Price ; Scale Drawing ; Scale Factor ; Unit Rate

	and think of one quantity as a percent of another using the formula Quantity = Percent × Whole to problem-solve when given two terms out of three from a quantity, whole, and percent. • When comparing two quantities, students compute percent more or percent less using algebraic, numeric, and visual models. Lessons 4: • Students solve percent problems when one quantity is a certain percent more or less than another. • Students solve percent problems involving a percent increase or decrease. Lesson 5: • Students find 100% of a quantity (the whole) when given a quantity that is a percent of the whole by using a variety of methods including finding 1%, equations, mental math using factors of 100, and double number line models. • Students solve word problems involving finding 100% of a given quantity with and without using equations.		
Domain: Ratios and Proportional Relationships Cluster: Analyze proportional relationships and use them to solve real-world and mathematical problems. ■ 7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. ■ 7.RP.A.2 Recognize and represent proportional relationships between quantities.	Essential Question(s): • Why are multiplicative relationships proportional? • What is the difference between a unit rate and a ratio? • How can you apply ratios and proportional reasoning to real-world situations? Topic B Objectives: Lesson 7 • Students understand the terms original price, selling price, markup, markdown, markup rate, and markdown rate.	Topic B: Percent Problems Including More Than One Whole Lesson 7 Lesson 8 Lesson 9 Lesson 10 Lesson 11 For Topic B, you may choose to use the resources from the following Teacher Toolbox lesson for review, remediation, and/or assessment to meet the needs of	

■ 7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error. Domain: Expressions and Equations Cluster: Solve real-life and mathematical problems using numerical and algebraic 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.	• Students identify the original price as the whole and use their knowledge of percent and proportional relationships to solve multi-step markup and markdown problems. • Students understand equations for markup and markdown problems and use them to solve for unknown quantities in such scenarios. Lesson 8 • Given the exact value, x, of a quantity and an approximate value, a, of the quantity, students use the absolute error, $\lvert a - x \rvert$, to compute the percent error by using the formula $\lvert a-x \rvert$ / $\lvert x \rvert$ × 100%. • Students understand the meaning of percent error as the percent the absolute error is of the exact value. • Students understand that when an exact value is not known, an estimate of the percent error can still be computed when given a range determined by two inclusive values Lesson 9 • Students solve percent problems where quantities and percents change. • Students use a variety of methods to solve problems where quantities and percents change, including double number lines, visual models, and equations. Lesson 10 • Students solve simple interest problems using the formula $I = Prt$, where I represents interest, P represents principal, r represents interest rate, and t represents time. • When using the formula $I = Prt$, students recognize that units for both interest rate and time must be compatible; students convert	your students. • Lesson 13: *Proportional Relationships* Mid-Module 4 Assessment & Review of Assessment *(Complete by 12/14/18)* Additional Resources: *These optional resources may be used for extension, enrichment and/or additional practice, as needed.* Illustrative Math: Discounted Books (7.EE.B.3) Illustrative Math Tasks: 7.RP.3 TN Task: Plant Species 7.RP.A. 1-3 TNCore Assessment Tasks: Car Wash, Deshawn's Run, Digging a Ditch, Lemonade Stand, Orange Juice for Sale, Snack Mix, Amusement Park, Babysitting Fees or Basketball Scores (Choose from this list)	

	the units when necessary. Lesson 11 • Students solve real-world percent problems involving tax, gratuities, commissions, and fees. • Students solve word problems involving percent using equations, tables, and graphs. • Students identify the constant of proportionality (e.g., tax rate, commission rate) in graphs, equations, and tables, and in the context of the situation.		

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 – October 2018

Mon	Tue	Wed	Thu	Fri	
1	**2**	**3**	**4**	**5** Q1 Ends	
8 Columbus Day Fall Break →	**9**	**10**	**11**	**12**	
15 Q2 Begins Recap any Module 2 lessons taught before Fall Break, as needed	**16** Recap any Module 2 lessons taught before Fall Break, as needed	**17** Module 2 Lesson 17	**18**	**19**	
22	**23** End-of-Module 2 Assessment & Review of Assessment (#3, optional & omit #5)	**24** End-of-Module 2 Assessment & Review of Assessment (#3, optional & omit #5)	**25** Begin Module 3	**26**	
29	**30**	**31** Halloween			

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■ Major Content ➢ Supporting Content

Shelby County Schools – Grade 6 – November 2018					
Mon	**Tue**	**Wed**	**Thu**	**Fri**	
			1	**2**	
5	**6**	**7**	**8**	**9**	
12 Veterans Day Teachers & Students are out	**13** Prepare for Module 4	**14** Mid-Module 3 Assessment & Review of Assessment	**15** Mid-Module 3 Assessment & Review of Assessment	**16**	
19	**20**	**21** Thanksgiving Break	**22** Thanksgiving Day	**23** Thanksgiving Break	
26	**27**	**28** End-of-Module 3 Assessment & Review of Assessment	**29** End-of-Module 3 Assessment & Review of Assessment	**30** Begin Module 4	

Shelby County Schools – Grade 6 – December 2018					
Mon	**Tue**	**Wed**	**Thu**	**Fri**	
3	**4**	**5**	**6**	**7**	
10	**11**	**12**	**13** Mid-Module 4 Assessment & Review of Assessment	**14** Mid-Module 4 Assessment & Review of Assessment	
17 Semester Exams	**18** Semester Exams	**19** Q2 Ends Semester Exams	**20** Christmas and Winter Break →	**21**	
24 Christmas Day →	**25**	**26**	**27**	**28**	