Mathematics

Grade 4 – Year at a Glance

2018 - 2019

Q1		Q2		Q3		Q4		
Module 1 Aug. 6 – Sept. 7	Module 2 Sept. 11- 18	Module 3 Sept. 18 – Nov.15	Module 4 Nov. 16 – Dec. 17	Module 5 Jan. 7 – Mar. 1	Module 6 Mar. 4 – Apr. 9	Module 7 Apr.10-18 Lessons 1-8 only	Module 7 (con't) Apr. 22 - May23	
Place Value, Rounding and Algorithms for Addition and Subtraction	Unit Conversion and Problem Solving with Metric Measurements	Multi-Digit Multiplication and Division	Angle Measure and Plane Figures	Fraction Equivalence, Order and Operations	Decimal Fractions	Exploring Measurement with Multiplication	TN Ready Testing Window	Material covered after April 9th is an extension of 4th grade standards or review of previously taught skills
4.OA.A.3	4.MD.A.1	4.OA.A.1	4.MD.C.5	4.NF.A.1	4.NF.C.5	4.OA.A.1		4.OA.A.1
4.NBT.A.1	4.MD.A.2	4.OA.A.2	4.MD.C.6	4.NF.A.2	4.NF.C.6	4.OA.A.2		4.OA.A.2
4.NBT.A.2		4.OA.A.3	4.MD.C.7	4.NF.A.3	4.NF.C.7	4.OA.A.3		4.OA.A.3
4.NBT.A.3		4.OA.B.4	4.G.A.1	4.NF.A.4	4.MD.A.2	4.MD.A.1		
4.NBT.B.4		4.NBT.B.5	4.G.A.2	4.OA.C.5		4.MD.A.2		*Additional standards – see curriculum map
		4.NBT.B.6	4.G.A.3	4.MD.B.4				
		4.MD.A.3						

Key:

Major Content	Supporting Content

Note: Please use this suggested pacing as a guide. It is understood that teachers may be up to 1 week ahead or 1 week behind depending on the needs of their students.

Use the instructional map and the following guide as you prepare to teach a module for additional guidance in planning, pacing, and suggestions for omissions.

Pacing and Preparation Guide (Omissions)

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.

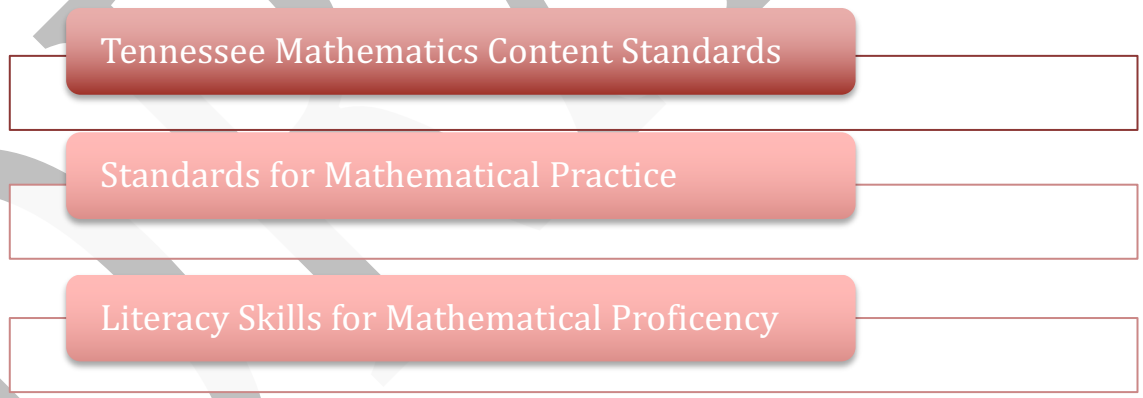
What will success look like?

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**.

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.



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 4 Quarter 1 Overview

Module 1: Place Value, Rounding, and Algorithms for Addition and Subtraction
Module 2: Metric Unit Conversions and Problem Solving with Metric Measurement
Module 3: Multi-Digit Multiplication and Division

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.

Focus Grade Level Standard	Type of Rigor	Foundational Standards
4.OA.A.1	Conceptual Understanding	3.OA.A.1, 3.OA.A.3
4.OA.A.2	Application	3.OA.A.3
4.OA.A.3	Conceptual Understanding, Application	3.OA.D.8, 4.NBT.A.3, 4.NBT.B.6
4.NBT.A.1	Conceptual Understanding	2.NBT.A.1
4.NBT.A.2	Conceptual Understanding, Procedural Fluency	4.NBT.A.1
4.NBT.A.3	Conceptual Understanding	3.NBT.A.1, 4.NBT.A.1, 4.NBT.A.2
4.NBT.B.4	Procedural Fluency	3.NBT.A.2, 4.NBT.A.1
4.NBT.B.5	Conceptual Understanding, Procedural Fluency	3.OA.A.4, 3.OA.B.5, 3.OA.C.7, E.OA.D.8, 3.NBT.A.2, 3.NBT.A.3, 3.MD.C.7, 4.NBT.A.1
4.MD.A.1	Conceptual Understanding, Procedural Fluency	3.MD.A.2, 3.OA.C.7
4.MD.A.2	Conceptual Understanding, Application	4.MD.A.1, 4.NF.B.4, 4.NF.C.5, 4.NF.C.6
4.MD.A.3	Conceptual Understanding, Procedural Fluency	3.MD.C.7, 3.MD.D.8, 3.OA.A.4

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Module 1: Place Value, Rounding, and Algorithms for Addition and Subtraction			
Domain: Numbers and operations in Base Ten **Cluster:** 4.NBT.A Generalize place value understanding for multi-digit whole numbers. ■ **4.NBT. A.1** Recognize that in a multi-digit whole number (less than or equal to 1,000,000), a digit in one place represents 10 times as much as it represents in the place to its right. For example, recognize that 7 in 700 is 10 times bigger than the 7 in 70 because 700 ÷ 70 =10 and 70 x 10= 700. ■ **4.NBT. A.2** Read and write multi-digit whole numbers (less than or equal to 1,000,000) using standard form, word form, and expanded form (e.g. the expanded form of 4256 is written as 4 x 1000 + 2 x 100 + 5 x 10 + 6 x 1). Compare two multi-digit numbers based on meanings of the digits in each place and use the symbols >, =, and< to show the relationship.	**Essential Questions** • Is place value important when comparing and ordering numbers? • How can you estimate a product by rounding? • What are some ways to represent numbers in the thousands and millions? • How do you round numbers? **Topic A: Place Value of Multi-Digit Whole Numbers** **Objectives/Learning Targets** **Lesson 1:** I can Interpret a multiplication equation as a comparison. (**4.NBT.A.1, 4.NBT.A.2**, 4.OA.A.1) **Lesson 2:** I can recognize a digit represents 10 times the value of what it represents in the place to its right. (**4.NBT.A.1, 4.NBT.A.2**, 4.OA.A.1) **Lesson 3:** I can name numbers within 1 million by building understanding of the place value chart and placement of commas for naming base thousand units. (**4.NBT.A.1, 4.NBT.A.2**, 4.OA.A.1) **Lesson 4:** I can read and write multi-digit numbers using base ten numerals, number names, and expanded form. (**4.NBT.A.1, 4.NBT.A.2**, 4.OA.A.1)	Eureka Parent Newsletter Topic A Optional Quiz: Topic A **Pacing Considerations:** No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** See Eureka Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 1 – Understand Place Value Zearn Lessons – Mission 1 Lesson 1: Bundle Action Lesson 2: 10 Times Lesson 3: Commas, Lesson 4: What's Your Name? Embarc.online – Module 1 **Videos:** • Understand the Relationship Between Place and Value • Read and Write Numbers in Numeric Form • Read and Write Numbers in Expanded Form **I-Ready Lessons:** • Place Value to 1000 • Place Value and Writing Numbers in Standard Form **Task Bank** Threatened and Endangered (4.NBT.A.1)	**Vocabulary** Millions, ten millions, hundred millions, ten thousands, hundred thousands, variables Familiar Terms and Symbols =, <, >, addend, algorithm, bundling, making, renaming, changing, exchanging, regrouping, trading compose, decompose, difference, digit, endpoint, equation, estimate, expanded form, expression, halfway, number line, number sentence, place value, rounding, standard form, sum, tape diagram, unbundling, breaking, renaming, changing, regrouping, trading, word form **Fluency Practice:** **Lesson 1** Sprint: Multiply and divide by 10 Multiply and divide by 10 Place Value **Lesson 2** Skip Counting Multiply by 10 Place Value **Lesson 3** Sprint: Multiply by 3 Place Value and Value Base Ten Units **Lesson 4** Skip Counting Place Value Numbers expressed in Different Base Units

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Domain: Numbers and operations in Base Ten **Cluster:** 4.NBT.A Generalize place value understanding for multi-digit whole numbers. **4.NBT. A.2** Read and write multi-digit whole numbers (less than or equal to 1,000,000) using standard form, word form, and expanded form (e.g. the expanded form of 4256 is written as 4 x 1000 + 2 x 100 + 5 x 10 + 6 x 1). Compare two multi-digit numbers based on meanings of the digits in each place and use the symbols >, =, and< to show the relationship.	**Topic B: Comparing Multi-Digit Whole Numbers** **Objectives/Learning Targets** **Lesson 5:** I can **c**ompare numbers based on meanings of the digits using >, <, or = to record the comparison. **(4.NBT.A.2)** **Lesson 6:** I can find 1, 10, and 100 thousand more and less than a given number. **(4.NBT.A.2)**	Eureka Parent Newsletter Topic B **Pacing Considerations:** No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 2 – Compare Whole numbers Zearn Lessons – Mission 1 Lesson 5: <,>, or =? Lesson 6: Pattern Spotter Embarc.online – Module 1 **I-Ready Lessons:** • Comparing and Ordering Numbers to 1,000 • Comparing and Ordering Numbers to 100,000 **Task Bank:** Ordering 4-Digit Numbers (4.NBT.A.2)	**Fluency Practice:** **Lesson 5** Sprint: Multiply by 4 Unit Skip Counting Place Value **Lesson 6** Unit Skip Counting Rename the Units Compare Numbers

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Domain: Numbers and operations in Base Ten **Cluster:** 4.NBT.A Generalize place value understanding for multi-digit whole numbers. **4.NBT. A.3** Round multi-digit whole numbers to any place (up to and including the hundred-thousand place) using understanding of place value.	**Topic C: Rounding Multi-Digit Whole Numbers** **Objectives/Learning Targets** **Lesson 7:** I can round multi-digit numbers to the thousands place using the vertical number line. **(4.NBT.A.3)** **Lesson 8:** I can round multi-digit numbers to any place using the vertical number line. **(4.NBT.A.3)** **Lesson 9:** I can use place value understanding to round multi-digit numbers to any place value. **(4.NBT.A.3)** **Lesson 10:** I can use place value understanding to round multi-digit numbers to any place value using real world applications. **(4.NBT.A.3)** **Complete Mid Module Assessment**	Eureka Parent Newsletter: Topic C Optional Quiz: Topic B and C **Pacing Considerations:** No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 4 – Round Whole Numbers Zearn Lessons – Mission 1 Lesson 7: Round and Round Lesson 8: Oh, The Places You'll Round! Lesson 9: Round It! Lesson 10: Round the World Embarc.online – Module 1 **Videos:** • Round Numbers To the Leading Digit Using a Number line • Round in Real Life Situations **I-Ready Lessons:** • Rounding to the Nearest 10,100, or 1,000 **Task Bank** Rounding on the Number Line (4.NBT.A.3) Rounding to the Nearest 100 and 1000 (4.NBT.A.3) Rounding to the Nearest 1000 (4.NBT.A.3)	**Fluency Practice:** **Lesson 7** Change Place Value Number Patterns Find the Midpoint **Lesson 8** Sprint: Find the Halfway Point Rename the Units **Lesson 9** Multiply by Ten Round to Different Place Values **Lesson 10** Sprint: Round to the Nearest 10,000 Multiply by 10

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Domain: Operations and Algebraic Thinking **Cluster:** 4.OA. A Use the four operations with whole numbers to solve problems. **4.OA.A.3** Solve multi-step contextual problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **Domain:** Numbers and operations in Base Ten **Cluster:** 4.NBT.A Generalize place value understanding for multi-digit whole numbers. **4.NBT. B.4** Fluently add and subtract within 1,000,000 using appropriate strategies and algorithms.	**Topic D: Multi-Digit Whole Number Addition** **Objectives/Learning Targets** **Lesson 11:** I can use place value understanding to fluently add multi-digit whole numbers using the standard addition algorithm, and apply the algorithm to solve word problems using tape diagrams. **(4.OA.A.3, 4.NBT.B.4**, 4.NBT.A.1, 4.NBT.A.2) **Lesson 12:** I can solve multi-step word problems using the standard addition algorithm modeled with tape diagrams, and assess the reasonableness of answers using rounding. **(4.OA.A.3, 4.NBT.B.4**, 4.NBT.A.1, 4.NBT.A.2)	Eureka Parent Newsletter: Topic D **Pacing Considerations:** No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** Eureka Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 3 – Add and Subtract Whole Numbers Zearn Lessons – Mission 1 Lesson 11: Add it Up Lesson 12: Sum Sense Embarc.online – Module 1 **I-Ready Lessons** • Solve Multi-step Word Problems • Money Problems: Addition, Subtraction, Multiplicatio **Task Bank:** Not available at this time	**Fluency Practice:** **Lesson 11** Round to Different Place Values Multiply by 10 Add Common Units **Lesson 12** Round to Different Place Values Find the sum
Domain: Operations and Algebraic Thinking **Cluster:** 4.OA. A Use the four operations with whole numbers to solve problems. **4.OA.A.3** Solve multi-step contextual	**Topic E: Multi-Digit Whole Number Subtraction** **Objectives/Learning Targets**	Eureka Parent Newsletter: Topic E Optional Quiz: D and E **Pacing Considerations:**	**Fluency Practice:** **Lesson 13** Find the Sum Subtract Common Units

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **Domain:** Numbers and operations in Base Ten **Cluster:** 4.NBT.A Generalize place value understanding for multi-digit whole numbers. ■ **4.NBT. B.4** Fluently add and subtract within 1,000,000 using appropriate strategies and algorithms.	**Lesson 13:** I can **u**se place value understanding to decompose to smaller units once using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams. **(4.OA.A.3, 4.NBT.B.4)** **Lesson 14:** I can use place value understanding to decompose to smaller units up to three times using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams. **(4.OA.A.3, 4.NBT.B.4)** **Lesson 15:** I can use place value understanding to fluently decompose to smaller units multiple times in any place using the standard subtraction algorithm, and apply the algorithm to solve word problems using tape diagrams. **(4.OA.A.3, 4.NBT.B.4)** **Lesson 16:** I can solve two-step word problems using the standard subtraction algorithm fluently modeled with tape diagrams, and assess the reasonableness of answers using rounding. **(4.OA.A.3, 4.NBT.B.4)**	No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** **Eureka Remediation Guide** **Ready teacher-toolbox aligned lessons:** • Lesson 3: Add and Subtract Whole Numbers **Zearn Lessons – Mission 1** Lesson 13: Subtraction Action Lesson 14: Take it Away Lesson 15: Unbundling Bonanza Lesson 16: Break It and Tape It **Embarc.online – Module 1** **Videos:** • **Subtract Using Standard Algorithm** **I-Ready Lessons** • Solve Multi-step Word Problems • Money Problems: Addition, Subtraction, Multiplication • Subtracting Multi-digit Numbers **Task Bank** Not available at this time	**Lesson 14** Base Ten Thousand Units Find the Difference Convert Units **Lesson 15** Place Value Find the Difference Convert Units **Lesson 16** Sprint: Convert Meters and Centimeters to Centimeters Compare Numbers

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Domain: Operations and Algebraic Thinking **Cluster:** 4.OA. A Use the four operations with whole numbers to solve problems. **4.OA.A.3** Solve multi-step contextual problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	**Topic F: Addition and Subtraction Word Problems** **Objectives/Learning Targets** **Lesson 17:** I can solve *additive compare* word problems modeled with tape diagrams. **(4.OA.A.3)** **Omit** **Lesson 18:** I can solve multi-step word problems modeled with tape diagrams, and assess the reasonableness of answers using rounding. **(4.OA.A.3)** **Lesson 19:** I can create and solve multi-step word problems from given tape diagrams and equations. **(4.OA.A.3)** **Omit** **Complete End of Module Assessment**	Eureka Parent Newsletter: Topic F Optional Quiz: Topic F **Pacing Considerations:** **Omit Lesson 17** **Omit Lesson 19** **Additional instructional resources for enrichment/remediation:** Eureka Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 9: Module Multi-step Problems • Lesson 10: Solve Multi-step Problems Zearn Lessons – Mission 1 Lesson 18: Reflect on Reasonableness Embarc.online – Module 1 **Videos:** Solve multi-step word problems by organizing the data (4.OA.A.3) **I-Ready Lessons** • Solve Multi-step Problems **Task Bank** Carnival Tickets (4.OA.A.3)	**Fluency:** **Lesson 17** Change Place Value Convert Units **Lesson 18** Number Patterns Convert Units **Lesson 19** Sprint: Convert Meters to Kilometers and Meters

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Module 2 Unit Conversions and Problem solving with Metric Measurement			
Domain: Measurement and Data **Cluster:** Estimate and Solve Problems involving Measurement ➢ **4.MD.A.1** Measure and estimate to determine relative sizes of measurement units within a single system of measurement involving length, liquid volume, and mass/weight of objects using customary and metric units. ➢ **4.MD.A.2** Solve one- or two-step real-world problems involving whole number measurements with all four operations within a single system of measurement including problems involving simple fractions.	**Essential Questions** • How can you estimate and measure length? • How do you measure an object in inches? • How do you measure to a fraction of an inch? • How can you estimate and measure length? **Topic A : Metric Unit Conversions** **Objectives/Learning Targets** **Lesson 1:** I can express metric length measurements in terms of a smaller unit; model and solve addition and subtraction word problems involving metric length**. (4. MD.A.1, 4.MD.A.2)** **Lesson 2:** I can express metric mass measurements in terms of a smaller unit; model and solve addition and subtraction word problems involving metric mass. **(4. MD.A.1, 4.MD.A.2)** **Lesson 3:** I can express metric capacity measurements in terms of a smaller unit; model and solve addition and subtraction word problems involving metric capacity. **(4. MD.A.1, 4. MD.A.2)**	**Eureka Parent Newsletter: Topic A** **Pacing Considerations:** **Lessons 1-3** can be combined if a teacher is struggling with pacing. When combining lessons, review and choose the problems that align to the depth of knowledge the standard requires and meets the needs of your students in both the concept development, problem set and exit ticket. **Additional instructional resources for enrichment/remediation:** **Remediation Guide** **Ready teacher-toolbox aligned lessons:** • Lesson 23: Convert Measurements • Math in Action: Use Measurements **Zearn – Mission 2** Lesson 1: Same Distance, New Units Lesson 2: Mix and Match Lesson 3: Fluidly Decompose **Embarc.online – Module 2** **Videos:** **Compare and Convert Metric Units of Length**	**Vocabulary** Convert (express a measurement in a different unit; rename units) Kilometer, Mass, Milliliter, Mixed Units Familiar Terms and Symbols =, <, >, Algorithm, Capacity, Distance, Equivalent, Kilogram (kg), gram (g), Larger or smaller unit, Length, Liter (L) , Measurement, Meter (m), centimeter (cm), Mixed units. Simplifying strategy, Table, Times as much as, Weight **Fluency Practice:** **Lesson 1** Convert Units Meter and Centimeter Number Bonds **Lesson 2** Convert Units Unit Counting Add and Subtract Meters and Centimeters **Lesson 3** Convert Units Unit Counting Add and Subtract Meters and Centimeters

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
		I-Ready Lessons • Express Measurements in Larger Units • Solve Word Problems Involving Measurement **Task Bank** **Who is the Tallest? (4.MD.A.1)**	
Domain: Measurement and Data **Cluster:** Estimate and Solve Problems involving Measurement ➢ **4.MD.A.1** Measure and estimate to determine relative sizes of measurement units within a single system of measurement involving length, liquid volume, and mass/weight of objects using customary and metric units. ➢ **4.MD.A.2** Solve one- or two-step real-world problems involving whole number measurements with all four operations within a single system of measurement including problems involving simple fractions.	**Topic B** **Lesson 4:** I can know and relate metric units to place value units in order to express measurements in different units **(4. MD.A.1, 4.M.A.2)** **Lesson 5:** I can use addition and subtraction to solve multi-step word problems involving length, mass, and capacity **(4. MD.A.1, 4.M.A.2)** **Complete End of Module Assessment**	**Eureka Parent Newsletter: Topic B** **Pacing Considerations:** No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** **Remediation Guide** **Ready teacher-toolbox aligned lessons:** • Lesson 25: Length, Liquid, Volume and Mass • Math in Action: Use Measurements **Zearn – Mission 2** Lesson 4: Like This Like That Lesson 5: Use Your Units **Embarc.online – Module 2** **Videos:** **Convert measurements to solve distance problems**	**Fluency Practice:** **Lesson 4** Perimeter and Area Add and Subtract Meters and Centimeters Add and Subtract M and CM Convert Units Unit Counting **Lesson 5** **Sprint:** Convert Kilograms to Grams Write in Kilograms and Grams Sprint Convert Kilograms and Grams Convert Units Unit Counting

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
		I-Ready Lessons • Express Measurements in Larger Units • Solve Word Problems Involving Measurement **Task Bank** How Heavy? **(4.MD.A.2)**	
Module 3 Multi-Digit Multiplication and Division			
Domain: Operations and Algebraic Thinking **Cluster:** 4.OA.1 Use the Four Operations with whole numbers to solve problems ■ **4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret 35=5x7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. ■ **4.OA.A.2** Multiply or divide to solve contextual problems involving multiplicative comparison, and distinguish multiplicative comparison from additive comparison. For example, school A has 300 students and school B has 600 students: to say that school B has two times as many students is an example of multiplicative comparison; to say that school B has 300 more students is an example of additive comparison **Domain:** Measurement and Data	. **Essential Questions** • What place-value patterns can be seen when you multiply 1-digit numbers by multiples of 10 and 100? • What are some ways to multiply mentally? • How can you use rounding to estimate when you multiply? • How do you know if your answer is reasonable? • How do you multiply a 2-digit number by a 1-digit number? • How do you multiply a 3-digit number by a 1-digit number? **Topic A: Multiplicative Comparison Word Problems** **Objectives/Learning Targets** **Lesson 1**: I can investigate and use the formulas for area and perimeter of rectangles	Eureka Parent Newsletter: Topic A Optional Quiz: Topic A **Pacing Considerations:** No pacing adjustments recommended **Additional instructional resources for enrichment/remediation:** Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 5: Understand Multiplication • Lesson 26: Perimeter and Area Zearn: Mission 3 Lesson 1: In 'n' Out Lesson 2: Dynamic Dimensions Lesson 3: As Long, As Wide	**Vocabulary** Associative property, composite number, distributive property, divisible, divisor, formula, long division, partial product, prime number, remainder Familiar Terms and Symbols Algorithm, Area, Area model, Array, bundling, grouping, reaming, changing, compare, distribute, divide, division, equation, factors, mixed units, multiple, multiply, multiplication, perimeter, place value, product, quotient, rectangular array, rows, columns, __times as many__as ____ **Fluency Practice:** **Lesson 1** Perimeter and Area Multiply Number by Itself Group Count

Curriculum and Instruction – Mathematics

Quarter: 1 Grade: 4

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
Cluster: Estimate and Solve Problems involving measurement ➢ **4.MD.A.3** Know and apply the area and perimeter formula for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing he area formula as a multiplication equation with an unknown factor.	(**4.OA.A.1, 4.OA.A.2, 4. MD.A.3,** 4.OA.A.3) **Lesson 2**: I can solve multiplicative comparison word problems by applying the area and perimeter formulas. (**4.OA.A.1, 4.OA.A.2, 4. MD.A.3,** 4.OA.A.3) **Lesson 3:** I can demonstrate understanding of area and perimeter formulas by solving multi-step real world problems. (**4.OA.A.1, 4.OA.A.2, 4. MD.A.3,** 4.OA.A.3)	Embarc.online Module 3 **Videos:** • See multiplication as a comparison using number sentences • Compare numbers using a bar model • Find the area of a rectangle using the standard formula • Use area models to find the area of rectangles • Find the perimeter of a rectangle using an area model **I-Ready Lessons** • Understand Multiplication • Multiplication and Division in Word Problems • Understanding Area and Surface Area **Task Bank** Threatened and Endangered Comparing Money Raised (4.OA.A.2)	Find the Unknown Factor **Lesson 2** Multiply a Number by Itself Rename the Unit Find the Area and Perimeter **Lesson 3** Sprint: Missing Products and Factors Find the Area and Perimeter
Domain: Numbers and Operations in Base Ten **Cluster:** Use place value understanding and properties of operations to perform multi-digit arithmetic	**Topic B: Multiplication by 10, 100, 1000** **Objectives/Learning Targets** **Lesson 4**: I can interpret and represent patterns when multiplying by 10, 100, and	Eureka Parent Newsletter: Topic B Optional Quiz: Topic B **Pacing Considerations:**	**Fluency Practice:** **Lesson 4** Rename the Unit Group Count by Multiples of 10 and 100 Find the Area and Perimeter

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
■ **4.NBT.B.5** Multiply a whole number of up to four digits by a one digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	1,000 by single digits recognizing patterns. **(4.NBT.B.5,** 4.OA.A.1, 4.OA.A.2, 4.NBT.A.1) **Lesson 5**: I can multiply multiples of 10, 100, and 1,000 by single digits, recognizing patterns. (**4.NBT.B.5**, 4.OA.A.1, 4.OA.A.2, 4.NBT.A.1) Lesson 6: I can multiply two-digit multiples of 10 by two-digit multiples of 10 with the area model. (**4.NBT.B.5**, 4.OA.A.1, 4.OA.A.2, 4.NBT.A.1)	**Lesson 4 & 5** can be combined. Review both lessons and choose the problems that align to the depth of knowledge the standard requires and meets the needs of your students in both the concept development, problem set and exit ticket. **Additional instructional resources for enrichment/remediation:** Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 11: Multiply Whole Numbers Zearn: Mission 3 Lesson 4: Leftward Ho Lesson 5: Extra! Extra! Zeros! Lesson 6: Free Associate Embarc.online Module 3 **Videos:** • Multiply 2-digit multiples of 10 by 2-digit multiples of 10 by using the area model **I-Ready Lessons** • Multiplying Tow-Digit Numbers by One-Digit Numbers • Multiplying Tow-Digit Numbers by Two-Digit Numbers • Multiplying by Two-Digit Numbers	**Lesson 5** Group Count by Multiples of 10 and 100 Multiply Units **Group 6** Multiply by Different Units Take Out the 10, 100, or 1,000 Multiply by Multiples of 10, 100,1,000

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
		Task Bank Thousands and Millions of Fourth Graders (4.NBT.B.5)	
Domain: Numbers and Operations in Base Ten **Cluster:** Use place value understanding and properties of operations to perform multi-digit arithmetic ■ **4.NBT.B.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Topic C: Multiplication of up to Four Digits by Single-Digit Numbers** **Objectives/Learning Targets** **Lesson 7:** I can use place value disks to represent two-digit by one-digit multiplication. **(4.NBT.B.5,** 4.OA.A.2, 4.NBT.A.1) **Lesson 8:** I can extend the use of place value disks to represent three- and four-digit number by one-digit numbers applying the standard algorithm. **(4.NBT.B.5,** 4.OA.A.2, 4.NBT.A.1) **Lesson 9-10:** I can multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm. **(4.NBT.B.5,** 4.OA.A.2, 4.NBT.A.1) **Omit Lesson 10** **Lesson 11:** I can connect the area model and the partial products method to the standard algorithm. **(4.NBT.5,** 4.OA.2, 4.NBT.1)	Eureka Parent Newsletter: Topic C Optional Quiz: Topic C **Pacing Considerations:** **Lesson 4 & 5** can be combined. Review both lessons and choose the problems that align to the depth of knowledge the standard requires and meets the needs of your students in both the concept development, problem set and exit ticket. **Omit Lesson 10:** This lesson is the same objective as lesson 9. Review problems in both lesson 9 and 10 and choose problems that meet the needs of your students. **Additional instructional resources for enrichment/remediation:** Eureka Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 11: Multiply Whole Numbers Zearn: Mission 3 Lesson 7: Fun with Partial Products Lesson 8: Twice Is Nice Lesson 9: Twinkies! Lesson 11: Area of Interest	**Fluency Practice** **Lesson 7** Sprint: Multiply Multiples of 10, 100, and 1,000 Multiply Mentally

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
		Embarc.online Module 3 **Videos:** • Solve multi-digit multiplication problems by using place value understanding • Multiply multi-digit whole numbers by single digit whole number using an area model **I-Ready Lessons** • Multiplying Tow-Digit Numbers by One-Digit Numbers • Multiplying Tow-Digit Numbers by Two-Digit Numbers • Multiplying by Two-Digit Numbers **Task Bank** Thousands and Millions of Fourth Graders (4.NBT.B.5)	
Domain: Operations and Algebraic Thinking **Cluster:** 4.OA.1 Use the Four Operations with whole numbers to solve problems ■ **4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret 35=5x7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations. ■ **4.OA.A.2** Multiply or divide to solve contextual problems involving multiplicative comparison, and distinguish multiplicative comparison from additive comparison. For	**Topic D: Multiplication Word Problems** **Lesson 12:** I can solve two-step word problems, including multiplicative comparison. (**4.OA.A.1, 4.OA.A.2, 4.OA.A.3, 4.NBT.B.5)** **Lesson 13:** I can use multiplication, addition, or subtraction to solve multi-step word problems. (**4.OA.A.1, 4.OA.A.2, 4.OA.A.3, 4.NBT.B.5)**	Eureka Parent Newsletter: Topic D Optional Quiz: Topic D **Pacing Considerations:** **Lesson 12 & 13** can be combined. Review both lessons and choose the problems that align to the depth of knowledge the standard requires and meets the needs of your students in both the concept development, problem set and exit ticket. **Additional instructional resources for**	

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY/FLUENCY
example, school A has 300 students and school B has 600 students: to say that school B has two times as many students is an example of multiplicative comparison; to say that school B has 300 more students is an example of additive comparison ■ **4.OA.A.3** Solve multi-step contextual problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. **Domain:** Numbers and Operations in Base Ten **Cluster:** Use place value understanding and properties of operations to perform multi-digit arithmetic ■ **4.NBT.B.5** Multiply a whole number of up to four digits by a one digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**Complete Mid Module Assessment**	**enrichment/remediation:** Remediation Guide Ready teacher-toolbox aligned lessons: • Lesson 6: Multiplication and Division Word Problems Zearn: Mission 3 Lesson 12: All for One, One for All Lesson 13: These Times are No Joke! Embarc.online Module 3 **I-Ready Lessons** • Multiplication and Division in Word Problems **Task Bank** Karl's Garden (4.MD.A.3, 4.OA.A.3) Carnival Tickets (4.OA.A.3)	

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RESOURCE TOOLBOX

The Resource Toolbox provides additional support for comprehension and mastery of grade-level skills and concepts. These resources were chosen as an accompaniment to modules taught within this quarter. Incorporated materials may assist educators with grouping, enrichment, remediation, and differentiation.

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	TN Core/CCSS	Videos
Great Minds' Eureka Math	**Tennessee Math Standards** **Achieve the Core - Tasks**	**NCTM Common Core Videos** **LearnZillion** **CCSS Video Series**

Interactive Manipulatives	Additional Sites
Interactive Content http://www.eduplace.com/ Illuminations Resources for Teaching Math Interactive Sites for Educators Math Playground: Common Core Standards Thinking Blocks: Computer and iPad based games PARCC Games IXL Math Virtual Manipulatives	Edutoolbox Parent Roadmap: Supporting Your Child in Grade Four Mathematics

Other

Illustrated Mathematics Dictionary for Kids

Use this guide as you prepare to teach a module for additional guidance in planning, pacing, and suggestions for omissions.

Pacing and Preparation Guide (Omissions)

August 2018						
Lessons for the Week	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Notes:**
			1	**2**	**3**	Optional Quizzes: Module 1 Topic A Topic B and C (Quizzes should not take more than 15 minutes to administer)
2-3 days for routines and procedures **Module 1** **Topic A: Lessons 1-2**	**6** *1st Day of School*	**7**	**8**	**9**	**10**	
Module 1 **Topic A: Lessons 3-4** **Topic B: Lessons 5-6** **Topic C: Lesson 7**	**13**	**14**	**15**	**16**	**17**	
Module 1 **Topic C: Lessons 8-10** **1-day Review** **Mid Module Assessment**	**20**	**21**	**22**	**23**	**24** **M1: Mid Module Assessment Complete**	
Module 1 **Topic D: Lessons 11-12** **Topic E: 13-15**	**27**	**28**	**29**	**30**	**31**	

September 2018						
Suggested Lessons for the Week	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Notes:**
Module 1 **Topic E: Lesson 16** **Topic F: Lesson 18** **(Omit Lesson 17 and 19)** **1-day Review** **End of Module Assessment**	**3** ***Labor Day (Out)***	**4**	**5**	**6**	**7** **Module 1: End of Module Assessment Complete**	**Omit Lesson 17 and 19** Note: ***Flex days*** are included in the instructional calendar to allow opportunities for review, district testing, tasks and other school-based activities. (See curriculum map for Task Bank) Optional Quizzes: Module 1 Topic D and E Topic F (Quizzes should not take more than 15 minutes to administer) Optional Quizzes: Module 3 Topic A Topic B Topic C (Quizzes should not take more than 15 minutes to administer) **Combine lessons 4-5, 7-8** **Omit Lesson 10**
Flex (NWEA) Day **Module 2** **Topic A: Lessons 1-3** **Topic B: Lesson 4**	**10**	**11**	**12**	**13** *Parent Conferences*	**14**	
Module 2 **Topic B: Lesson 5** **End of Module Assessment** **Module 3** **Topic A: Lessons 1-3**	**17**	**18** **Module 2: End of Module Assessment Complete**	**19**	**20**	**2**	
Module 3 **Topic B: Lessons 4-6** **(Combine lessons 4/5)** **Topic C: Lesson 7-11** **(Combine lessons 7/8, Omit lesson 10)**	**24**	**25**	**26**	**27**	**28**	

October 2018

Lessons for the Week	Monday	Tuesday	Wednesday	Thursday	Friday	Notes:
Module 3 Topic D: Lessons 12-13 1-day Review Mid Module Assessment Flex (Task) Day	1	2	3	4 Module 3: Mid Module Assessment Complete	5 *End of 1st Nine Weeks*	Optional Quizzes: Module 3 Topic D Topic E Topic F (Quizzes should not take more than 15 minutes to administer) Note: ***Flex days*** are included in the instructional calendar to allow opportunities for review, district testing, tasks and other school-based activities. (See curriculum map for Task Bank) **Omit Lesson 19**
	8 *Columbus Day*	9 *Fall Break*	10 *Fall Break*	11 *Fall Break*	12 *Fall Break*	
Module 3 Topic E: Lessons 14-18 (Omit Lesson 19)	15 *Begin 2nd Nine Weeks*	16	17	18	19	
Module 3 Topic E: Lesson 20 (Omit Lesson 21) Topic F: Lesson 22-25	22	23	24	25	26	**Omit Lesson 21**
Module 3 Topic G: Lesson 26-30 (Omit Lesson 31)	29	30	31 *Halloween*	1	2	