Department of Teaching & Learning

Third Grade Math Pacing Guide 2020-2021

Third Grade Pacing Guide

First Nine Weeks	
Units/Topics	
Week 1	Review Accountable Talk and Standards for Mathematical Practice
Weeks 2-3	3.NBT.A.2 - Addition
Weeks 4-5	3.NBT.A.2 - Subtraction
Week 6	3.NBT.A.1 - Rounding and Estimating
Weeks 7-8	3.OA.A.1, 3.OA.A.3 Multiplication Strategies and Word Problems
Week 9	3.MD.C Connecting Multiplication (Arrays) with Area

Second Nine Weeks	
Units/Topics	
Weeks 1-2	3.OA.B.5 Multiplication Properties and Patterns
Week 3	3.OA.A.2 Division Strategies and Word Problems
Week 4	3.OA.A.4 Connecting Multiplication and Division
Weeks 5-6	3.OA.D.8 2-Step Word Problems
Week 7-8	3.MD.A.1 - Time Unit • Ensure that instruction meets the rigor called for by the standard. To help with this, use the Instructional Focus Documents (Use the dropdown to choose what grade-level) and the Go Math Guidance Documents

Third Nine Weeks	
Units/Topics	
Weeks 1-2	3.MD.D.8 - Perimeter
Weeks 3-5	3.MD.C - Area
Week 6	3.NF.A.2 – Naming Fractions
Week 7	3.NF.A.3 - Fractions on a Number Line
Week 8	3.NF.A.3 - Compare Fractions
Week 9	3.MD.A.1 - Equivalent Fractions
Week 10	3.MD.B.3 Graphs

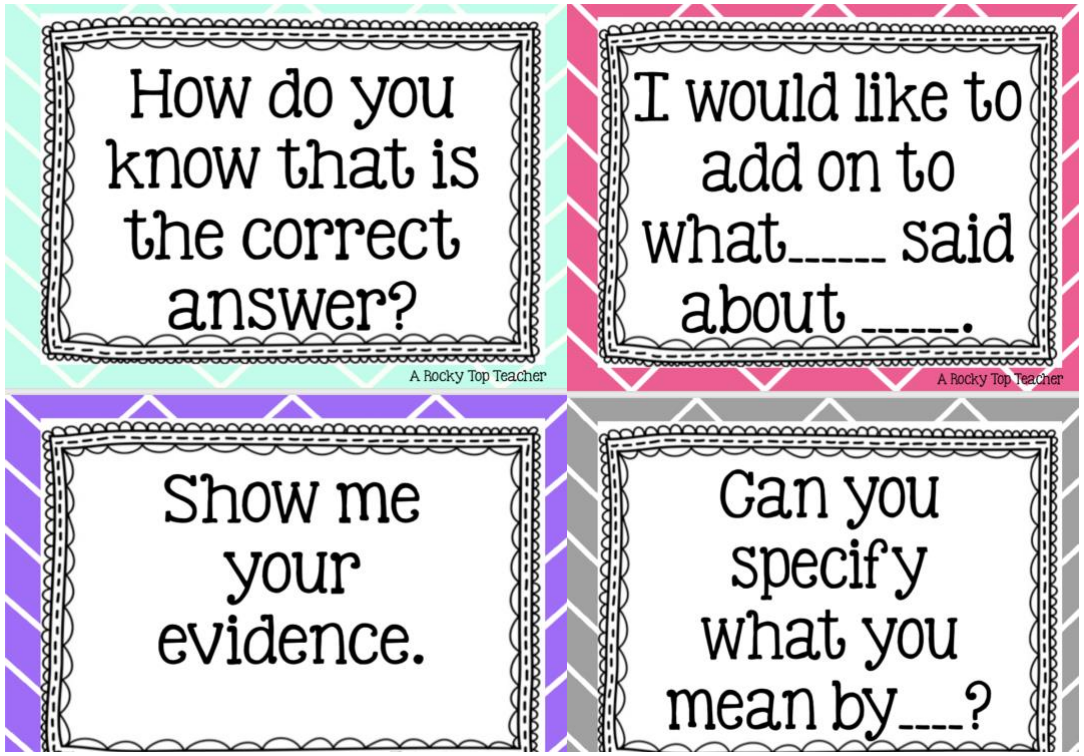
Fourth Nine Weeks	
Units/Topics	
Week 1	3.MD.B.4 Measurement to 1/4” and Line Plots
Week 2	3.G.A.1 - Quadrilaterals
Week 3	3.MD.A.2 - Measure and Estimate Liquid Volumes & Masses
Week 4	TN Ready Review
Weeks 5-7	TN Ready Assessments
Weeks 8-9	4.NBT.A, 4.NBT.B.5, 4.G.A.3 3.MD.C4th Grade Place Value, and Multi-Digit Multiplication

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

First Nine Weeks – Topics and Concepts to be covered during the first quarter of the year		
Tennessee Standards **The Major Work of the Grade are bolded.**	**Learning Outcomes** **The Major Work of the Grade are bolded.**	**Content**
Week 1: Mathematical Practice and Accountable Talk		

Refer to pages 9-12 for the Eight Standards for Mathematical Practice.
Posters for the 8 standards to print and hang in your classroom can be found here. You may have to scroll a little before you see them.
There are a lot of fantastic resources on the site above to help you understand, explain, and teach the 8 practices!

Free Accountable Talk posters to print and hang in your classroom can be found here.



1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
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 (Common Core S

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

First Nine Weeks – Topics and Concepts to be covered during the first quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Weeks 2-3: Addition		
3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. **3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.** ***For example, analyze patterns in the multiplication table and observe that 4 times a number is always even (because 4 x 6 = (2 x 2) x 6 = 2 x (2 x 6), which uses the associative property of multiplication***	**Learning Targets** I can add within 1000 with ease using various place value strategies and properties. **I can identify and describe arithmetic patterns in number charts, addition tables, and multiplication tables.** **Essential Understandings:** 1. Addition can be used to solve real world problems that involve joining, part-part whole or comparison. 2. There are properties that are used to govern arithmetic and algebra that are always true. 3. Relationships can be described and generalizations made for mathematical situations that have numbers or objects that repeat in predictable ways. 4. Sometimes the answer to one problem/question is needed to find the answer to another problem/question. 5. Answers to problems should always be checked for reasonableness, and this can be done in different ways. **Essential Questions:** 1. How can addition properties be used to show relationships that always hold true? 2. How can you use place value to add 3-digit numbers? 3. How can you break apart numbers to help you add 2 digit numbers using mental math? 4. How can we use estimation and rounding to check to see if our answers are reasonable?	**GO! Math** 1-1 Number Patterns 1-5 Use Properties to Add 1-6 Use the Break Apart Strategy to Add 1-7 Use Place Value to Add - EngageNY Module 2, Topic D has additional lessons on addition **Vocabulary:** addition, add, addend, sum, strategies, properties **Mathematical Practices Focus** 6. Attend to precision. **Additional Resources:** Mall Mania by Stuart J. Murphy BrainpopJr: Adding with Regrouping **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf Ensure that instruction meets the rigor called for by the standard. To help with this, use the Instructional Focus Documents (Use the dropdown to choose what grade-level) and the Go Math Guidance Documents
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

First Nine Weeks – Topics and Concepts to be covered during the first quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Weeks 4-5: Subtraction		
3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	**Learning Targets** I can subtract within 1000 with ease using various place value strategies and properties. **Essential Understandings:** 1. Some real-world problems involving joining, separating, part-part-whole, or comparison can be solved using subtraction. 2. There is more than one way to do a mental calculation. 3. Place value relationships can help to simplify mathematical operations and equations. 4. Estimation strategies include front end estimation, rounding with adjustments, and using benchmark numbers. These strategies can be used to check for reasonableness. **Essential Questions:** 1. When do we subtract? 2. How can you subtract using mental math? 3. How can you use place value to subtract 3-digit numbers?	**GO! Math** 1-9 Mental Math Strategies for Subtraction 1-10 Use Place Value to Subtract 1-11 Combine Place Values to Subtract EngageNY Module 2, Topic E has additional lessons on subtraction **Vocabulary:** subtraction, subtract, difference, strategies **Mathematical Practices Focus** 6. Attend to precision. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Additional Resources:** Shark Swimathon by Stuart J. Murphy BrainpopJr: Subtracting without Regrouping, Subtracting with Regrouping **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

First Nine Weeks – Topics and Concepts to be covered during the first quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 6: Rounding and Estimating		
3.NBT.A.1 Round whole numbers to the nearest 10 or 100 using understanding of place value.	**Learning Targets** I can determine the midway point between multiples of ten or hundred in order to round conceptually. I can use place value to round to the nearest 10 by reasoning about position of the number in relation to the midpoint. I can use place value to round to the nearest 100 by reasoning about position of the number in relation to the midpoint. **Essential Understandings:** 1. Numbers are rounded to the nearest ten or hundred by determining which it is closer to on a number line. 2. When reasoning about the closest ten or hundred on a number line, you must be able to identify the midpoint. **Essential Questions:** 1. How can you round numbers? 2. How can you use compatible numbers and rounding to estimate sums? 3. How can you use compatible numbers and rounding to estimate differences?	**GO! Math** 1.2 Round to the Nearest Ten or Hundred 1.3 Estimate Sums 1.8 Estimate Differences EngageNY Module 2, Topic C has additional lessons on rounding **Vocabulary:** place value, round, estimate **Mathematical Practices Focus** 6. Attend to precision. **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** Rounding Numbers PDF Rounding Numbers Song BrainpopJr: Place Value, Rounding **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

First Nine Weeks – Topics and Concepts to be covered during the first quarter of the year		
Tennessee Standards **The Major Work of the Grade are bolded.**	**Learning Outcomes** **The Major Work of the Grade are bolded.**	**Content** EngageNY Modules 1 and 3 contain additional lessons for all of the multiplication and division standards
Weeks 7-8: Multiplication Strategies and Word Problems		
3.OA.A.1 Interpret the factors and products in whole number multiplication equations, (e.g., 4x7 is 4 groups of 7 objects with a total of 28 objects or 4 strings measuring 7 inches each with a total of 28 inches.) *Area, in the form of arrays, can (and should) go ahead and be introduced along with this standard! **3.OA.A.3 Multiply within 100 to solve contextual problems, with unknowns in all positions, in situations involving equal groups, arrays, and measurement quantities using strategies based on place value, the properties of operations, and the relationship between multiplication and division (e.g., contexts including computations such as 3 x ? = 24, 6 x 16 = ?, ? ÷ 8 = 3, or 96 ÷ 6 =?)**	**Learning Targets** **I can interpret the factors and products in whole number multiplication equations.** **(50 = 5x10 can be interpreted as 5 groups of 10, an array with 5 rows and 10 columns, the area of a 5-by-10 rectangle, a number line with 5 groups of 10, or repeated addition 10+10+10+10+10).** **I can determine when to multiply in word problems by focusing on equal groups and arrays/area with unknown products.** **I can represent multiplication situations with concrete models.** **I can determine the total number of groups and items in each group** **I can make connections between concrete models and equations/expressions.** **Enduring Understandings:** 1. Some real-world problems involve joining or separating equal groups. 2. Repeated addition represents/is joining equal groups and is one way to think about multiplication. 3. An array represents/is joining equal groups and is one way to think about multiplication. 4. A number line can represent joining equal groups and is one way to think about multiplication. 5. Area can represent joining equal groups and is one way to think about multiplication.	**GO! Math** 3-1 Count Equal Groups 3-2 Relate Addition and Multiplication 3-3 Skip Count on a Number Line 3-5 Model with Arrays **Vocabulary:** multiplication, multiply, factors, products, arrays, equal groups, groups of, twice, commutative property **Mathematical Practices Focus** 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 7. Look for and make use of structure. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:**

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

	Essential Questions: 1. How can you find the total number of objects in equal groups? 2. What are arrays, and how do they show multiplication? 3. How can you write a story to describe a multiplication fact? 4. How do you write a good mathematical explanation? 5. Can you use an array to solve multiplication problems? 6. How is multiplication like addition?	See Multiplication and Division Situations Chart (scroll to the bottom) Amanda Bean's Amazing Dream by Cindy Neuschwander Too Many Kangaroo Things to Do by Great Source Mathstart BrainpopJr: Arrays, Repeated Addition **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

First Nine Weeks – Topics and Concepts to be covered during the first quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 9: Connect Multiplication (Arrays) with Area		
3.MD.C.5 Recognize that plane figures have an area and understand concepts of area measurement. **a. Understand that a square with side length 1 unit, called "a unit square," is said to have "one square unit" of area and can be used to measure area.** **b. Understand that a plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units** **3.MD.C.6 Measure areas by counting unit squares (square centimeters, square meters, square inches, square feet, and improvised units).** **3.MD.C.7 Relate area of rectangles to the operations of multiplication and addition.** **a. Find the area of a rectangle with whole-number side lengths by tiling it and show that the area is the same as would be found by multiplying the side lengths.** **b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real-world and mathematical problems and represent whole-number products as rectangular areas in mathematical reasoning.**	**Learning Targets** **I can measure area with square units.** **I can use square units to show the area of plane figures.** **I can find an area by counting square units.** **I can find an area by tiling, and also prove that it is the same as multiplying the side lengths.** **I can solve and reason through real-world problems that require finding the area of rectangles with whole number lengths.** **Enduring Understandings:** 1. The region inside a shape is its area and can be measured using square units. 2. Area of rectangles can be found by adding the individual square units. 3. A rectangle can be decomposed into an array, therefore area can be found by multiplying side lengths. **Essential Questions:** What is area and how do you measure it? How can you find the area of a plane figure? Why can you multiply to find the area of a rectangle?	**GO! Math** 11-4 Understand Area 11-5 Measure Area 11-6 Use Area Models **Vocabulary:** attribute, area, square unit, unit square, plan figure, gap, overlap, square cm, square m, square in, square ft, nonstandard units, tiling, side length, **Mathematical Practices Focus** 4. Model with mathematics. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** BrainpopJr: Area **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 1st Nine Weeks 2020-2021

Third 2nd Nine Grade Mathematics Curriculum Map, Weeks 2020-2021

Second Nine Weeks – Topics and Concepts to be covered during the second quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Weeks 1-2: Multiplication Properties and Patterns		
3.OA.B.5 Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.) ***Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.)*** ***3 × 5 × 2 can be solved by (3 x 5) x 2 or 3 x (5 x 2) (Associative property of multiplication.)*** ***One way to find 8 x 7 is by using 8 × (5 + 2) = (8 × 5) + (8 × 2). By knowing that 8 x 5 = 40 and 8 x 2 = 16, then 8 x 7 = 40 + 16 = 56. (Distributive property of multiplication over addition.)*** *These properties should be taught thoroughly through the Concrete-Pictorial-Abstract approach to ensure depth of understanding. You may wish to break up the three properties more throughout the year and focus on just commutative and associative now and save distributive property for when you teach the area standards.	**Learning Targets** **I can explain how the products are found using these strategies.** **I understand that the order of the factors doesn't matter.** **I understand that when I have more than two factors, I can rearrange them to make an easier problem.** **I can decompose a factor into two parts and multiply by the other factor and find the sum of those parts to find the product.**	**GO! Math** 3.6 Commutative Property of Multiplication 4.4 Distributive Property 4.6. Associative Property of Multiplication 4.7 Patterns on the Multiplication Table 5.4 Multiplication Strategies with Multiples of 10 5.5 Multiply 1-Digit Numbers by Multiples of 10 NYEngage Module 3, Lesson 17 has a lesson specifically about patterns in a multiplication chart. **Vocabulary:** properties, Commutative Property, Identity Property, Zero Property, Associative Property, Distributive Property, multiples **Mathematical Practices Focus** 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 7. Look for and make use of structure. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said?
3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, analyze patterns in the multiplication table and observe that 4 times a number is always even (because 4 x 6 = (2 x 2) x 6 = 2 x (2 x 6), which uses the associative property of multiplication*	**I can explain arithmetic patterns using properties of operations.**	
3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.	I can multiply one digit whole numbers by multiples of 10. **Enduring Understandings** For a given set of numbers, there are	

	relationships that are always true called properties, and these are the rules that support arithmetic with fluency. Students do not need to use the formal terms for these properties, but all of these applications should be explored concretely through models then related to the equation/expression. **Essential Questions** How can you use the Commutative Property of Multiplication to find products? When might you need to multiply three numbers? When would it be helpful to decompose a factor when multiplying? How can you use the properties to explain patterns on the multiplication table?	Can someone add on to what was said? Does someone have a similar idea? Do you agree or disagree? **Additional Resources:** See Properties of Operations Table on page 34 for the multiplication properties BrainpopJr: Multiplying by 0 or 1 Brainpop: Commutative Property, Associative Property **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf Ensure that instruction meets the rigor called for by the standard. To help with this, use the Instructional Focus Documents (Use the dropdown to choose what grade-level) and the Go Math Guidance Documents

Third 2nd Nine

Grade Mathematics Curriculum Map, Weeks 2020-2021

Second Nine Weeks – Topics and Concepts to be covered during the second quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 3: Division Strategies and Word Problems		
3.OA.A.2 Interpret the dividend, divisor, and quotient in whole number division equations (e.g., 28÷7 can be interpreted as 28 objects divided into 7 equal groups with 4 objects in each group or 28 objects divided so there are 7 objects in each of the 4 equal groups.) **3.OA.B.6 Understand division as an unknown–factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*** **3.OA.A.3 Divide within 100 to solve contextual problems, with unknowns in all positions, in situations involving equal groups, arrays, and measurement quantities using strategies based on place value, the properties of operations, and the relationship between multiplication and division (e.g., contexts including computations such as 3 x ? = 24, 6 x 16 = ?, ? ÷ 8 = 3, or 96 ÷ 6 =?)**	**Learning Targets** **I can model concretely various division situations by making equal groups or finding the number of objects in each group.** **I understand that division is finding the number of equal groups or the number of objects in each group.** **I understand that division is finding unknown factors.** **I can determine when to divide in word problems requiring me to find equal groups and arrays/area with group size unknown and number of groups unknown.** **I can describe the context for a division situation.** **Enduring Understandings** 1. Students will understand that some real-world problems involving joining or separating equal groups can be solved using division. 2. Partitive division, also called sharing, involves separating equal shares to determine "how many groups." 3. Quotative division, also called repeated subtraction, involves separating equal groups to determine "how many in each group." 4. Some problems can be solved by using objects to act out the problem or by drawing a picture to show the actions in the problem. **Essential Questions** 1. How can you think of division as sharing?	**GO! Math** 6.2 Size of Equal Groups 6.3 Number of Equal Groups 6.4 Model with Bar Models 7-4A Choose an Appropriate Equation (Transition lesson) **Vocabulary:** Divide, division, divisor, dividend, quotient, partitioned equally, group size **Mathematical Practices Focus** 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** The Doorbell Rang by Pat Hutchins Divide and Ride by Stuart Murphy BrainpopJr: Making Equal Groups, Repeated Subtraction

	2. How can you think of division as repeated subtraction? 3. What kinds of stories involve division situations? 4. How can you use bar models to solve division problems? 5. How can you model a division problem to find how many in each group? 6. How can you model a division problem to find how many equal groups?	**Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third 2nd Nine Grade Mathematics Curriculum Map, Weeks 2020-2021

Second Nine Weeks – Topics and Concepts to be covered during the second quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 4: Connecting Multiplication and Division		
3.OA.A.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers within 100. *For example, determine the unknown number that makes the equation true in each of the equations 8 × ? = 48, 5 = ? ÷ 3, 6 × 6 = ?* **3.OA.C.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of 3rd grade, know from memory all products of two one-digit numbers and related division facts.** *Strategies for fluency should be explicitly taught. e.g., doubles, ten facts, square numbers, decomposing unknown facts to known facts, skip counting, 5 facts (half of ten), nines (one group less than 10 facts). **3.OA.A.3 Multiply and divide within 100 to solve contextual problems, with unknowns in all positions, in situations involving equal groups, arrays, and measurement quantities using strategies based on place value, the properties of operations, and the relationship between multiplication and division (e.g., contexts including computations such as 3 x ? = 24, 6 x 16 = ?, ? ÷ 8 = 3, or 96 ÷ 6 =?)**	**Learning Targets** **I can determine the unknown number in multiplication and division problems.** **I can multiply and divide any two numbers within 100 with ease by picking and using strategies that will get to the answers fairly quickly.** **I can determine when to multiply or divide using all six multiplication and division situation types: equal groups, unknown product, group size unknown, number of groups unknown and arrays/area: unknown product, group size unknown, number of groups unknown** **Enduring Understandings** 1. Multiplication and division have inverse relationships. 2. The inverse relationship between multiplication and division can be used to find division facts; every division fact has a related multiplication fact. **Essential Questions** 1. How are multiplication and division facts related? 2. How can you use multiplication to help you divide?	**GO! Math** 5.2 Find Unknown Numbers 6.8 Write Related Facts Fact Fluency Practice: 3.7 Multiplying by 0 and 1 4.1 - 4.3 Multiplying by 2, 3, 4, 5, 6, 10, 4.5 Multiplying by 7 4.8 Multiplying by 8 4.9 Multiplying by 9 6.9 Dividing by 0 and 1 7.1 – 7.9 Dividing by 2, 3, 4, 5, 6, 7, 8, 9, 10 **Vocabulary:** multiply, divide, equations, unknown, multiples, factor, product, quotient, strategies, properties, operation **Mathematical Practices Focus** 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 7. Look for and make use of structure. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Additional Resources:** Multiplication Rhymes PDF Multiplication Rhymes Song **Daily Math Fact Practice should be incorporated from now until end of the school year**
Teacher Created Formative Assessment		

Third 2nd Nine

Grade Mathematics Curriculum Map, Weeks 2020-2021

Second Nine Weeks – Topics and Concepts to be covered during the second quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Weeks 5-6: 2-Step Word Problems		
3.OA.D.8 Solve two-step contextual problems using the four operations. 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.	**Learning Targets** **I can solve two-step word problems using addition, subtraction, multiplication, and division.** **I can represent these problems using an equation and a letter for the unknown part.** **I can check and explain the reasonableness of my answer using mental computation and estimation.** **Enduring Understandings** 1. Sometimes the answer to one problem/question is needed to find the answer to another problem/question. 2. Answers to problems should always be checked for reasonableness, and this can be done in different ways. 3. The letter that represents an unknown	**GO! Math** 1-12 Model Addition and Subtraction 3-4 Model Multiplication 4-10 Problem Solving –Multiplication 7-10 Two-Step Problems EngageNY Module 3, Lesson 18 and Module 7,Topic A have additional lessons on one-and two-step word problems **Vocabulary:** multiply, divide, factor, product, quotient, unknown, reasonableness, mental computation **Mathematical Practices Focus** 7. Look for and make use of structure. 6. Attend to precision **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** See Addition and Subtraction Situations Table and Multiplication and Division Situations Table (scroll to the bottom) **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf

	quantity is the unknown in the part-whole relationship. **Essential Questions** How can I use the four operations to solve two-step word problems? How can you use the strategy draw a diagram to solve one- and two-step addition and subtraction problems?	
Teacher Created Formative Assessment		

Second Nine Weeks – Topics and Concepts to be covered during the second quarter of the year		
Tennessee Standards **The Major Work of the Grade are bolded.**	**Learning Outcomes** **The Major Work of the Grade are bolded.**	**Content** **EngageNY contains additional lessons**
Weeks 7-8: Time Unit		
3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve contextual problems involving addition and subtraction of time intervals in minutes. *For example, students may use a number line to determine the difference between the start time and the end time of lunch.*	**Learning Targets** **I can read and write time to the nearest minute.** **I can add and subtract time using clock models and number line models.** **I can solve word problems related to time and represent elapsed time on a number line.** **I can determine the start time when given the elapsed time and the end time.** **Essential Understandings:** 1. There are different units for measuring time. Many clock times can be expressed in more than one way. 2. The end time for an event can be known if one knows the start time and the duration of the event. 3. The start time for an event can be known if one knows the end time and the duration of the event and then working backwards. **Essential Questions:** 1. How can you tell time to the nearest minute? 2. How can you measure elapsed time in minutes? 3. How can you find a starting time or an ending time when you know the elapsed time?	**GO! Math** 10.1 Time to the Minute 10.2 A.M and P.M. 10.3 Measure Time Intervals 10.4 Use Time Intervals 10.5 Time Intervals EngageNY Module 2, Topic A has lessons for adding and subtracting time **Vocabulary:** time, time intervals, minute, hour, elapsed time, A.M., P.M. **Mathematical Practices Focus** 6. Attend to precision. **Accountable Talk Stems:** ▯ Did everyone hear that? ▯ Can someone repeat what was just said? ▯ Can someone add on to what was said? ▯ Does someone have a similar idea? ▯ Do you agree or disagree? **Additional Resources:** Pigs on a Blanket: Fun with Math and Time by Amy Axelrod BrainpopJr: Parts of a Clock, Time to the Hour, Time to the Quarter and Half Hour, Time to the Minute **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 3rd Nine Weeks 2020-2021

Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year		
Tennessee Standards **The Major Work of the Grade are bolded.**	**Learning Outcomes** **The Major Work of the Grade are bolded.**	**Content**
Weeks 1-2: Perimeter		
3.MD.D.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. **3.G.A.3** Determine if a figure is a polygon.	**Learning Targets** I can define perimeter. I can find the perimeter of polygons when given the length of all sides. I can find the unknown side lengths of polygons when given the perimeter. I can show different rectangles that have the same perimeter and different areas. I can show rectangles that have the same area and different perimeters. I can identify whether a figure is a polygon or not. **Essential Understandings:** 1. The distance around a figure is its perimeter, which is the sum of the length of the sides. 2. Shapes can have the same perimeter and different areas. 3. Shapes can have the same area and different perimeters. **Essential Questions:** 1. How do you find perimeter of common shapes? 2. How can you find an unknown side length if given the perimeter? 3. How can rectangles have the same perimeter and different areas? 4. How can rectangles have the same area and different perimeters? 5. What characteristics do all polygons have in common?	**GO! Math** 11.1 Model Perimeter 11.2 Find Perimeter 11.3 Find the Unknown Side Lengths 11.9 Same Perimeter, Different Areas 11.10 Same Area, Different Perimeters EngageNY Module 7, Topic C has additional perimeter lessons **Vocabulary:** attribute, perimeter, plan figure, linear, area, polygon, side length **Mathematical Practices Focus** 4. Model with mathematics. **Additional Resources:** Perimeter Song PDF Perimeter and Area Song PDF Racing Around by Stuart Murphy Chickens on the Move (Math Matters) by Pamela Pollack Spaghetti and Meatballs for All by Marilyn Burns Perimeter, Area, and Volume by David Adler BrainpopJr: Perimeter **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 3rd Nine Weeks 2020-2021

Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year		
Tennessee Standards **The Major Work of the Grade are bolded.**	**Learning Outcomes** **The Major Work of the Grade are bolded.**	**Content**
Week 3-5: Area		
3.MD.C.7 Relate area of rectangles to the operations of multiplication and addition. **c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b +c is the sum of a x b and a x c. Use area models to represent the distributive property in mathematical reasoning.** ***For example, in a rectangle with dimensions 4 by 6, students can decompose the rectangle into 4 x 3 and 4 x 3 to find the total area of 4 x 6.*** **d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping parts, applying this technique to solve real-world problems.**	**Learning Targets** **I can use and prove area models can represent the distributive property.** **I can recognize and prove that area is additive.** **Essential Understandings** The area of a rectangle or rectilinear shape can be found by decomposing it into smaller rectabgles and then adding the areas of smaller rectangles. **Essential Questions** 1. How do you	**GO! Math** 11-7 Areas of Rectangles 11-8 Area of Combined Rectangles EngageNY Module 4 has an entire unit covering all of the area standards **Vocabulary:** decomposing **Mathematical Practices Focus** 4. Model with mathematics **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** ▯ Did everyone hear that? ▯ Can someone repeat what was just said? ▯ Can someone add on to what was said? ▯ Does someone have a similar idea? ▯ Do you agree or disagree? **Additional Resources:** See Properties of Operations Table on page 34 Perimeter and Area Song PDF **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf

	estimate to find the area of an irregular shape? 2. How can you use the strategy find a pattern to solve area problems? 3. How can you break apart a figure to find the area?	• Ensure that instruction meets the rigor called for by the standard. To help with this, use the Instructional Focus Documents (Use the dropdown to choose what grade-level) and the Go Math Guidance Documents
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 3rd Nine Weeks 2020-2021

Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 6: Naming Fractions		
33.NF.A.1 Understand a fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts (unit fraction); understand a fraction a/b as the quantity formed by *a* parts of size 1/b. *For example, ¾ represents a quantity formed by 3 parts of size ¼.* **3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. *For example, partition a shape into 4 equal parts with equal area, and describe the area of each part as 1/4 of the area of the shape.***	**Learning Targets** **I can explain any unit fraction as one part of a whole.** **I can explain the meaning of the numerator and denominator.** **I can name various parts of the whole using fractions and explain that the fraction is made of unit pieces. Ex: 3/8 = 1/8 + 1/8 + 1/8** I can partition (divide) shapes into equal parts with equal areas. **Essential Understandings** 1. A whole can be divided into equal-sized parts. Those pieces are equal in size (covering the same area) but not necessarily equal in shape. 2. A fraction describes the division of a whole (parts of a whole, number line) into equal parts. 3. A fraction is relative to the size of a whole. 4. The denominator tells how many equal size pieces the whole is divided into. 5. The numerator tells how many pieces you are counting. 6. The more equal pieces you create, the smaller the pieces become. 7. Fractions are numbers, not just parts of a whole. Fractions should be seen as special numbers that allow us to count pieces that are part of a whole. **Essential Questions** 1. How can you divide a region into equal parts? 2. How can you show and name part of a whole? 3. How can a fraction name a part of a group? 4. What do the top and bottom numbers of a fraction tell?	**GO! Math** 8-1 Equal Parts of a Whole 8-2 Equal Shares 8-3 Unit Fractions of a Whole 8-4 Fractions of a Whole EngageNY Module 5, Topics A and B (Lessons 1-9) have additional lessons for these two standards **Vocabulary:** partition(ed), equal parts, fraction, unit fraction, numerator, denominator, eighths, fourths, halves, sixths, thirds, whole **Mathematical Practices Focus** 6. Attend to precision **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** ▯ Did everyone hear that? ▯ Can someone repeat what was just said? ▯ Can someone add on to what was said? ▯ Does someone have a similar idea? ▯ Do you agree or disagree? **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf

Third Grade Mathematics Curriculum Map 3rd Nine Weeks 2020-2021

Teacher Created Formative Assessment

Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year

Tennessee Standards	Learning Outcomes	Content
Week 7: Fractions on a Number Line		
3.NF.A.2 Understand a fraction as a number on the number line. Represent fractions on a number line diagram. ** Because this is the first time to work with number lines between the wholes, students will need ample experiences finding linear models to reason about fractions. **a. Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/b and that the endpoint locates the number 1/b on the number line. *For example, on a number line from 0 to 1, students can partition it into 4 equal parts and recognize that each part represents a length of ¼ and the first part has an endpoint at ¼ on the number line.*** **b. Represent a fraction a/b on a number line diagram by marking off *a* lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line. *For example, 5/3 is the distance from 0 when there are 5 iterations of 1/3.***	**Learning Targets** **I can represent a fraction on a number line.** **I can partition a number line into equal sized parts**. (Using fraction strips to find fractional parts on a number line can help make the connection between the fraction models to the number line iterations.) **I can identify each point on a number line as a group of unit fractions.** **I can extend the number line to include fractions greater than one.** **Essential Understandings:** Each fraction can be associated with the unique point on a number line to represent a fractional part of a whole. The distance between 0 and 1 represents one whole. Work with improper fractions, not as a special group of fractions, but as a continuation of counting by unit fractions. This leads to the understanding that if the numerator and denominator are the same, the fraction is equal to one and fractions with a numerator greater than the denominator means the fraction is greater than one. **Essential Questions:** How can you represent and locate fractions on a number line? When might you use a fraction greater than 1 or a whole number?	**GO! Math** 8-5 Fractions on a Number Line 8-6 Relate Fractions and Whole Numbers EngageNY Module 5, Topic D has a 6 lesson unit covering Fractions on a Number Line **Vocabulary:** fraction, equal distance (intervals), numerator, denominator **Mathematical Practices Focus** 6. Attend to precision. **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf

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Third Grade Mathematics Curriculum Map 3rd Nine Weeks 2020-2021

Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 8: Compare Fractions		
3.NF.A.3 Explain equivalence of fractions and compare fractions by reasoning about their size. **d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or < to show the relationship and justify the conclusions.**	**Learning Targets** **I can compare two fractions with the same numerator or denominator by reasoning about their size.** **I can justify my answer about a comparison by using a visual fraction model.** **I can compare two fractions by reasoning about benchmark fractions. Ex: 4/6 is greater than 3/8 because 3/8 is less than ½ and 4/6 is greater than ½.** **Essential Understandings:** A fraction is relative to the size of a whole. Fractions can only be compared when the fractions refer to the same whole. There are three ways to reason about fractions when comparing: 1) When fractions have the same denominator, they are composed of the same unit fraction so the bigger the numerator, the larger the fraction. 2) When fractions have the same numerators but different denominators, the fraction with the smaller denominator has larger pieces and is the bigger fraction. **Essential Questions:** How can you compare fractions?	**GO! Math** 9-1 Compare Fractions 9-2 Compare Fractions with Different Denominators 9-3 Compare Fractions with the Same Numerator 9-4 Compare Fractions EngageNY Module 5, Topic C has a unit covering comparing fractions **Vocabulary:** fraction, numerator, denominator, comparison, compare, <, >, =, justify **Mathematical Practices Focus** 6. Attend to precision **Math Task Suggestions:** Instructional and Assessment Tasks: http://www.edutoolbox.org/tntools **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

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Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Weeks 9: Equivalent Fractions		
3.NF.A.3 Explain equivalence of fractions and compare fractions by reasoning about their size. **a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.** *Concrete experiences of drawing models and folding fraction strips should gradually transition to equivalent fractions on a number line. **b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3) and explain why the fractions are equivalent using a visual fraction model.** **c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. For example: express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.** *Students should recognize 3/1 as 3 wholes divided into one group. They then need lots of situations where they model 6/2 to see that 6 pieces that are ½ each. This helps build understanding that 6/2 is 6 divided by 2.	**Learning Targets** **I can identify two fractions as being equivalent if they are at the same point on a number line.** **I can recognize and name simple equivalent fractions by reasoning about their size.** **I can explain why fractions are equivalent by using a visual fraction model.** **I can express whole numbers as fractions, and recognize fractions that are equal to whole numbers.** **Essential Understandings:** The same fractional amount can be represented by an infinite set of different but equivalent fractions. Two fractions are equivalent if they refer to the same size/area of a whole. A whole number can be represented as a fraction. **Essential Questions:** How can different fractions name the same part of a whole? How can you find models to find equivalent fractions?	**GO Math!** 9-6 Model Equivalent Fractions 9-7 Equivalent Fractions EngageNY Module 5, Topic E has a unit covering equivalent fractions **Vocabulary:** fraction, numerator, denominator, equivalent, equivalence **Mathematical Practices Focus** 6. Attend to precision. **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** BrainpopJr: Equivalent Fractions **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf

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Third Grade Mathematics Curriculum Map 3rd Nine Weeks 2020-2021

Third Nine Weeks – Topics and Concepts to be covered during the third quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 10: Graphs		
3.MD.B.3 Draw a scaled pictograph and a scaled bar graph to represent a data set with several categories. Solve one- and two- step "how many more" and "how many less" problems using information presented in scaled graphs.	**Learning Targets** I can read and interpret a scaled bar graphs in order to solve 1- or 2-step "how many more" and "how many less" problems. I can make a scaled pictograph or bar graph with several categories to represent data. I can represent data in bar graphs and pictographs with different values for symbol and scale representations. **Essential Understandings:** Each type of graph is most appropriate for certain kinds of data. A graph's appearance changes based on the scale or symbol value, but the data does not change. **Essential Questions:** 1. What information can we gain by reading a graph? 2. What kind of data can be represented in bar graphs and pictographs? 3. How do you determine how much a symbol in a picture graph represents? 4. How can you choose a scale to make a bar graph?	**GO! Math** 2.1 Organize Data 2.2 Use Picture Graphs 2.4 Use Bar Graphs 2.6 Solve Problems Using Data EngageNY Module 6, Topic A has additional lessons on graphs **Vocabulary:** scale, scaled picture graph, scaled bar graph, data, frequency table, key **Mathematical Practices Focus** 4. Model with mathematics. **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** BrainpopJr: Pictographs, Tally Charts and Bar Graphs
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 4th Nine Weeks 2020-2021

Fourth Nine Weeks – Topics and Concepts to be covered during the fourth quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 1: Measurement to ¼" and Line Plots		
3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units: whole numbers, halves, or quarters. • Ensure that instruction meets the rigor called for by the standard. To help with this, use the Instructional Focus Documents (Use the dropdown to choose what grade-level) and the Go Math Guidance Documents	**Learning Targets** I can use a ruler to measure length in whole, half, and quarter inches. I can make a line plot with a horizontal scale to show measurement data. **Essential Understandings:** 1. Fractions of an inch give measurements that are closer to the actual lengths of objects than whole inches. 2. Line plots represent the frequency of a number occurring in a set of data and can be represented in the form of a number line. 3. A line plot represents data with halves and fourths of an inch just like the ruler. (This helps students make the connection between a ruler and a number line.) **Essential Questions:** 1. How do you measure to a fraction of an inch? 2. How can you read and interpret data in a line plot and use data to make a line plot?	**GO! Math** 10-6 Measure Length 2-7 Use and Make Line Plots EngageNY Module 6, Topic B has additional lessons **Vocabulary:** scale, line plot, data **Mathematical Practices Focus** 4. Model with mathematics. 5. Use appropriate tools strategically. **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 4th Nine Weeks 2020-2021

Fourth Nine Weeks – Topics and Concepts to be covered during the fourth quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 2: Quadrilaterals		
3.G.A.1 Understand that shapes in different categories may share attributes and that the shared attributes can define a larger category. Recognize rhombuses, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories. **3.G.A.3** Determine if a figure is a polygon.	**Learning Targets** I can use attributes to identify shapes. I can use attributes to classify shapes into categories. I can recognize examples of quadrilaterals. I can draw examples of quadrilaterals that are not rhombuses, rectangles, or squares. I can identify whether a figure is a polygon or not. **Essential Understandings:** 1. Shapes have many properties that make them different from one another. 2. Polygons can be described and classified by their sides and angles. **Essential Questions:** 1. What are some special names for quadrilaterals? 2. How can you use the attributes of shapes to classify them? 3. What characteristics do all polygons have in common?	**GO! Math** 12-1 Describe Plane Shapes 12-2 Describe Angles in Plane Shapes 12-3 Identify Polygons 12-4 Describe Sides of Polygons 12-5 Classify Quadrilaterals EngageNY Module 7, Topic B has additional lessons for this standard **Vocabulary:** properties, attributes, features, quadrilateral, open figure, closed figure, three-sided, 2-dimensional, rhombi, rectangles, and squares are subcategories of quadrilaterals, polygon, rhombus/rhombi, rectangle, square, kite **Accountable Talk Stems:** ▯ Did everyone hear that? ▯ Can someone repeat what was just said? ▯ Can someone add on to what was said? ▯ Does someone have a similar idea? ▯ Do you agree or disagree? **Additional Resources:** Quadrilateral Song PDF **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Formative Assessment		

Third Grade Mathematics Curriculum Map 4th Nine Weeks 2020-2021

Fourth Nine Weeks – Topics and Concepts to be covered during the fourth quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 3: Measure and Estimate Liquid Volumes and Masses		
3.MD.A.2 Measure the mass of objects and liquid volume using standard units of grams (g), kilograms (kg), milliliters (ml), and liters (l). Estimate the mass of objects and liquid volume using benchmarks. *For example, a large paper clip is about one gram, so a box of about 100 large clips is about 100 grams. Therefore, ten boxes would be about 1 kilogram.* *Students need lots of opportunities to weigh in grams and kg and measure in liters in order to reason about their size.	**Learning Targets** **I can estimate liquid volumes and masses of objects using standard units of mass and capacity.** **I can add and subtract to solve one-step measurement word problems by using drawings to model the problem.** **I can multiply and divide to solve one-step measurement word problems by using drawings to model the problem.** **Essential Understandings:** 1. Capacity is a measure of the amount of liquid a container can hold. 2. The mass of an object is a measure of how much matter is in an object. 3. Understand the relationship between the size of the unit and the number of units needed. **Essential Questions:** 1. How can you estimate and measure capacity? 2. How can you estimate and measure mass?	**GO! Math** 10-7 Estimate and Measure Liquid Volume 10-8 Estimate and Measure Mass 10-9 Solve Problem About Liquid Volume and Mass Refer to EngageNY Module 2, Topic B for lessons covering this standard **Vocabulary:** estimate, measure, liquid volume, mass, standard units, metric, gram (g), kilogram (kg), liter (L) **Mathematical Practices Focus** 6. Attend to precision. **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Additional Resources:** Millions to Measure by David Schwartz On the Scale, a Weighty Tale by Brian Clearly BrainpopJr: Grams and Kilograms **Math Instructional Focus Document** https://www.tn.gov/content/dam/tn/education/standards/math/Standards_Support_grade_3_Mathematics.pdf
Teacher Created Benchmark Assessment		

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Fourth Nine Weeks – Topics and Concepts to be covered during the fourth quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Weeks 4-7: TNReady Review and Assessments		
Review skills for State Math Assessment. Refer to Pacing Guide for a list of all tested standards.	**Learning Targets:** I can review and practice skills to help me show my best on the State Math Assessment Test.	EngageNY has the following review lessons available: Perimeter and Area: Module 7, Topics D and E Fractions, Multiplication, and Division: Module 7, Topic F • Ensure that instruction meets the rigor called for by the standard. To help with this, use the Instructional Focus Documents (Use the dropdown to choose what grade-level) and the Go Math Guidance Documents
Teacher Created Formative Assessment		

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Fourth Nine Weeks – Topics and Concepts to be covered during the fourth quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 8: 4th Grade Place Value and Comparing 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.	**Learning Targets** I can recognize that a digit in one place represents 10 times as much as the place to its right. I can read and write a multi-digit number in standard form, word form, and expanded form. I can compare two multi-digit numbers using place value and record the comparison using symbols >, <, and =. **Essential Understandings:** 1. Our number system is based on groups of ten. 2. In our numeration system, the value of a digit is determined by its position. 3. Numbers can be read and written in a variety of ways, including standard form, word form, and expanded form. 3. Place value can be used to compare numbers. **Essential Questions:** Is place value important when comparing numbers?	**GO! Math** 1-1 Model place Value Relationships 1-2 Read and Write Numbers 1-3 Compare and Order Numbers **Vocabulary:** digits, place value, standard form, expanded form, word form, period, compare **Mathematical Practices Focus** Make sense of problems and persevere in solving them. **Accountable Talk Stems:** ▯ Did everyone hear that? ▯ Can someone repeat what was just said? ▯ Can someone add on to what was said? ▯ Does someone have a similar idea? ▯ Do you agree or disagree? **Additional Resources:** How Much Is a Million? by David M Schwartz Place Value Song PDF PlaceValue Song BrainpopJr: Place Value, Comparing Numbers
Teacher Created Formative Assessment		

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Fourth Nine Weeks – Topics and Concepts to be covered during the fourth quarter of the year		
Tennessee Standards	**Learning Outcomes**	**Content**
Week 9: 4th Grade Multi-Digit Multiplication		
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.	**Learning Targets** I can multiply a multi-digit number by a one-digit whole number using strategies and properties. I can multiply two two-digit numbers using strategies and properties. I can use equations, arrays, and area models to illustrate and explain my calculations. **Essential Understandings:** 1. Making an array with place value blocks provides a way to visualize and find products. 2. There is an expanded algorithm for multiplying where the numbers are broken apart using place value and the parts are used to find partial products. **Essential Questions:** 1. How can you use arrays to help multiply with a 2-digit number? 2. How can you break apart arrays to help you multiply with greater numbers?	**GO! Math** 2-10 Multiply 2-Digit Numbers with Regrouping 2-11 Multiply 3-Digit and 4-Digit Numbers with Regrouping 3-1 Multiply by Tens 3-5 Multiply with Regrouping **Vocabulary:** partial products **Accountable Talk Stems:** • Did everyone hear that? • Can someone repeat what was just said? • Can someone add on to what was said? • Does someone have a similar idea? • Do you agree or disagree? **Mathematical Practices Focus** 1. Make sense of problems and persevere in solving them. 7. Look for and make use of structure.
Teacher Created Formative Assessment		

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