Mathematics
Grade 4- Year at a Glance
2019-2020

Q1   Q2   Q3   Q4

Module 1 Aug 19- Sept 10	Module 2 Sept 11- Sept 19	Module 3 Sept 23-Nov 18	Module 4 Nov 19- Dec 19	Module 5 Jan 6- Mar 9	Module 6 Mar 10-April 9	Module 7 Apr 13-Apri 16 (Lessons 1-8 only)	TN READY April 13- May 8	Module 7 April 27-May 22
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 and Multiplication		Material covered after April 12th 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.B.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.B.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		
		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 Digital Suite resources as you prepare to teach a module for additional guidance in planning, pacing, and suggestions for omissions
Pacing and Preparation Guide (Omissions)

■Major Work   ➢ Supporting

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?

80% of seniors will be college-or career-ready	**90%** of students will graduate on time	**100%** of college-or career-ready graduates enroll in post-secondary opportunities

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**.

Instructional Shifts for Mathematics

Focus	Coherence	Rigor
		Conceptual Understanding
		Procedural Fluency
		Application

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

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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.

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Grade 4 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, 2.OA.C.3, 2.OA.C.4
4.OA.A.2	Application	3.OA.A.3, 3.OA.A.1, 3.OA.A.2
4.OA.A.3	Conceptual Understanding, Application	4.NBT.A.3, 4.NBT. B.6, 3.OA.D.8, 3.OA.A.3, 2.OA.A.1,
4.NBT.A.1	Conceptual Understanding	2.NBT. A.1
4.NBT.A.2	Conceptual Understanding, Procedural Fluency	4.NBT. A.1, 2.NBT.A.1
4.NBT.A.3	Conceptual Understanding	4.NBT.A.1, 4.NBT.A.2, 3.NBT.A.1, 2.NBT.A.1
4.NBT.B.4	Procedural Fluency	4. NBT.A.1, 3.NBT.A.2, 2.NBT.B.7, 2.NBT.B.8
4.NBT.B.5	Conceptual Understanding, Procedural Fluency	3.OA.A.4, 3. OA.B.5, 3.OA.C.7, 3.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
Indicates Power Standard (2017-2018)		
Instructional Focus Document- Grade 4		

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES
— **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.

Domain: Operations and Algebraic Thinking
Cluster: 4.OA.A 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

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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.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**)

Lesson 4: I can read and write multi-digit numbers using base ten numerals, number names, and expanded form. (**4.NBT.A.2**)

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 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 relationships between digits and their place value**
- **Understand place value: the power of 10**
- **See multiplication as a comparison using number sentences**

I-Ready Lessons:
- Place Value to 1000
- Place Value and Writing Numbers in Standard Form

Task Bank
Threatened and Endangered (4.NBT.A.1)

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
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 compare 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** **Optional Quiz: Topic B and C** **Pacing Considerations:** Embed lesson 6 with lessons 11 and 13. Lesson 6 will be combined with lessons 11 and 13 later in the module.	**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** **Videos:** **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)**
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)**	**Eureka Parent Newsletter- Topic C** **Optional Quiz: Topic B and C** **Pacing Considerations:** Combine lessons 7 and 8. Combine Lessons 9 and 10. **Suggestions for combining:** **Lesson 7 and 8** **Fluency (5 minutes)** Lesson 7- Find the Midpoint	**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

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES
	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**	Lesson 8 – Sprint Lesson 8- Rename the Units **Application Problem (5 minutes)** Lesson 7 (Lesson 8 Application Problem can be used during small group instruction) **Concept Development (30 minutes)** Lesson 7 Problem 1 and 2 Lesson 8 Problems 1-3 **Problem Set (10 minutes)** Lesson 7- Problems 1 and 3 Lesson 8- Problems 1,3 and 5 **Debrief/Exit Ticket (10 minutes)** Lesson 7-8 **Suggestions for combining:** **Lesson 9 and 10** **Fluency** Lesson 9- Multiply by 10 Lesson 10 Sprint Application Problem Choose Lesson 9 or 10	**Embarc.online – Module 1** **Videos:** • **Round Numbers Using a Number line** • **Round in Real Life Situations** • **Round numbers to a specified place on a number line** **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)**

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
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 6:** I can find 1, 10, and 100 thousand more and less than a given number. **(4.NBT.A.2)** **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** **Optional Quiz: Topic D and E** **Pacing Considerations:** Embed lesson 6 with lesson 11. Combine lessons 12 and 16. **Suggestions for combining:** **Lesson 6 and 11** **Fluency (5 minutes)** Use the maintenance or preparation fluency from both lessons within the allotted timeframe. **Application Problem (5 minutes)** Choose between lesson 6 and 11. **Concept Development (30 minutes)** • Teach Concept Development Problem 1 in Lesson 6 with Concept Development Problem 1 in Lesson 11 • Teach Concept Development Problem 2 in Lesson 6 with Concept Development 2 in Lesson 11 • Teach Concept Development 3 in Lesson 6 with Concept Development 3 in Lesson 11 • Teach Concept Development 4 in Lesson 11 **Problem Set (10 minutes)** Lesson 6 Problems 3a, 3c, 3e,4a Lesson 11 Problems 1(all) and 2 **Debrief/Exit Ticket (10 minutes)** Lesson 6 - 1 and 2 addition problems only	**Additional instructional resources for enrichment/remediation:** **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** **Videos:** • **Unit Form Addition** • **Problem Solving with Tape Diagram** **I-Ready Lessons** • Solve Multi-step Word Problems • Money Problems: Addition, Subtraction, Multiplication **Task Bank** None available at this time.

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
		Lesson 11- All **Suggestions for combining**: **Lesson 12 and 16** **Fluency** Lesson 16 Sprint Lesson 16 Compare Numbers Lesson 12 Fluency- Find the Sum can be used on Friday Flex Day **Application Problem** Lesson 12 Application Problem Lesson 16 Application Problem could be used in today's lesson with early finishers **Concept Development** • Teach Problem 1 from lesson 12 and 16 together • Teach Problem 2 from lesson 12 and 16 together • Teach Problem 3 from lesson 12 **Problem Set** Lesson 12 Problem 1 Lesson 16 Problem 1 **Debrief/Exit Ticket** Lessons 12 and 16	
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	**Topic E: Multi-Digit Whole Number Subtraction** **Objectives/Learning Targets** **Lesson 6:** I can find 1, 10, and 100 thousand more and less than a given number.	**Eureka Parent Newsletter Topic E** **Optional Quiz: Topic D and E** **Pacing Considerations:** Embed lesson 6 with lesson 13. Combine lessons 14 and 15. Combine lessons 12 and 16. **Suggestions for combining:**	**Additional instructional resources for enrichment/remediation:** **Remediation Guide** **Ready teacher-toolbox aligned lessons:** • Lesson 3: Add and Subtract Whole Numbers

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
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 l 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.	**(4.NBT.A.2)** **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)**	**Lessons 6 and 13** **Fluency (5 minutes)** Complete Lesson 13 Fluency **Application Problem (5 minutes)** Lesson 13 **Concept Development (30 minutes)** • Teach Concept Development Lesson 6 Problem 1 with Concept Development Lesson 13 Problem 1 • Teach Concept Development Lesson 6 Problems 2 and 3 with Concept Development Lesson 13 Problem 2 • Teach Concept Development Lesson 13 Problem 3 **Problem Set (10 minutes)** Lesson 6- Problem 3 subtraction problems, 4B, 4C Lesson 13- Problems 1 and 2 **Debrief/ Exit Ticket (10 minutes)** Lesson 6 subtraction problems and Lesson 13 **Suggestions for combining:** **Lessons 14 and 15** **Fluency** Teacher choice: Lesson 14 and 15 fluency titles are the same **Application Problem** Lesson 14 Use Lesson 15 Application Problem with	**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	

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
		Concept Development Problem 3 in Lesson 15 **Concept Development** • Teach Problem 1 in Lesson 14 • Teach Problem 2 in Lesson 14 with Problem 1 in Lesson 15 • Teach Lesson 14 Problem 3 with Lesson 15 Problem 3 and use the Application Problem from Lesson 15 **Problem Set** Lesson 14 Problems 1 and 2 Lesson 15 Problems 1 A,B,C & D. Select 2, 3 or 4 **Exit Ticket** Lessons 14 & 15	
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)** **(can be omitted)** **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) (can be omitted)**	Eureka Parent Newsletter Topic F **Optional Quiz: Topic F** **Pacing Considerations:** Lessons 17 and 19 can be omitted.	**Additional instructional resources for enrichment/remediation:** 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**

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
	Complete End of Module Assessment		• Solve Multi-step Problems **Task Bank** Carnival Tickets (4.OA.A.3)

Module 2: Metric 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	Eureka Parent Newsletter Topic A **Optional Quiz: Topic A** **Pacing Considerations:** No pacing recommendations at this time.	**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 **Additional instructional resources for enrichment/remediation:**

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES
	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)**	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** • **Practice Converting Metric Units of Mass and Capacity** • **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.	**Topic B: Application of Metric Unit Conversions** **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.MD.A.2)**	**Eureka Parent Newsletter Topic B** Optional Quiz: 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**

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TN STATE STANDARDS	CONTENT		INSTRUCTIONAL SUPPORT & RESOURCES
➤ **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.	**Lesson 5:** I can use addition and subtraction to solve multi-step word problems involving length, mass, and capacity **(4. MD.A.1, 4.MD.A.2)** **Complete End of Module Assessment**		Lesson 4: Like This Like That Lesson 5: Use Your Units **Embarc.online – Module 2** **Videos:** **Convert measurements to solve distance problems** **I-Ready Lessons** • Express Measurements in Larger Units • Solve Word Problems Involving Measurement **Task Bank** Margie buys Apples

■Major Work   ➤ Supporting

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES
Module 3: Multi-Digit Multiplication and Division		

TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
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 **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.	. **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 (**4. MD.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**) **Lesson 3:** I can demonstrate understanding of area and perimeter formulas by solving multi-step real world problems. (**4.OA.A.2, 4.MD.A.3**)	[Eureka Parent Newsletter Topic A](#) [Optional Quiz: Topic A](#) **Pacing Considerations:** Combine lessons 2 and 3. Suggestions for combining: **Lesson 2 and 3** **Fluency** Lesson 2: Find the area and perimeter Lesson 2- Rename the Unit Lesson 3 Sprint **Application Problem** Lesson 2 Application Problem **Concept Development** Teach Lesson 2- Problem 1 and 2 Teach Lesson 3 Problem 1 **Note**: Lesson 3 Concept Development and problem set are the same/ teachers can allow students to work Problem Set #1 in groups and come together as a class to discuss **Note**: Lesson 2 problems 3 &4 do not relate to the Exit Ticket and can be used as extensions. **Problem Set** Lesson 2- Problems 1 and 2 Lesson 3- Problem 1 Incorporate additional problems if time permits **Debrief/Exit Ticket** Lesson 2 and 3 Exit Ticket	**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 ____ **Additional instructional resources for enrichment/remediation:** Remediation Guide **Ready teacher-toolbox aligned lessons:** • Lesson 5: Understand Multiplication • Lesson 26: Perimeter and Area **Zearn: Misson 3** Lesson 1: In 'n' Out Lesson 2: Dynamic Dimensions Lesson 3: As Long, As Wide **Embarc.online Module 3**

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TN STATE STANDARDS	CONTENT		INSTRUCTIONAL SUPPORT & RESOURCES
			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** **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)**
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 B: Multiplication by 10, 100, 1000** **Objectives/Learning Targets** **Lesson 4**: I can interpret and represent patterns when multiplying by 10, 100, and 1,000 by single digits recognizing patterns. **(4.NBT.B.5, 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.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.NBT.A.1**)	Eureka Parent Newsletter Topic B Optional Quiz: Topic B **Pacing Considerations:** <mark>**Lesson 4 & 5** can be combined.</mark> **Suggestions for combining:** **Lesson 4 and 5** **Fluency:** Lesson 4/5- Group Count by Multiples of 10 and 100 Lesson 4- Fine the Area and Perimeter Lesson 4- Rename the Units	**Additional instructional resources for enrichment/remediation:** Remediation Guide **Ready teacher-toolbox aligned lessons:** • Lesson 11: Multiply Whole Numbers **Zearn: Misson 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 Two-Digit Numbers by One Digit Numbers

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
		Application Problem Lesson 4 **Concept Development** **Teach** Lesson 4 Problem 1 with Lesson 5 Problem 1 **Teach** Lesson 4 Problem 2 with Lesson 5 Problem 2 **Teach** Lesson 4 Problem 3 with Lesson 5 Problem 3 **Teach** Lesson 5 Problem 3 Lesson 5 Problem 3 **Problem Set** Lesson 4 Problem 3 Lesson 5- Problems 3,4,5 and 6 Assign additional problems if time permits	**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)** **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)** **Lesson 9-10:** I can multiply three- and four-digit numbers by one-digit numbers applying the standard algorithm. **(4.NBT.B.5)** **(Can omit**	**Eureka Parent Newsletter Topic C** **Optional Quiz: Topic C** **Pacing Considerations:** Combine lessons 7 and 8. 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. **Fluency** Lesson 7 Sprint Multiply Mentally Expanded Form or Multiplying using disks **Application Problem** Lesson 7	**Additional instructional resources for enrichment/remediation:** **Remediation Guide** **Ready teacher-toolbox aligned lessons:** • Lesson 11: Multiply Whole Numbers **Zearn: Misson 3** Lesson 7: Fun with Partial Products Lesson 8: Twice Is Nice Lesson 9: Twinsies! Lesson 11: Area of Interest **Embarc.online Module 3** **Videos:** • **Solve multi-digit multiplication problems by using place value understanding**

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT & RESOURCES	
	lesson 10) **Lesson 11:** I can connect the area model and the partial products method to the standard algorithm.**(4.NBT.5)**	**Concept Development** Teach Lesson 7 Problems 1 and 2 with Lesson 8 Problem 1 Teach Lesson 8 Problem 2,3 and 4 **Problem Set** Lesson 7 problem 2 Lesson 8 Problem 2 Assign additional problems if time permits **Debrief/Exit Ticket** Lesson 7 and 8 Exit Ticket	• **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 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	**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**) **Mid Module Assessment**	**Eureka Parent Newsletter Topic D** **Optional Quiz: Topic D** **Pacing Considerations:** Combine lessons 12 and 13. **Fluency** Lesson 13 Sprint Lesson 12 Multiply Multiply Lesson 13 Multiply using the standard algorithm **Application Problem** None **Concept Development** Concept Development and Problem Set are the same for Lesson 12 and Lesson 13 Lesson 12, Problem 3 is similar to Lesson 12 Exit Ticket Lesson 13, Problem 1 is similar to Lesson 13 Exit Ticket	**Additional instructional resources for enrichment/remediation:** **Remediation Guide** **Ready teacher-toolbox aligned lessons:** • Lesson 6: Multiplication and Division Word Problems • **Zearn: Misson 3** Lesson 12: All for One, One for All Lesson 13: These Times are No Joke! **Embarc.online Module 3** **Videos:** • **Solve multi-step multiplication problems** • **Extend understanding of multiplicative comparisons in different types of problems**

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY & FLUENCY
■ **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.		**Exit Ticket** Lesson 12 and 13 Exit Ticket	**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)** **Multiplication Task Arcs**

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TN STATE STANDARDS	CONTENT	INSTRUCTIONAL SUPPORT	VOCABULARY & FLUENCY
Domain: Numbers and Operations in Base Ten **Cluster:** Use place value understanding and properties of operations to perform multi-digit arithmetic ■ **4.NBT.B.6** Find whole-number quotients and remainders with up to four dividends and one- digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	**. Essential Questions** • How can you use place value and patterns to help you divide mentally? • What does it mean when you divide, and some are left over? • What do you do when there are not enough hundreds to divide? • How can you use multiplication to find all the factors of a number? • How can you sort numbers by their factors? • What hidden questions lie within a multiple-step problem? **Topic E: Division of Tens and Ones with Successive Remainders** **Learning Targets/Objectives:** **Lesson 14**: I can solve division word problems with remainders. **(4.NBT.B.6)** **Lesson 15**: I can understand and solve division problems with a remainder using the array and area models. **(4.NBT.B.6)** **Lesson 16:** I can understand and solve two-digit dividend division problems with a remainder in the ones place by using place value disks. **(4.NBT.B.6)**	**Eureka Parent Newsletter- Topic E** **Optional Quiz: Topic E** **Pacing Considerations** Omit Lesson 19, and instead, embed discussions of interpreting remainders into other division lessons. Omit Lesson 21 because students solve division problems using the area model in Lesson 20. Using the area model to solve division problems with remainders are not specified in the progressions documents.	**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 ____ **Additional resources for enrichment/ Remediation** Remediation Guide **Embarc.online Module 3** **Ready teacher- toolbox aligned lessons** • Lesson 12- Divide Whole Numbers **Zearn Lessons- Mission 3** Lesson 14- That's what's left Lesson 15- All that Remains Lesson 16- Divisible Disks Lesson 17- Ten is not the end Lesson 18- Divide those Numbers Lesson 19- Shell it Out Lesson 20- Break and Build

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RESOURCE TOOLKIT
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.

Textbook Resources	CCSS	Videos
Great Minds' Eureka Math	TN Math Standards Achieve the Core	Eureka Resources/Homework Resources NCTM Common Core Videos TN Core Online Math Resources LearnZillion
Children's Literature Math and Literature: A Match Made in the Classroom Math for Kids-Best Children's Books Scholastic: Books and Programs to Improve Elementary Math	**Interactive Manipulatives** Multiplying by Repeated Addition Multiplication Games Multiplication Fluency	**Additional Sites** http://www.k-5mathteachingresources.com/3rd-grade-number-activities.html www.illustrativemathematics.org http://www.edutoolbox.org/tntools/list/grade/819/955/3#96 0

Other

Parent Roadmap: Supporting your child in Grade Four Mathematics

Illustrated Mathematics Dictionary for Kids

Other:

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

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August 2019

Suggested Lessons for the Week	Monday	Tuesday	Wednesday	Thursday	Friday	Notes:
				1	**2**	**Flex Day Options Include:** *Standard*- Suggested standard(s) to review for the day (*-denotes a Power Standard)
	5	**6**	**7**	**8**	**9**	*Pacing* – Use this time to adjust instruction to stay on pace. *Other*- This includes assessments, review, re-teaching, etc.
	12	**13**	**14**	**15**	**16**	
	Use this time to establish routines, procedures, and build positive classroom culture. Additional SEL resources: SEL Connections and SEL Competencies					
Module 1	**19** Topic A Lesson 1	**20** Topic A Lesson 2	**21** Topic A Lesson 3	**22** Topic A Lesson 4	**23** **Flex Day Options** **4.NBT.A.1*** **4.NBT.A.2** **Pacing** **Other**	Optional quizzes: Module 1 Topic A Topic B and C (Quizzes should not take more than 15 minutes to administer)
Module 1	**26** Topic B Lesson 5	**27** Topic C Combine lessons 7 and 8	**28** Topic C Combine lessons 9 and 10	**29** **Mid Module Assessment**	**30** **Flex Day Options** **4,NBT.A.2** **4.NBT.A.3*** **Pacing** **Other**	Lesson 6 will be embedded with lessons 11 and 13.

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September 2019						
Suggested Lessons for the Week	**Monday**	**Tuesday**	**Wednesday**	**Thursday**	**Friday**	**Notes:**
Module 1	**2** *Labor Day (Out)*	**3** Topic D Combine lessons 6 and 11	**4** Topic E Combine lessons 6 and 13	**5** Topic E Combine lessons 14 and 15	**6** Topics D and E Combine lessons 12 and 16	**Flex Day Options Include:** ***Standard***- Suggested standard(s) to review for the day (*-denotes a Power Standard)
Module 2	**9** Topic F Lesson 18	**10** **End of Module Assessment**	**11** Topic A Lesson 1	**12** Topic A Lesson 2	**13** **Flex Day Options** **4.MD.A.1** **4.MD.A.2** **Pacing** **Other**	***Pacing*** – Use this time to adjust instruction to stay on pace. ***Other***- This includes assessments, review, re-teaching, etc.
Module 2	**16** Topic A Lesson 3	**17** Topic B Lesson 4	**18** Topic B Lesson 5	**19** **End of Module Assessment** *Parent Teacher Conferences*	**20** *½ day students* **Flex Day Options** **4.MD.A.1** **4.MD.A.2** **Pacing** **Other**	Optional Quizzes: Module 1 Topic D and E Topic F Optional quizzes- Module 2 Topic A Topic B
Module 3	**23** Topic A Lesson 1	**24** Topic A Combine lessons 2 and 3	**25** Topic B Combine lessons 4 and 5	**26** Topic B Lesson 6	**27** **Flex Day Options** **4.OA.A.2** **4.NBT.B.5** **Pacing** **Other**	Optional quizzes- Module 3 Topic A Topic B Topic C
Module 3	**30** Topic C Combine lessons 7 and 8	1	2	3	4	(Quizzes should not take more than 15 minutes to administer)

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October 2019

Suggested Lessons for the Week	Monday	Tuesday	Wednesday	Thursday	Friday	Notes:
Module 3	30	1 Topic C Lesson 9	2 Topic C Lesson 11	3 Topic D Combine lessons 12 and 13	4 Flex Day Options 4.NBT.B.5 4.OA.A.1 Pacing Other	**Flex Day Options Include:** *Standard*- Suggested standard(s) to review for the day (*-denotes a Power Standard)
Module 3	7 **Mid Module Assessment**	8 Topic E Lesson 14	9 Topic E Lesson 15	10 Topic E Lesson 16	11 *½ day students* *End of Quarter 1* **Flex Day Options** **4..NBT.B.6** **Pacing** **Other**	*Pacing* – Use this time to adjust instruction to stay on pace. *Other*- This includes assessments, review, re-teaching, etc.
	14	15	16	17	18	Optional Quizzes- Module 3 Topic C Topic D Topic E
			Fall Break			(Quizzes should not take more than 15 minutes to administer)
	21 *Quarter 2 begins*	21	23	24	25	
	28	29	30	31 *Halloween*	1	

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