BARTLETT CITY SCHOOLS

Department of Curriculum & Accountability
Fifth Grade Math Curriculum Guide 2020-2021

Fifth Grade Pacing Guide

***Major Work is Bold** *Supporting Work Underlined

Quarter 1	
Units/Topics. 44 days	
Weeks 1-3 (5.NBT.A.1, 5.NBT.A.2,)	**Procedures, Assess, Review Accountable Talk** **Place Value (millions thru thousandths)**
Weeks 4-5 (5.NBT.A.3, 5.NBT.A.4, 5.NBT.A.7) **Weeks 6-7** (5.NBT.B.5, 5.NBT.B.7)	**Adding /Subtracting, Comparing, Rounding Whole Numbers & Decimals** **Multiplying Whole Numbers and Decimals**
Weeks 8-9 (5.NBT.B.6, 5.NBT.B.7)	**Dividing Whole Numbers and Decimals by 1 and 2 Digit Divisors**

Quarter 2	
Units/Topics 39 days	
Week 1-2 (5.NF.A.1, 5.NF.A.2)	**Add/Subtract Fractions with Unlike Denominators**
Week 3 (5.NF.B.3)	**Interpret a Fraction as a Division Problem**
Weeks 4-5 (5.NF.B.4, 5.NF.B.5, 5.NF.B.6))	**Multiplying a Fraction, Whole Number, or Mixed Number by a Fraction and Scaling**
Weeks 6-7 (5.NF.B.7)	**Divide Unit Fractions by Whole Numbers and Whole Numbers by Fractions**
Week 8 (5.MD.C.3, 5.MD.C.4, 5.MD.C.5)	**Recognize Volume of Solid Figures**

Quarter 3	
Units/Topics. 48 days	
Weeks 1 (5.MD.C.3,4,5)	**Recognize Volume of Solid Figures**
Weeks 2-3 (5.G.B.3)	Classify Two-Dimensional Figures
Week 4-5 (5.OA.A.1,2)	Write and Interpret Numerical Expressions
Week 5 (5.OA.B.3)	Patterns and Relationships
Week 6 (5.G.A.1,2)	Graph Points on the Coordinate Plane
Week 7-8 (5.MD.A.1)	Convert Measurements within a Given System
Week 9-10 (5.MD.B.2)	Represent and Interpret Data to Make a Line Plot

Quarter 4	
Units/Topics 44 days	
Week 1 (5.MD.B.2)	Represent and Interpret Data to Make a Line Plot
Weeks 2-3	Review, Practice Test for TN Standards
Weeks 4-6	TN Standards Test
Week 7-9	Review + Extending Concepts

Fifth Grade Mathematics Curriculum Map, Quarter 1, 2020-2021

Quarter 1		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Week 1-3 -Beginning of the year procedures, Accountable Talk, etc. and (5.NBT.A.1 and 5.NBT.A.2) Place Value		
5.NBT **Number and Operations in Base Ten (NBT)** **A. Understand the place value system** **5.NBT.A.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.** **5.NBT.A.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole number exponents to denote powers of 10.**	**Enduring Understandings** 1. Place value can be used to compare and order whole numbers and decimals as well as tell how many. 2. Some numbers can be represented using a base number and an exponent. 3. Understanding place value can lead to number sense and efficient strategies for computing numbers. **Essential Questions** 1. (1-1) How can you describe the relationship between two place-value positions? 2. (1-4) How can you use an exponent to show powers of 10? 3. (1-5) How can you use a basic fact and a pattern to multiply by a 2-digit number. **Learning Targets** I can recognize the 10 to 1 relationship among place value positions. I can read and write whole numbers through hundred millions. I write and evaluate repeated factors in exponent form. I can use basic fact and a pattern to multiply mentally by multiples of 10, 100, and 1,000. I understand the relationship of place value positions	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go Math** 1-1 Investigate-Place Value and Patterns (5.NBT.A.1) **MP2, MP5, MP7** 1-2 Place Value of Whole Numbers Delete 1-3 Place Value of Whole Numbers Delete 1-4 Algebra-Powers of 10 and Exponents (5.NBT.A.2) **MP2, MP7, MP8** 1-5 Algebra-Mutiplication Patterns (5.NBT.A.2) **MP2, MP3, MP8** **Mathematical Practices Focus (Students)** 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.

	in numbers. I *can* read and write numbers through the millions. I *can* recognize that each place to the left is 10 times larger in a multi-digit number. I *can* recognize that each place to the right is 1/10 as much as multi-digit number. I *can* express powers of ten using whole-number exponents. I *can* illustrate and explain a pattern for how the number of zeros of a product-when multiplying a whole number by power of 10-relates to the power of 10 (e.g.500-which is 5 x 100, or 5x10 to the second power-has two zeros in its product.) I know that an exponent tells how many times to write the base as a factor. I know that a power of 10 represents a base ten place value position. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning.	**NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** **Module 1: Place Value and Decimal Fractions** **Topic A: Multiplicative Patterns on the Place Value chart** **Lesson 1** **Lesson 2** **Lesson 3** **Lesson 4** **Instructional Tasks**: TNCore Treehouse Task **Mathematics Tasks Arcs** **Place Value and Base Ten (5.NBT.1, 5.NBT.2, 5.NBT.3, 5.NBT.4)** **Instructional Tasks:**

		5.NBT.A. Are these equivalent to 9.52? **5.NBT.A.1.** **Kipton's Scale** ○ Millions and Billions of People ○ Tenths and Hundredths ○ Which number is it? **5.NBT.A.2.** ○ Marta's Multiplication Error ○ Multiplying Decimals by 10 **Vocabulary:** place value, period, patterns, standard form, expanded form, word form, comma, units, thousands, millions, exponent, base, squared, cubed **Tools:** place value flip charts, place value chart worksheets, number-line ***More Optional Activities are below:*** **Journal Topics:** -Journal-The Write Way, Go Math p.4D -Explain how 10 is used in our place value number system. -How are all the different forms of the number related (standard form, words, expanded form)? -How many times greater is the 7 in 7,592 than the 7 in 5.7? Explain your reasoning. -Reflections on new learning ….How did I do on the learning? What could I do better on in the lesson? -Consider the numbers 4,205,176 and 4,008. What is the difference in the values of the digit 4 in each number?

		-Consider 7 x 10 to the third power. Write a pattern to find the value of the expression. -Kyle says that 20 x 10 to the fourth power is the same as 20,000. He reasoned that since he saw 4 as the exponent that he should write 4 zeros in his answers. Is Kyle Correct? Explain. **Song**- "Ones, Tens, Hundreds, That's the Place for Me!" Place Value Song- (Words) "Ones, Tens, Hundreds, That's the Place for Me!" Place Value Song (Audio) **Literature Connection**: How Much is a Million? By David Schwartz **Slideshow Lesson- Using Powers of 10** **SlideshowLesson-Comparing Using Powers of 10** **Slideshow Lesson**- Place Value **Links:** **Study Jams- Math- Numbers- Place Value** **Study Jams- Math- Numbers- Expanded Notation** **BrainPop- Math- Exponents** **BrainPop**- Math- Standard and Scientific Notation 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 1, 2020-2021

Quarter 1		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content** **Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**

Weeks 4-5 (5.NBT.A.3, 5.NBT.A.4, and 5.NBT.B.7) Place Value with Decimals		
5.NBT.A **Number and Operations in Base Ten** **A. Understand the place value system** **5.NBT.A.3 Read and write decimals to the thousandths using standard form, word form, and expanded form (e.g., the expanded form of 347.392 is written as 3 x 100 + 4 x 10 + 7 x 1 + 3 x (1/10) + 9 x (1/100) + 2 x (1/1000). Compare two decimals to thousandths based on meanings of the digits in each place and use the symbols >,=, and < to show the relationship.** **5.NBT.A.4 Round decimals to the nearest hundredth, tenth, or whole number using understanding of place value.** **5.NBT.B** **Number and Operations in Base Ten (NBT)** **B. Perform operations with multi-digit whole numbers and with decimals to hundredths.** **5.NBT.B.7 Add, subtract, multiply, and divide decimals to the hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationships between operations; assess the reasonableness of answers using estimation strategies. (Limit division problems so that either the**	**Enduring Understandings** 1. Whenever we get 10 in one place value, we move to the next greater place value. 2. Decimals allow for representations of a variety of real world values. 3. Computational fluency includes understanding not only the meaning but also the appropriate use of numerical operations. 4. The magnitude of number affects the outcome of operations on them. 5. Context is critical when using estimation. **Essential Questions** **1.** (3-1) How can you describe the relationship between two decimal place-value positions? **2.** (3-2) How do you read, write, and represent decimals through thousandths? **3.** (3-3) How can you use place value to compare and order decimals? **4.** (3-5) How can you use base-ten blocks to model decimal addition? **5.** (3-6) How can you use base-ten blocks to model decimal subtraction? **6.** (3-8) How can place value help you add decimals? **7.** (3-9) How can place value help you subtract decimals? **8.** (3-10) How can you use addition or subtraction to describe a pattern or create a sequence with	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go Math** 3-1, Estimate Decimal Sums and Differences (5.NBT.B.7) **MP4, MP5, MP7** 3-2, Place Value of Decimals (5.NBT.A.3a) **MP2, MP7** 3-3, Compare and Order Decimals (5.NBT.A3b) **MP2, MP6** 3-4, Rounding Decimals Delete- Replace with Engage NY Module 1, Lesson 7 3-5, Investigate-Decimal Addition (5.NBT.B.7) **MP5, MP6, MP8** 3-6, Investigate-Decimal Subtraction (5.NBT.B.7) **MP2, MP5, MP8** 3-7 Estimate Decimal Sums and Differences **Delete** 3-8, Add Decimals (5.NBT.B.7) **MP1, MP2, MP8** 3-9, Subtract Decimals (5.NBT.B.7) **MP1, MP2, MP5** 3-10, Algebra-Patterns with Decimals (5.NBT.B.7) **MP7, MP8** 3-11, Problem Solving-Add and Subtract Money (5.NBT.B.7) **MP1** 3-12, Choose a Method (5.NBT.B.7) **MP1, MP2, MP5** **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations

dividend or divisor is a whole number.)	decimals? **9.** (3-11) How can the strategy Make a Table help you organize and keep track of your bank account balance? **10.** (3-12) Which method could you choose to find decimal sums and differences? **Learning Targets** I can model, read, and write decimals to thousandths. I can model decimal addition and subtraction using base-ten blocks. I know place value to the thousandths. I can read and write numbers in word form. I can write numbers in expanded form using unit fractions. I can write decimals as a fraction. I understand decimal equivalents (e.g. 0.8=0.80=0.800=8/10=80/100). I know how to multiply a whole number by a unit fraction. I can read number to the thousandths. I can write numbers in expanded form incorporating unit fractions and decimals. I can read, write, and use each symbol (= < >) when comparing numbers. I know to compare like place value positions. I know that if both decimals have the same digit in the tenths place, then I must compare the hundredths, and if those digits are the same, I must compare the digit in the thousandths. I *can* add and subtract decimals to hundredths using strategies based on place value, properties of operations, or other strategies.	6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** **Module 1** **Topic B: Decimal Fractions and Place Value Patterns** **Lesson 5** **Lesson 6** **Topic C: Place Value and Rounding Decimal Fractions** **Lesson 7** **Lesson 8** **Topic D: Adding and Subtracting Decimals** **Lesson 9** **Lesson 10** **Instructional Tasks**: 5th Grade Task: Place Value Game: Addition and Subtraction (5.NBT.1, 5.NBT.7) **Instructional Tasks:** **5.NBT.A.3. Are these equivalent to 9.52?** ○ Comparing Decimals on the Number Line ○ Placing Thousandths on the Number Line. **5.NBT.A.3.b. Drawing Pictures to Illustrate Decimal Comparisons**

	I *can* explain and illustrate strategies using concrete models or drawings when adding and subtracting decimals to hundredths. I *can* use the value of the digit to the right of the place to be rounded to determine whether to round up or down. I *can* round decimals to any place. I *can* explain how to use place value and what digits to look at to round decimals to any place. I *can* explain how to use place value and what digits to look at to round decimals to any place. I *can* estimate decimals. I can add to models (e.g. block drawings and base ten blocks) for adding and multiplying numbers with decimals. I can break down or take away from models (e.g. block drawings and base ten blocks) for subtracting and dividing with decimals. I can remember and use the properties of addition, subtraction, multiplication, and division to solve problems with decimals. I can turn my concrete model into a written mathematical problem using the standard operations. I can explain how to join and separate numbers to the hundredths. I know how adding the same number over and over is related with a multiplication strategy. I know how taking away the same number over and over is connected to a division strategy. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols.	**5.NBT.A.4. Rounding to Tenths and Hundredths** **5.NBT.B.7** 5.NBT The Value of Education **gfletchy- 3-Act Tasks** **5.NBT.B.3 Final Lap and Chasing Gold** **Vocabulary**: decimal, decimal place, decimal point, tenths, hundredths, thousandths, compare, greater than, less than, least, between, greatest, number line, before, after, number order, benchmark, round **Tools:** place value chart, grid paper, place value flip chart, Decimal Dogs ***More Optional Activities are below:*** **Journal Topics:** -Journal –The Write Way, Go Math p. 150B -Explain how our place value system is based on powers of 10. -Which is greater 3.7 or 3.12? Explain your reasoning. -Reflections on new learning ….How did I do on the learning? What could I do better on in the lesson? -Explain how you know that the digit 6 does not have the same value in the numbers 3.675 and 3.756 -Explain why any number less than 12.5 and greater than or equal to 11.5 would round to 12 when rounded to the nearest whole number. -Explain why it is important to remember to line up the place values in each number when adding or subtracting decimals. **Songs**: "Line up the Decimals" (Words) "Line up the Decimals" (Audio) "Here We Go Rounding Numbers Today" (Words) "Here We Go Rounding Numbers Today" (Audio) "Let's Take it to the Right of the Decimal Point" (Words) "Let's Take it to the Right of the Decimal Point" (Audio) **Literature Connection:**

	I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to model addition, subtraction, multiplication, and division problems. I can create models that explain strategies for solving addition, subtraction, multiplication, and division problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	Pigs will be Pigs by Amy Axelrod Slide Show- MultiplicationExponential Expanded Form **Slideshow Lesson- Comparing Decimals** **Slideshow Lesson- Rounding Decimals** **Links:** **Study Jams- Math- Numbers- Order Whole Numbers** **Study Jams- Math- Numbers- Estimate Whole Numbers** **BrainPop-Math- Decimals** **BrainPop**- Math – Rounding 901 Math Videos

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Quarter 1		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content** **Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Weeks 6-7 (5.NBT.B.5 and 5.NBT.B.7) Multiplication		
5.NBT.B **Numbers and Operations in Base Ten (NBT)** **B. Perform operations with multi-digit whole numbers and with decimals to hundredths.** **5.NBT.B.5- Fluently multiply**	**Enduring Understandings** 1. Multiplication is related to both addition and division. 2. Computational fluency includes understanding not only the meaning but also the appropriate use of numerical operations. 3. The standard multiplication algorithm	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go Math** 1-6 Multiply by 1-Digit Number (5.NBT.B.5) **MP1, MP2, MP3** 1-7 Multiply by Multi-Digit Numbers **(5.NBT.B.5) MP1, MP4, MP6**

multi-digit whole numbers (up to three digit by four-digit factors) using appropriate strategies and algorithms. **<u>5.NBT.B.7</u> Add, subtract, multiply, and divide decimals to the hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationships between operations; assess the reasonableness of answers using estimation strategies. (Limit division problems so that either the dividend or divisor is a whole number.)**	breaks the calculation into simpler calculations using place value starting with the ones, then the tens, etc. 4. The magnitude of numbers affects the outcome of operations on them. 5. Context is critical when using estimation. **<u>Essential Questions</u>** **1.** (1-6) How do you multiply by 1-digit numbers? **2.** (1-7) How do you multiply by Multi-digit numbers? **3.** (4-1) How can patterns help you place the decimal point in a product? **4.** (4-2) How can you use a model to multiply a whole number and a decimal? **5.** (4-3) How can you use properties and place value to multiply a decimal and a whole number? **6.** (4-4) How can you use expanded form and place value to multiply a decimal and a whole number? **7.** (4-5) How can the strategy Draw a Diagram help you solve a decimal multiplication problem? **8.** (4-6) How can you use a model to multiply decimals? 9. (4-7) What strategies can you use to place a decimal point in a product? **10.** (4-8) How do you know you have the correct number of decimal places in your product? **<u>Learning Targets</u>** I *can* explain the standard algorithm for multi-digit whole number multiplication. I *can* explain the standard algorithm for multi-digit decimal multiplication. I *can* use the standard algorithm to multiply	**Add Engage NY Module 2 Lesson 8** 4-1 Multiplication Patterns with Decimals **(5.NBT.A.2)(5.NBT.B.7) MP2, MP3, MP6** 4-2 Multiply Decimals and Whole Numbers **(5.NBT.B.7)MP2, MP4,MP6** 4-3 Multiplication with Decimals and Whole Numbers **(5.NBT.B.7) MP2, MP3, MP6** 4-4 Multiply Using Expanded Form (5.NBT.B.7)(5.NBT.A.2) **MP1, MP3 MP6** 4-5 Problem Solving * Multiply Money (5.NBT.B.7) **MP1, MP4** 4-6 Decimal Multiplication (5.NBT.B.7) **MP2, MP3, MP8** 4-7 Multiply Decimals (5.NBT.B.7)(5.NBT.A.2) **MP1, MP3, MP8** 4-8 Zeros in the Product (5.NBT.B.7) **MP1, MP2, MP6, MP8** **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas.

	multi-digit whole numbers/decimals with ease. I *can* use the standard algorithm to multiply multi-digit decimals with ease. I can place the decimal point in decimal multiplication. I can multiply decimals with zeros in the product. I can add to models (e.g. block drawings and base ten blocks) for adding and multiplying numbers with decimals. I can break down or take away from models (e.g. block drawings and base ten blocks) for subtracting and dividing with decimals. I can remember and use the properties of addition, subtraction, multiplication, and division to solve problems with decimals. I can turn my concrete model into a written mathematical problem using the standard operations. I can explain how to join and separate numbers to the hundredths. I know how adding the same number over and over is related with a multiplication strategy. I know how taking away the same number over and over is connected to a division strategy. I can find patterns in products when multiplying by powers of 10. I can use expanded form and place value to multiply a decimal and a whole number. I can solve problems using the strategy draw a diagram to multiply money. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to model addition, subtraction, multiplication, and division problems.	4. Write mathematical arguments. **Graham Fletcher- Progression of Multiplication Video** **EngageNY** **Module 2** **Topic B: The Standard Algorithm for Multi-Digit Whole Number Multiplication** **Lesson 3** **Lesson 4** **Lesson 5** **Lesson 6-** **Lesson 7** **Lesson 8** **Lesson 9** Module 2 **Topic C: Decimal Multi-Digit Multiplication** **Lesson 10** **Lesson 11** **Lesson 12** **Module 2** **Topic E: Multiplying Decimals** **Lesson 11** **Lesson 12** **Module 2** **Topic D: Measurement Word Problems with Whole Number and Decimal Multiplication** **Lesson 13** **Lesson 14** **Lesson 15** **Instructional Tasks**: **Mathematics Tasks Arcs** **Decimal Operations: Multiplication and Division (5.NBT.5, 5.NBT.7, 5.NBT.6)**

	I can create models that explain strategies for solving addition, subtraction, multiplication, and division problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	**Instructional Tasks:** **https://www.illustrativemathematics.org/5** **5.NBT.B. Perform operations with multi-digit whole numbers and with decimals to hundredths.** **5.NBT.B.5. Elmer's Multiplication Error** **gfletchy 3-Act Tasks** 5.NBT.B.6-7 Tomato-Tomato, Gassed, Sugar Cubes **Vocabulary:** factors, product, partial products, multiply, multiples, exponent, base, squared, cubed, powers of 10, exponential notation, expanded form, standard form **Tools:** grid paper ***More Optional Activities are below:*** **Journal Topics:** -Journal- The Write Way Go Math p. 232B -Explain how multiplication is related to both addition and division. -Compare multiplying whole numbers and decimals. Show your response on a Venn Diagram. -Explain how to multiply 345 x 36 to someone who doesn't know how to multiply it. What strategies could you use? Explain which strategies work best for you. -Reflections on new learning ….How did I do on the learning? What could I do better on in the lesson? **Songs**: "Rhymes and Times" (Audio) **Literature Connection**: The Lion's Share by Matthew McElligott **Slideshow Lesson**- Multiplication **Links:** **Study Jams- Math- Multiplication and Division- Multiples**

		BrainPop-Math-Multiplication 901 Math Videos

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Quarter 1		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Weeks 8-9 (5.NBT.B.6 and 5.NBT.B.7) Division		
5.NBT.B **Numbers and Operations in Base Ten** **B. Perform operations with multi-digit whole numbers and with decimals to hundredths.** **5.NBT.B.6** **Find whole-number quotients and remainders of whole numbers with up to four-digit dividends and two-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.** **5.NBT.B.7 Add, subtract, multiply, and divide decimals to the hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationships between operations; assess the reasonableness of answers using estimation**	**Enduring Understandings** 1. Division has a variety of applications and is a necessary operation. 2. Computational fluency includes understanding not only the meaning bu also the appropriate use of numerical operations. 3. The magnitude of numbers affects the outcome of operations on them. 4. Context is critical when using estimation. **Essential Questions** 1. (1-8) How is multiplication used to solve a division problem? 2. (2-2) How do you solve and check division problems? 3. (2-3) How can you use base-ten blocks to model and understand division of whole numbers? 4. (2-5) How can you use compatible numbers to estimate quotients? 5. (2-4) How can you use partial quotients to divide by 2-digit divisors?	*INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE Achieve the Core: Go Math Guidance Document **Go Math** 1-8, Relate Multiplication to Division (5.NBT.B.6) **MP1, MP3, MP6, MP7** 1-9, Problem Solving-Multiplication and Division Delete 2-1, Place the First Digit Delete 2-2, Divide by 1-Digit Divisors (5.NBT.B.6) **MP1, MP2, MP8** 2-3, Investigate-Division with 2-Digit Divisors Delete 2-5, Estimate with 2-Digit Divisors (5.NBT.B.6) **MP1, MP2, MP3** 2-4 Partial Quotients (5.NBT.B.6) **MP1, MP3, MP8** 2-6, Divide by 2-Digit Divisors (5.NBT.B.6) **MP1, MP2, MP8** 2-7, Interpret the Remainder (5.NF.B.3) **MP2, MP3, MP4** 2-8, Adjust Quotients (5.NBT.B.6) **MP1, MP6, MP7** 2-9 Problem Solving- Division (5.NBT.B.6)

strategies. (Limit division problems so that either the dividend or divisor is a whole number.)	6. (2-6) How can you divide by 2-digit divisors? 7. (2-7) When solving a division problem, when do you write the remainder as a fraction? 8. (2-8) How can you adjust the quotient if your estimate is too high or too low? 9. (2-9) How can the strategy draw a diagram help you solve a division problem? 10. (5-1) How can patterns help you place the decimal point in a quotient? 11. (5-2) How can you use a model to divide a decimal by a whole number? 12. (5-3) How can you estimate decimal quotients? 13. (5-4) How can you divide decimals by whole numbers? 14. (5-5) How can you use a model to divide by a decimal? 15. (5-6) How can you place the decimal point in the quotient? 16. (5-7) When do you write a zero in the dividend to find a quotient? 17. (5-8) How do you use the strategy work backward to solve multistep decimal problems? **<u>Learning Targets</u>** I *can* divide 3-4 digit dividends by a one-digit and a two-digit divisor. I can place the first digit in th quotient by estimating or using place value. I *can* divide with a whole number or decimal dividend. I can solve division problems and write the remainder as a fraction. I *can* explain my chosen strategy. I *can* select a reasonable solution to a real-world division problem in which a remainder must be	**MP1, MP3, MP4** 5-1, Algebra-Division Patterns with Decimals (5.NBT.A.2) **MP5, MP6, MP7** 5-2, Investigate-Divide Decimals by Whole Numbers (5.NBT.B.7) **MP1, MP2, MP5, MP6** 5-3, Estimate Quotients (5.NBT.B.7) **MP1, MP2, MP4, MP6** 5-4, Division of Decimals by Whole Numbers (5.NBT.B.7) **MP1, MP2, MP6** 5-5, Investigate-Decimal Division (5.NBT.B.7) **MP2, MP4, MP5, MP6** 5-6, Divide Decimals (5.NBT.B.7) **MP1, MP2, MP8** 5-7, Write Zeros in the Dividend (5.NBT.B.7) **MP2, MP3, MP5, MP6, MP8** 5-8 Problem Solving- Decimal Operations (5.NBT.B.7) **MP2, MP6, MP7** **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse.

	considered. I *can* use divisibility rules to factor numbers. I *can* explain and illustrate strategies using concrete models or drawings when dividing decimals to hundredths. I *can* select a reasonable solution to a real-world division problem in which a remainder must be considered. I can add to models (e.g. block drawings and base ten blocks) for adding and multiplying numbers with decimals. I can break down or take away from models (e.g. block drawings and base ten blocks) for subtracting and dividing with decimals. I can remember and use the properties of addition, subtraction, multiplication, and division to solve problems with decimals. I can turn my concrete model into a written mathematical problem using the standard operations. I can explain how to join and separate numbers to the hundredths. I know how adding the same number over and over is related with a multiplication strategy. I know how taking away the same number over and over is connected to a division strategy. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to model addition, subtraction, multiplication, and division problems. I can create models that explain strategies for solving addition, subtraction, multiplication, and division problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. Graham Fletcher- Progression of Division Videos **EngageNY** **Module 2** **Topic E- Mental Strategies for Multi-Digit Whole Number Division** **Module 2** **Topic F: Partial Quotients and Multi-Digit Whole Number Division** **Lesson 13** **Lesson 14** **Lesson 15** **Lesson 16** **Module 2** **Topic G- Partial Quotients and Muiti-Digit Decimal Division** **Module 2** **Topic H- Measurement Word Problems with Multi-Digit Division** **Mathematics Tasks Arcs** **Decimal Operations: Multiplication and Division (5.NBT.5, 5.NBT.7, 5.NBT.6)**

		Instructional Tasks: **5.NBT.B.6. Find whole-number quotients of whole numbers with up to four-digit divid5** Illustrative Math **5.NBT.B.6** Minutes and Days **5.NBT.B.7.** ○ The Value of Education ○ What is 23 ÷ 5? **gfletchy 3-Act Tasks** 5.NBT.B.6-7 Tomato-Tomato, Gassed, Sugar Cubes, Got Cubed **Vocabulary:** division, dividend, divisor, quotient, divisible, remainder, rounding, truncating, decimal point **Tools:** grid paper ***More Optional Activities are below:*** **Journal Topics:** -Journal- The Write Way Go Math p.290B -Explain how to divide 583 divided by 7 to someone who doesn't know how to divide it. What strategies could you use? Explain which strategies work best for you. -Explain how division is related multiplication. -Compare dividing whole numbers and decimals. -Reflections on new learning (How did I do on the learning? What could I do better on in the lesson?

		Song- "Long Division" (Audio) "Up on the Housetop" (Audio) "Dividing Decimals" by Gigi Shadid **Literature Connection**: The Doorbell Rang by Pat Hutchins **Slideshow Lesson**- Long Division **Slideshow Lesson**- Considering the Remainder **Links:** **Study Jams- Math- Multi and Div- Relate Multiplication and Division** **Study Jams**- Math- Multi and Div- Divisibility Rules **Study Jams-Math-Multi and Div- Double Digit Division** **BrainPop**-Math-Division 901 Math Videos

Additional Lessons-
Engage NY Modules

K-5 Math Teaching Resources-3rd grade Journals
http://www.k-5mathteachingresources.com/5th-grade-number-activities.html

UnPacking the Standards
http://www.madison-schools.com/Page/111

Fifth Grade Mathematics Curriculum Map, Quarter 2, 2020-2021

Quarter 2		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Weeks 1-2 (5.NF.A.1 and 5.NF.A.2) Add/Subtract Fractions		
5.NF **Number and Operations-Fractions (NF)** **A. Use equivalent fractions as a strategy to add and subtract fractions.** **5.NF.A.1** **Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general a/b + c/d = (ad +bc)/bd.)** **5.NF.A.2** **Solve contextual problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result 2/5 +1/2= 3/7, by observing that 3/7 < 1/2.**	**Enduring Understandings** 1. The denominator determines how many parts make the whole; that is why quantities must have the same denominator to be combined. 2. One representation may sometimes be more helpful than another; and, used together multiple representations give a fuller understanding of a problem. **Essential Questions** 1. (6-1) How can you use models to add and subtract fractions with unlike denominators? 2. (6-2) How can you use models to subtract fractions that have different denominators? 3. (6-3) How can you make reasonable estimates of fraction sums and differences? 4. (6-4) How can you add and subtract mixed numbers with unlike denominators? 5. (6-5) How can you use a common denominator to add and subtract fractions with unlike denominators? 6. (6-6) How can you add and subtract mixed numbers with unlike denominators? 7. (6-7) How can you use renaming to find the difference of two mixed numbers? 8. (6-9) How can the strategy work backward help	*INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE Achieve the Core: Go Math Guidance Document **Go-Math** 6-1, Investigate Addition with Unlike Denominators (5.NF.A.1) (5.NF.A.2) **MP4, MP5, MP6** 6-2, Investigate Subtraction with Unlike Denominators (5.NF.A.2) **MP2, MP3, MP4, MP5** 6-3, Estimate Fraction Sums and Differences (5.NF.A.2) **MP2, MP3, MP6** 6-4,Common Denominators and Equivalent Fractions (5.NF.A.1) **MP2, MP4, MP6** 6-5, Add and Subtract Fractions (5.NF.A.1) **MP1, MP2, MP3** 6-6, Add and Subtract Mixed Numbers (5.NF.A.1) **MP1, MP2, MP6** 6-7, Subtracting with Renaming (5.NF.A.1) **MP1, MP5, MP6** 6-8, Algebra-Patterns with Fractions Delete 6-9, Problem Solving-Practice Addition and Subtraction (5.NF.A.2) **MP1, MP2, MP4, MP6** 6-10 Algebra-Use Properties of Addition (5.NF.A.1) **MP4, MP7, MP8**

	you solve a problem with fractions that involves addition and subtraction? 9. (6-10) How can properties help you add fractions with unlike denominators? **Learning Targets** I can use models to add and subtract fractions with unlike denominators. I can make reasonable estimates of fraction sums and differences. I *can* determine common multiples of two unlike denominators. I *can* determine the least common multiple of two numbers. I can create equivalent fractions using common multiples. I *can* use multiplication to create a common denominator. I *can* add and subtract with unlike denominators. I can add mixed numbers. I can rename to find the difference of two mixed numbers. I *can* use division to simplify fractions. I *can* explain or illustrate my solutions using visual fraction models that represent the fraction. I *can* use estimate strategies, benchmark fractions, and number sense to check is my answer is reasonable. I can use models to represent adding/subtracting fractions with unlike denominators. I can draw models to represent adding/subtracting fractions with unlike denominators. I can turn my concrete model into a written mathematical problem using the standard operations. I can explain how to get a common denominator. I know how adding the same number over and over is related with a multiplication strategy. I know how taking away the same number over and over is connected to a division strategy. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	**Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. Graham Fletcher- Fractions: The Meaning, Equivalence, and Comparison Videos **EngageNY** **Module 3 Addition and Subtraction of Fraction** **Topic A: Equivalent Fractions**

		Lesson 1 Lesson 2 Topic B: Making Like Units Pictorially Topic C: Making Like Units Numerically Topic D: Further Applications **Instructional Tasks:** Apple Orchard Task (5.NF.1)(5.NF.2) Pizza (5.NF.1)(5.NF.2) **Instructional Tasks:** **5.NF.A.** ○ Measuring Cups ○ To Multiply or not to multiply? ○ To Multiply Or Not to Multiply, Variation 2 **5.NF.A.1.** ▪ Egyptian Fractions ▪ Finding Common Denominators to Add ▪ Finding Common Denominators to Subtract ▪ Fractions on a Line Plot ▪ Jog-A-Thon ▪ Making S'Mores ▪ Mixed Numbers with Unlike Denominators **5.NF.A.2.** ▪ Do These Add Up? ▪ Salad Dressing

		▪ Sharing Lunches **Vocabulary:** fraction, numerator, denominator, mixed numbers, equivalent fractions, common multiple, least common multiple (LCM), least common denominator (LCD), decimals, add/addition, subtract/subtraction, sum, difference, unlike denominator, benchmark fraction, estimate, reasonableness, sum, difference, Benchmark, simplest form, mixed number **Tools:** Hamburger Fractions, fraction pieces ***More Optional Activities are below:*** **Journal Topics:** -The Write Way p. 350D -Explain how a fraction is like a decimal and how they are different. Use a Venn Diagram to show your work. -Explain how and why we get common denominators when adding and subtracting fractions with unlike denominators. Explain so well that your friend who does not know how to do it can learn how to get the common denominator. -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- "Fraction Rock" by Joe Crone "Fraction Rap" by Gigi Shadid **Literature Connection**: Fraction House by Dayle Dodds **Slideshow Lesson**- Fractions Slideshow- Go Math Ch 6 Lesson 1 **Links:**

		Study Jams- Math- Add and Subtract with Unlike Denominators BrainPop-Math-Adding and Subtracting Fractions BrainPop-Math-Reducing Fractions 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 2, 2020-2021

Quarter 2		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Week 3 (5.NF.B.3) Fraction as Division		
5.NF **Number and Operations-Fractions (NF)** **B. Apply and extend previous understanding of multiplication and division to multiply and divide fractions.** **5.NF.B.3** **Interpret a fraction as division of the numerator by the denominator (a/b = a divided by b). For example, ¾ = 3 divided by 4 so when 3 wholes are shared equally among 4 people, each person has a share of size ¾. Solve contextual problems involving division of whole numbers leading to**	**Enduring Understandings** 1. One representation may sometimes be more helpful than another; and, used together multiple representations give a fuller understanding of a problem. **Essential Questions** 1. (8-3) How does a fraction represent division? **Learning Targets** I can interpret a fraction as division and solve whole-number division problems that result in a fraction or mixed number.	*INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE Achieve the Core: Go Math Guidance Document **Go-Math** 8-3 -Connect Fractions to Division Delete *Replace Go Math Chapters 7 and 8 with EngageNY Module 4 Lessons 2-33 **Mathematical Practices Focus (Students)** 1. Make sense of problems and persevere in solving them.

answers in the form of fractions or mixed numbers by using visual fraction models or equations to represent the problem. For example, if 8 people want to share 49 sheets of construction paper equally, how many sheets will each person receive? Between what two whole numbers does your answer lie?	I can divide the numerator by the denominator to interpret the fraction. I *can* simplify an improper fraction by dividing the numerator by the denominator to create an improper fraction. I can simplify the fraction in a mixed number by dividing the numerator and the denominator by the same number. I can turn my concrete model into a written mathematical problem using the standard operations. I know how adding the same number over and over is related with a multiplication strategy. I know how taking away the same number over and over is connected to a division strategy. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to model addition, subtraction, multiplication, and division problems. I can create models that explain strategies for solving addition, subtraction, multiplication, and division problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** **Module 4** **Topic B: Fractions as Division** **Lesson 2** **Lesson 3** **Lesson 4** **Lesson 5** **Instructional Tasks:**

		5.NF.B. Painting a Wall **5.NF.B.3.** **Converting Fractions of a Unit into a Smaller Unit** ○ How Much Pie? ○ Sharing Lunches ○ What is 23 ÷ 5? **Slideshow- Go Math Ch 8 Lesson 3** **gfletchy 3-Act Tasks** 5.NBT.B.6-7 The Nectarine, How Much Dew, Let It Flow, The Big Pad **Vocabulary:** Fraction, decimal, improper fraction, mixed number, Divide, numerator, denominator, whole number, equation **Tools:** Hamburger Fractions, fraction pieces ***More Optional Activities are below:*** **Journal Topics:** -Explain how to use division to help interpret a fraction. -Explain how to change a fraction to a decimal. -Can you always exactly convert a fraction to a decimal? Explain why or why not. -Explain how to change an improper fraction into a mixed number. -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson?

		Song- "If You Want to Convert a Fraction to a Percent" by Gigi Shadid **Literature Connection**: The Lion's Share by Matthew McElligott **Slideshow Lesson**- Fraction to Decimal **Links:** **BrainPop**-Math-Mixed Numbers 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 2, 2020-2021

Quarter 2		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Weeks 4-5 (5.NF.B.4, 5.NF.B.5, and 5.NF.B.5) Multiply Fractions		
5.NF **Number and Operations-Fractions (NF)** **B. Apply and extend previous understanding of multiplication and division to multiply and divide fractions.** **5.NF.B.4** **Apply and extend previous understanding of multiplication to multiply a fraction by a whole number or a fraction by a fraction.** **a. Interpret the product (a/b) x q as a x (q divided by b) (partition the quantity q into b equal parts and then multiply by a).**	**Enduring Understandings** 1. Improper fractions can assist when multiplying and dividing mixed numbers. 2. One representation may sometimes be more helpful than another; and, used together multiple representations give a fuller understanding of a problem. **Essential Questions** 1. How can you find a fractional part of a group? 2. How can you use a model to show the product of a fraction and a whole number? 3. How can you find the product of a fraction and	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go Math** Replace Go Math Chap 7 and 8 with EngageNY Module 4 Lesson 2-33 **Mathematical Practices Focus (Students)** 1. Make sense of problems and persevere in solving them.

Interpret the product a/b x q (a x q) divided by b (multiply a times the quantity q and then partition the product into b equal parts). For example, use a visual fraction model or write a story context to show that 2/3 x 6 can be interpreted as 2 x (6 divided by 3) or (2 x 6) divided by 3. Do the same with 2/3 x 4/5 = 8/15. (In general, a/b x c/d = ac/bd.)

b. Find the area of a rectangle with fractional side lengths by tilling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply factional side lengths to find areas of rectangles and represent fraction products as rectangular areas.

5.NF.B.5

Interpret multiplication as scaling (resizing).

a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. For example, know if the product will be greater than, less than, or equal to the factors.

b. Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explain why multiplying a given number by a fraction less than 1 results in a product less than the given number; and relate the principle of fraction equivalence a/b = (a x n)/(b x n) to the effect of

a whole number without using a model?
4. How can you use an area model to show the product of two fractions?
5. How does the size of the product compare to the size of one factor when multiplying fractions?
6. How do you multiply fractions?
7. How can you use a unit tile to find the area of a rectangle with fractional side lengths?
8. How does the size of the product compare to the size of one factor when multiplying fractions greater than one?
9. How do you multiply mixed numbers?
10. How can you use the strategy Guess, Check, and Revise to solve problems with fractions?

Learning Targets

I can model to find the fractional part of a group.
I can model the product of a fraction and a whole number.
I *can* multiply a fraction by a whole number and by a fraction.
I *can* create a story context for problems involving multiplication of a fraction and a whole number or multiplication of two fractions by interpreting multiplication with whole numbers.
I can use scaling to estimate multiplying fractions.
I can relate the size of the product compared to the size of one factor when multiplying fractions.
I can multiply mixed numbers.
I can turn my concrete model into a written mathematical problem using the standard operations.
I know how adding the same number over and over is related with a multiplication strategy.
I know how taking away the same number over and over is connected to a division strategy.
I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols.

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.

NCTM Effective Teaching Practices

1. Establish mathematics goals to focus learning.
2. Implement tasks that promote reasoning and problem solving.
3. Build procedural fluency from conceptual understanding.
4. Pose purposeful questions.
5. Use and connect mathematics representations
6. Facilitate meaningful mathematics discourse.
7. Elicit and use evidence of student thinking.
8. Support productive struggle in learning mathematics.

Literary Math Focus

1. Use multiple reading strategies.
2. Understand and use correct mathematical vocabulary.
3. Discuss and articulate mathematical ideas.
4. Write mathematical arguments.

EngageNY

Module 4

Topic C: Multiplication of a Whole Number by a Fraction

Lesson 6

Lesson 7

Lesson 8

Lesson 9

Topic E-Multiply a Fraction by a Fraction

multiplying a/b by 1. **5.NF.B.6** **Solve real world problems involving multiplication of fractions and mixed numbers by using visual fraction models or equations to represent the problem.**	I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to model multiplication problems. I can create models that explain strategies for solving multiplication problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem. I can use an area model to multiply fractions and/or mixed numbers by breaking down a mixed number to the whole number and fraction on each side of the rectangle. Then multiply the whole number by the whole number, then the fraction by the fraction, and finally adding the two products together.	**Topic F-Multiplication with Fractions and Decimals as Scaling and Word Problems** **Module 5, Topic C** Find the area of rectangles with whole-by-mixed and whole-by-fractional number side lengths by tiling. **Instructional Tasks:** **Scaling Points (5.NF.5)** **Illustrative Math** ○ ○ Connor and Makayla Discuss Multiplication ○ Cornbread Fundraiser ○ Cross Country Training ○ Folding Strips of Paper ○ Mrs. Gray's Homework Assignment **5.NF.B.4.a.** ▪ Connecting the Area Model to Context ▪ Sharing Lunches **5.NF.B.4.b.** ▪ Chavone's Bathroom Tiles ▪ New Park **5.NF.B.5.** ○ Calculator Trouble

		○ Comparing a Number and a Product ○ Comparing Heights of Buildings ○ Fundraising ○ Grass Seedlings ○ Reasoning about Multiplication ○ Running a Mile ○ Scaling Up and Down **5.NF.B.5.b.** ▪ Mrs. Gray's Homework Assignment **5.NF.B.6.** ○ Comparing Heights of Buildings ○ Drinking Juice ○ Half of a Recipe ○ Making Cookies ○ New Park ○ Running to School ○ To Multiply or not to multiply? ○ To Multiply Or Not to Multiply, Variation 2 **Vocabulary:** fraction, decimal, multiplication/multiply, product, numerator, denominator, area, divide, simplify, scaling **Tools:** Hamburger Fractions, fraction pieces, fraction circles, number-line ***More Optional Activities are below:***

		Journal Topics: -Explain how to multiply a fraction by a whole number. (Include a drawing) Is this the same as repeated addition? Explain why or why not. -Explain how to multiply a fraction by a fraction. (Include a drawing) Is this the same as repeated addition? Explain why or why not. -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? Slide Show- Multiplying Fractions Slideshow- Go Math Ch 7 Lesson 1 Slide Show-Fraction Reasoning/Scaling Slideshow- Go Math Ch 7 Lesson 5 **Song**- "Fraction Rap"- by Gigi Shahid **Links:** **BrainPop**-Math- Multiplying and Dividing Fractions 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 2, 2020-2021

Quarter 2		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content** **Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**

Weeks 6-7 (5.NF.B.7) Dividing Fractions by Whole Number and Whole Number by Fractions		
5.NF **Number and Operations-Fractions (NF)** **B. Apply and extend previous understanding of multiplication and division to multiply and divide fractions.** **5.NF.B.7** **Apply and extend previous understanding of division to divide unit fractions by whole numbers and whole numbers by unit fractions.** **a. Interpret division of a unit fraction by a non-zero whole number and compute such quotients. For example, use visual models and the relationship between multiplication and division to explain that (1/3) divided by 4 = 1/12 because (1/12) x 4 = 1/3.** **b. Interpret division of a whole number by a unit fraction and compute such quotients. For example, use visual models and the relationship between multiplication and division to explain that 4 divided by (1/5) = 20 because 20 x (1/5) = 4.** **c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share ½ lb of chocolate equally? How many 1/3 cup servings are in 2 cups of raisins?** ***Division of a fraction by a fraction is not a**	**Enduring Understandings** 1. Improper fractions can assist when multiplying and dividing mixed numbers. 2. One representation may sometimes be more helpful than another; and, used together multiple representations give a fuller understanding of a problem. **Essential Questions** 1. How do you divide a whole number by a fraction and divide a fraction by a whole number? 2. How can the strategy Draw a Diagram help you solve fraction division problems by writing a multiplication sentence? 3. How does a fraction represent division? How can you divide fractions by solving a related multiplication sentence? 4. How can you use diagrams, equations, and story problems to represent division? **Learning Targets** I *can* divide unit fractions by whole numbers and divide whole numbers by unit fractions. I *can* create story contexts for problems involving multiplication of a fraction and a whole number for multiplication of two fractions by interpreting multiplications wit whole numbers. I can solve problems using the strategy draw a diagram. I *can* simplify fractions by dividing the numerator and the denominator by the same number. I can turn my concrete model into a written mathematical problem using the standard operations. I know how adding the same number over and over is related with a multiplication strategy. I know how taking away the same number over and over is connected to a division strategy.	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go-Math** Replace Go Math Chap. 7 and 8 with EngageNY Module 4 Lessons 2-33 **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical

requirement at this grade.	I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to model division problems. I can create models that explain strategies for solving division problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** **Module 4** **Topic B- Fraction as Division** **Topic D- Fraction Expressions and Word Problems** **Topic G- Division of Fractions and Decimal Fractions** **Instructional Tasks:** **5.NF.B.7.** ○ Banana Pudding ○ Dividing by One-Half ○ How many servings of oatmeal? **5.NF.B.7.a.** ▪ Painting a room **5.NF.B.7.b. How many marbles?** ▪ Origami Stars **5.NF.B.7.c.** ▪ How many marbles? ▪ Salad Dressing ▪ Standing in Line **Vocabulary**: fractions, whole numbers, quotient, multiplication, multiply, division, divide, mixed

		numbers, product, partition, equal parts, inverse operations, **Tools:** Hamburger Fractions, fraction pieces, number lines ***More Optional Activities are below:*** **Journal Topics:** -The Write Way p.490B -Explain how 2 divided by ¼ is different from ¼ divided by 2. (Include a drawing, a number-line, equation, and story context to show your work) -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- "Fraction Rap"- by Gigi Shadid **Links:** **BrainPop-Math-Multiplying and Dividing Fractions** 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 2, 2020-2021

Quarter 2		
TN Standards **The Major Work of the Grade for TN Standards Assessments are bolded.**	**Learning Outcomes**	**Content Resources** **Bolded Math Practices are the Math Practices that can be taught with that task.**
Week 8 (5.MD.C.3, 5.MD.C.4, and 5.MD.C.4) Volume		
5.MD **Measurement and Data (MD)**	**Enduring Understandings** 1. One representation may sometimes be more	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE**

C. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

5.MD.C.3
Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

a. **Understand that a cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume and can be used to measure volume.**

b. **Understand that a solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.**

5.MD.C.4
Measure volume by counting unit cubes, using cubic centimeters, cubic inches, cubic feet, and improvised units.

5.MD.C.5
Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume of right rectangular prisms.

a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent whole-number products of three factors as volumes, (e.g., to represent the associative property of multiplication).

helpful than another; and, used together multiple representations gave a fuller understanding of a problem.

Essential Questions

1. (11-5) What is a unit cube and how can you use it to build a solid figure?
2. (11-6) How can you use unit cubes to find the volume of a rectangular prism?
3. (11-8) How can you find the volume of a rectangular prism?
4. (11-9) How can you use a formula to find the volume of a rectangular prism?
5. (11-10) How can you use the strategy Make a Table to compare different rectangular prisms with the same volume?
6. (11-11) How can you find the volume of rectangular prisms that are combined?

Learning Targets

I can understand unit cubes and how they can be used to build a solid figure.
I can count unit cubes that fill a solid figure to find volume.
I *can* relate finding the product of three numbers to finding volume and relate both to the associative and communicative property of multiplication.
I *can* use the formulas to determine the volume of rectangular prisms (V= L x W x H and V= BA x H).
I *can* decompose an irregular figure into non-overlapping rectangular prisms to find the volume of the irregular shape by finding the sums of the volumes of each of the decomposed prisms.
I can turn my concrete model into a written mathematical problem using the standard operations.
I know how adding the same number over and over is related with a multiplication strategy.
I can relate the concrete model I used to solve

Achieve the Core: Go Math Guidance Document

Go-Math
11-5, Investigate-Unit Cubes and Solid Figures (5.MD.C.3a) **MP2, MP5, MP6**
11-6, Investigate-Understand Volume (5.MD.C.3b)(5.MD.C.4) **MP3, MP5, MP6**
11-7, Investigate-Estimate Volume Delete
11-8, Volume of Rectangular Prisms (5.MD.C.5a)(5.MD.C.5b) **MP1, MP2, MP6**
11-9, Algebra-Apply Volume Formulas (5.MD.C.5a)(5.MD.C.5b) **MP2, MP6**
11-10, Problem Solving-Compare Volumes (5.MD.C.5b) **MP1, MP6, MP7**
11-11, Find Volume of Composed Figures (5.MD.C.5c) **MP3, MP6**

Mathematical Practices Focus (Students)

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.

NCTM Effective Teaching Practices
1. Establish mathematics goals to focus learning.
2. Implement tasks that promote reasoning and problem solving.
3. Build procedural fluency from conceptual understanding.
4. Pose purposeful questions.
5. Use and connect mathematics representations

b. Know and apply the formulas V = l x w x h and V = B x h (where B represents the area of the base) for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems. **c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.**	problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to multiplication problems. I can create models that explain strategies multiplication problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** Module 5: Addition and Multiplication with Volume and Area **Instructional Task:** **5.MD.C. Box of Clay** **5.MD.C.5.** ▪ Breaking Apart Composite Solids ▪ You Can Multiply Three Numbers in Any Order **5.MD.C.5.a.** ▪ Using Volume to Understand the Associative Property of Multiplication **5.MD.C.5.b. Cari's Aquarium** **5.MD.C.5.c.**

		▪ Breaking Apart Composite Solids **Gfletchy- 3 Act Task** **5.MD.3,4,5- Got Cubed, Packing Sugar, Overflow, The Fishtank** **Vocabulary**: volume, solid figure, unit cube, multiplication, edge lengths, height, area of base, measurement, rectangular prism, unit, unit cube, overlap, cubic units (cubic cm., cubic in., cubic ft.,) multiplication, edge lengths, height, area of base **Tools:** cubes ***More Optional Activities are below:*** **Journal Topics:** -Explain how knowing the volume of box could be helpful to a cookie baker? How could the baker determine the volume? Is there another way to determine the volume of the box? Explain. -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- "Volume Song" (Audio) **Literature Connection**: Perimeter, Area, and Volume by David Adler The Emperor's Army by Virginia Pilegard Slide Show- Volume **Links:** Study Jams-Math-Measurement-Volume BrainPop-Math- Volumes of Cylinders BrainPop-Math- Volumes of Prisms

		901 Math Videos

Additional Math Tasks:

Additional Lessons-
Engage NY Modules

K-5 Math Teaching Resources-3rd grade Journals
http://www.k-5mathteachingresources.com/5th-grade-number-activities.html

UnPacking the Standards
http://www.madison-schools.com/Page/111

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

TN Standards The Major Work of the Grade for TN Standards Assessments are bolded.	Learning Outcomes	Content Resources Bolded Math Practices are the Math Practices that can be taught with that task.
Week 1 (5.MD.C.3, 5.MD.C.4, and 5.MD.C.4) Volume		
5.MD **Measurement and Data (MD)** **C. Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.** **5.MD.C.3** **Recognize volume as an attribute of solid figures and understand concepts of volume measurement.** **a. Understand that a cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume and can be used to measure volume.** **b. Understand that a solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.** **5.MD.C.4** **Measure volume by counting unit cubes, using**	**Enduring Understandings** 1. One representation may sometimes be more helpful than another; and, used together multiple representations gave a fuller understanding of a problem. **Essential Questions** 1. (11-5) What is a unit cube and how can you use it to build a solid figure? 2. (11-6) How can you use unit cubes to find the volume of a rectangular prism? 3. (11-7) How can you use an everyday object to estimate the volume of a rectangular prism? 4. (11-8) How can you find the volume of a rectangular prism? 5. (11-9) How can you use a formula to find the volume of a rectangular prism? 6. (11-10) How can you use the strategy Make a Table to compare different rectangular prisms with the same volume? 7. (11-11) How can you find the volume of rectangular prisms that are combined?	*INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE Achieve the Core: Go Math Guidance Document **Go-Math** 11-5, Investigate-Unit Cubes and Solid Figures (5.MD.C.3a) **MP2, MP5, MP6** 11-6, Investigate-Understand Volume (5.MD.C.3b)(5.MD.C.4) **MP3, MP5, MP6** 11-7, Investigate-Estimate Volume (5.MD.C.4) **MP1, MP2, MP6** 11-8, Volume of Rectangular Prisms (5.MD.C.5a)(5.MD.C.5b) **MP1, MP2, MP6** 11-9, Algebra-Apply Volume Formulas (5.MD.C.5a)(5.MD.C.5b) **MP2, MP6** 11-10, Problem Solving-Compare Volumes (5.MD.C.5b) **MP1, MP6, MP7** 11-11, Find Volume of Composed Figures (5.MD.C.5c) **MP3, MP6** **Mathematical Practices Focus (Students)** 1. Make sense of problems and persevere in solving them.

cubic centimeters, cubic inches, cubic feet, and improvised units. **5.MD.C.5** **Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume of right rectangular prisms.** **a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent whole-number products of three factors as volumes, (e.g., to represent the associative property of multiplication).** **b. Know and apply the formulas V = l x w x h and V = B x h (where B represents the area of the base) for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.** **c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.**	**Learning Targets** I can understand unit cubes and how they can be used to build a solid figure. I can count unit cubes that fill a solid figure to find volume. I *can* relate finding the product of three numbers to finding volume and relate both to the associative and communicative property of multiplication. I *can* use the formulas to determine the volume of rectangular prisms (V= L x W x H and V= BA x H). I *can* decompose an irregular figure into non-overlapping rectangular prisms to find the volume of the irregular shape by finding the sums of the volumes of each of the decomposed prisms. I can turn my concrete model into a written mathematical problem using the standard operations. I know how adding the same number over and over is related with a multiplication strategy. I can relate the concrete model I used to solve problems into mathematical representations using numbers and symbols. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can use concrete materials to multiplication problems. I can create models that explain strategies multiplication problems. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** Module 5: Addition and Multiplication with Volume and Area **Instructional Task:** **5.MD.C. Box of Clay** **5.MD.C.5. Breaking Apart Composite Solids**

		▪ You Can Multiply Three Numbers in Any Order **5.MD.C.5.a. Using Volume to Understand the Associative Property of Multiplication** **5.MD.C.5.b. Cari's Aquarium** **5.MD.C.5.c. Breaking Apart Composite Solids** **Vocabulary**: volume, solid figure, unit cube, multiplication, edge lengths, height, area of base, measurement, rectangular prism, unit, unit cube, overlap, cubic units (cubic cm., cubic in., cubic ft.,) multiplication, edge lengths, height, area of base **Tools:** cubes ***More Optional Activities are below:*** **More Tasks:** **Journal Topics:** -Explain how knowing the volume of box could be helpful to a cookie baker? How could the baker determine the volume? Is there another way to determine the volume of the box? Explain. -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- "Volume Song" (Audio) **Literature Connection**: Perimeter, Area, and Volume by David Adler The Emperor's Army by Virginia Pilegard **Links:** Study Jams-Math-Measurement-Volume BrainPop-Math- Volumes of Cylinders

		BrainPop-Math- Volumes of Prisms 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

Quarter 3		
TN Standards	**Learning Outcomes**	**Content Resources**

Week 2 and 3 (5.G.B.3) Classify Two Dimensional Figures		
5.G Geometry B. Classify two-dimensional figures into categories based on their properties. 5.G.B.3 Classify two-dimensional figures in a hierarchy based on properties. Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.	**Enduring Understandings** 1. Geometric properties can be used to construct geometric figures. 2. Geometric relationships provide a means to make sense of the world around them. **Essential Questions** 1. (11-1) How can you identify and classify polygons? 2. (11-2) How can you classify triiangles? 3. (11-3) How can you classify and compare quadrilaterals? **Learning Targets** -I can identify and classify polygons. -I can classify and draw triangles using their properties. -I can classify and compare quadrilaterals using their properties. -I *can* explain two-dimensional attributes can belong to several two-dimensional figures.	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go-Math** 11-1, Polygons (5.G.B.3) **MP1, MP2, MP5, MP6** 11-2, Triangles (5.G.B.3) **MP2, MP6, MP7, MP8** 11-3, Quadrilaterals (5.G.B.3) **MP3, MP7** **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices**

	-I can identify subcategories using two-dimensional figures. -I can identify subcategories using two-dimensional attributes. -I can group together all shapes that share a single property, and then among these shapes, group together those that share a second property, and then among these, group together those that share a third property. I can understand that a square by definition is a square, parallelogram, rectangle, and a rhombus. I can understand that by definition a rectangle, rhombus, square, and parallelogram are all parallelograms. I can understand that by definition a square is a rectangle but a rectangle is not a square. I can understand that by definition a square is a rhombus but a rhombus is not a square.	1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. ***Note that Go Math** uses the following definition for trapezoid- a trapezoid has At Least One Pair of parallel lines. Which by definition means that a trapezoid is also a parallelogram. ****Note that Powerschool Tests** uses the following definition for trapezoid- a trapezoid Only Has One Pair of Parallel lines. Which by definition means that a trapezoid would not be a parallelogram. **EngageNY** **Module 5** Topic D: Drawing, Analysis, and Classification of Two-Dimensional Shapes **Lesson 19** **Lesson 20** **Lesson 21** **Instructional Task:** **5.G.B.3.** ▪ Always, Sometimes, Never ▪ What do these shapes have in Common?

		▪ What is a Trapezoid? (Part 2) **Vocabulary:** polygon, rhombus/rhombi, rectangle, square, triangle, quadrilateral, pentagon, hexagon, cube, trapezoid, half/quarter circle, congruent, right angles, obtuse angles, acute angles ***More Optional Activities Below:*** **Journal Topics:**- -The Write Way p.636B -How are a square and a rhombus alike? Is a square always a rhombus? Is a rhombus a square? Explain. -What is a quadrilateral? Name all 5 quadrilaterals. How are they alike and how are they different? -How is a parallelogram different from a rhombus? How are they similar? -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- Geometry Park by Joe Crone **Literature Connection**: The Greedy Triangle by Marilyn Burns **Slide Show- 2D Shapes** **Slide show** - Polygons to Create Prisms/Pyramids **Links:** Study Jams- Math- Classify Triangles Study Jams-Math- Classify Quadrilaterals BrainPop-Math-Polygons BrainPop-Math- Types of Triangles 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

Quarter 3		
TN Standards	**Learning Outcomes**	**Content Resources**
Weeks 4 and 5 (5.OA.A.1 and 5.OA.A.2) Write and Interpret Numerical Expressions		
5.OA Operations and Algebraic Thinking (OA) A. Write and interpret numerical expressions 5.OA.A.1 Use parentheses and/or brackets in numerical expressions and evaluate expressions having these symbols using the conventional order (Order of Operations). 5.OA.A.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as 2 x (8 +7), Recognize that 3 x (18,932 +921) is three times as large as 18,932 +921, without having to calculate the indicated sum or product.	**Enduring Understandings** 1. Algebraic representation can be used to generalize patterns and relationships. 2. Patterns and relationships can be represented graphically, numerically, symbolically, or verbally. 3. The symbolic language of algebra is used to communicate and generalize the patterns in mathematics. **Essential Questions** 1. (1-10) How can you use a numerical expression to describe a situation? 2. (1-11) In what order must operations be evaluated to find the solution to a problem? **Learning Targets** I can evaluate numerical expressions with parenthesis, brackets, and braces. I *can* use the order of operations (pemdas- parenthesis, exponents, multiplication, division, addition, and subtraction) to solve an expression. I can write numerical expressions. I can write without solving an order of operations problem using numbers and symbols after reading written phrases. I can explain the strategy I used to solve the problem. I can justify my reasoning.	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go Math** 1-3, Algebra- Properties Delete 1-10, Algebra-Numerical Expressions (5.OA.A.1)(5.OA.A.2) **MP3, MP4, MP6** 1-11, Algebra-Evaluate Numerical Expressions (5.OA.A.1) **MP2, MP3, MP4** 1-12, Algebra-Grouping Symbols Delete **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving.

		3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** Module 4 -Topic H Interpretation of Numerical Expressions **Instructional Tasks:** **5.OA.A.** • Picturing Factors in Different Orders • Why Do We Need an Order of Operations? • You Can Multiply Three Numbers in Any Order **5.OA.A.1.** ○ Bowling for Numbers ○ Using Operations and Parentheses ○ Watch Out for Parentheses 1 **5.OA.A.2.**

		○ Comparing Products ○ Seeing is Believing ○ Video Game Scores ○ Words to Expressions 1 **Vocabulary:** order of operations, pemdas, parentheses, brackets, exponents, multiplication, division, addition, subtraction, numerical expressions, expressions, equations, factor, product, Distributive Property ***More Optional Activities are below:*** **Journal Topics:** -What is the order of operations and why do we use it? Do we really have to solve the problem in order? Explain why or why not. -Create a math story problem where the order of operations needs to be followed. Create the problem and solve it. -How does the story of Strega Nona relate to using the Order of Operations? -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- Pemdas **Literature Connection**: Strega Nona by Tomie dePoala **Slideshow Lesson**- Order of Operations **Links:** Study Jams- Math- Order of Operations Study Jams-Math- Addition and Subtraction Equations Study Jams-Math- Multiplication and Divison Equations

		BrainPop-Math-Order of Operations BrainPop-Math-Equations with Variables 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

Quarter 3		
TN Standards	**Learning Outcomes**	**Content Resources**
Week 6–(5.OA.B.3) Patterns and Relationships		
5.OA Operations and Algebraic Thinking (OA) B. Analyze patterns and relationships. 5.OA.B.3 Generate two numerical patterns using two given rules. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences. a. Identify relationships between corresponding terms in two numerical patterns. For example, observe that the terms in one sequence are twice the corresponding terms in the other sequence. b. Form ordered pairs consisting of corresponding terms from two numerical patterns and graph the ordered pairs on a coordinate plane.	**Enduring Understandings** 1 Algebraic representation can be used to generalize patterns and relationships. 2 Patterns and relationships can be represented graphically, numerically, symbolically, or verbally. 3 The symbolic language of algebra is used to communicate and generalize the patterns in mathematics. **Essential Questions** 1. (9-5) How can you identify a relationship between two numerical patterns? 2. (9-6) How can you use the strategy Solve a Simpler Problem to help you solve a problem with patterns? 3. (9-7) How can you write and graph ordered pairs on a coordinate grid using two numerical patterns? **Learning Targets**	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go-Math** 9-5, Numerical Patterns (5.OA.B.3) **MP6, MP7, MP8** 9-6, Problem Solving-Find a Rule (5.OA.B.3) **MP4, MP6, MP7** 9-7, Graph and Analyze Relationships (5.OA.B.3) **MP4, MP7** **Mathematical Practices Focus (Students)** 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.

	I *can* identify the rule to complete the pattern for the table. I *can* generate two numerical patterns with the same starting number for two given rules. I can explain the relationship between the two numerical patterns by comparing how each pattern grows or by comparing the relationship between each of the corresponding terms from each pattern. I *can* form ordered pairs out of corresponding terms from each pattern and graph them on a coordinate plane. I can graph the relationship between two numerical patterns on a coordinate grid I can explain the strategy I used to solve the problem. I can justify my reasoning. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem.	7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** **Module 6, Topic B** **Patterns in the Coordinate Plane and Graphing Number Patterns from Rules** **Instructional Task:** **5.OA.B.3. Sidewalk Patterns** **Vocabulary:** tables, charts, expressions, corresponding terms, coordinate plane, ordered pairs **Journal Topics:**

		-How can you figure out the rule for a function table when you are not given the rule? -How can identifying two pattern using the given rules relate to an Ordered Pair Grid? -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Links:** Study Jams- Math- Function Tables 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

Quarter 3		
TN Standards	**Learning Outcomes**	**Content Resources**
Week 7- (5.G.A.1 and 5.G.A.2) Graph Points on Coordinate Plane		
5.G Geometry A. Graph points on the coordinate plane to solve real-world and mathematical problems 5.G.A.1 Graph ordered pairs and label points using the first quadrant of the coordinate plane. Understand that in the ordered pair that the first number indicates the horizontal distance traveled along the x-axis from the origin and the second number indicates the vertical distance traveled along the y axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). 5.G.A.2	**Enduring Understandings** 1. Integers are the whole numbers and their opposites where zero is its own opposite. 2. The coordinate system is a scheme that uses two perpendicular number lines intersecting at zero to tell the location of points in the plane. 3. The distance between two points on a number line is the number of unit segment between points. 4. A graph of a linear equation contains all of the points on the coordinate grid whose x- and y- coordinates satisfy the equation. **Essential Questions**	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Document** **Go-Math** 9-2, Ordered Pairs (5.G.A.1) **MP4, MP6** 9-3, Investigate-Graph Data Delete **Mathematical Practices Focus (Students)** 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.

Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	1. (9-2) How Can you identify and plot points on a coordinate grid? **Learning Targets** I *can* graph points on a coordinate grid when given the ordered pairs. I can identify the ordered pairs from a coordinate grid for a given point. I can solve a given pattern and then plot the ordered pairs on a coordinate grid. I can identify the ordered pairs from a gird, and then determine the pattern that was used to create the ordered pairs. I can explain the strategy I used to solve the problem. I can justify my reasoning. I *can* understand integers. -I *can* graph ordered pairs. -I find distances on the coordinate plane.	6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **EngageNY** Module 6: Problem Solving with Coordinate Planes Topic A: Coordinate Systems Topic B: Patterns in the Coordinate Plane and Graphing Number Patterns from Rules **Instructional Task:** **5.G.A.1. Battle Ship Using Grid Paper**

		5.G.A.2. **Meerkat Coordinate Plane Task** **Vocabulary:** Coordinate system, coordinate plane, first quadrant, points, lines, axis/axes, x-axis, y-axis, horizontal, vertical, intersection of lines, origin, ordered pairs, coordinates, x-coordinate, y-coordinate **Tools:** grid paper ***More Optional Activities Below:*** **Journal Topics:** -If you are given two ordered pairs, how can you tell if they lie on a vertical line or on a horizontal line? -How can identifying two pattern using the given rules relate to an Ordered Pair Grid? -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- ordered pairs and 4 quadrants (words) **Links:** Study Jams- Math- Classify Quidrilaterals BrainPop-Math-Coordinate Planes 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

Quarter 3		
TN Standards	**Learning Outcomes**	**Content Resources**
Week 8 and 9 (5.MD.A.1) Measurement Conversions		
		***INSTRUCTIONAL FOCUS DOCUMENT FOR**

5.MD
Measurement and Data (MD)
A. Convert like measurement units within a given measurement system from a larger unit to a smaller unit.

5.MD.A.1 Convert customary and metric units within a single system by expressing measurements of a **larger unit in terms of a smaller unit.** Use these conversions to solve multi-step real-world problems involving distances, intervals of time, liquid volumes, masses of objects, and money (including problems involving simple fractions or decimals). For example, 3.6 liters and 4.1 liters can be combined as 7.7 liters or 7700 milliliters.

Enduring Understandings

Essential Questions

1. (10-1) How can you compare and convert customary units of length?
2. (10-2) How can you compare and convert customary units of capacity?
3. (10-3) How can you compare and convert customary units of weight?
4. (10-4) How can you solve multistep problems that include measurement conversions?
5. (10-5) How can you compare and convert metric units?
6. (10-6) How can you use the strategy Make a Table to help solve problems about customary and metric conversions?

Learning Targets

I can convert a larger unit to a smaller unit by using multiplication..
I know that kilo is 1,000 times greater than the metric bases meter, liter, and gram.
I know that centi- is 10 times greater than a milli.
I know that deci is 10 times greater than a centi.
I know that the base unit (meter, liter, and gram) is 10 times greater than deci.
I can use the place value system-powers of 10 to help convert different metric units.
I know that there are 4 quarts in a gallon, 2 pints in each quart, 2 cups in each pint, and 8 oz. in a cup.
I know that there are 16 ounces in 1 pound.
I can compare, contrast, and convert customary units of length.

TENNESSEE

Achieve the Core: Go Math Guidance Document

Go-Math

10-1, Customary Length (5.MD.A.1) **MP1, MP6, MP7**
10-2, Customary Capacity (5.MD.A.1) **MP2, MP4, MP6**
10-3, Weight (5.MD.A.1) **MP1, MP2**
10-4, Multistep Measurement Problems (5.MD.A.1) **MP1, MP4, MP6**
10-5, Metric Measure (5.MD.A.1) **MP2, MP6, MP7**
10-6. Problem Solving-Customary and Metric Conversions (5.MD.A.1**) MP2, MP4, MP7**

Mathematical Practices Focus (Students)

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.

NCTM Effective Teaching Practices

1. Establish mathematics goals to focus learning.
2. Implement tasks that promote reasoning and problem solving.
3. Build procedural fluency from conceptual understanding.
4. Pose purposeful questions.
5. Use and connect mathematics representations
6. Facilitate meaningful mathematics discourse.
7. Elicit and use evidence of student thinking.
8. Support productive struggle in learning

		mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **Instructional Task:** **5.MD.A.1.** ▪ Converting Fractions of a Unit into a Smaller Unit ▪ Minutes and Days **Vocabulary:** Millimeter, centimeter, meter, Kilometer, yard, inch, foot, mile, formula, milliliter, liter, gallon, quart, pint, cup, gram, kilogram, ounce, pound **Tools:** ruler, meter stick, yard stick, weights, scales, metric system, meter, liter, gram, kilo, deci, centi, milli, standard system, gallon, quart, pint, cup, ounce, pound *Chart- Kangaroos Hop Down Mountains Drinking Chocolate Milk **Journal Topics:** -Explain how the Standard units of measuring distance is related to the metric units of measuring distance? -Explain how we can use the silly sentence- Kangaroos Hop Down Mountains Drinking Chocolate

		Milk- to help with all Metric Conversions. -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- Measurement **Literature Connection**: Jim and the Beanstalk by Raymond Briggs **Slideshow Lesson**-Measurement Conversions **Links:** Study Jams- Math- Customary Units of Length Study Jams-Math- Units of Measure Study Jams-Math- Measure Length Study Jams-Math-Convert Units of Time BrainPop-Math-Customary Units BrainPop-Math-Metric Units 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 3, 2020-2021

Quarter 3		
TN Standards	**Learning Outcomes**	**Content Resources**
Weeks 10 (5.MD.B.2) Line Plots		
5.MD Measurement and Data B. Represent and interpret data. 5.MD.B.2 Make a line plot to display a data set of measurement in fractions of a unit (1/2, ¼, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.	**Enduring Understandings** 1. Representing and interpreting data helps analyze information and develop critical thinking skills. 2. Data analysis is formulating questions that cn be addressed, explored, and synthesized with relevant information.	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the. Core: Go Math Guidance Document** **Go-Math** (9-1), Line Plots (5.MD.B.2) **MP1, MP2, MP4** **Mathematical Practices Focus (Students)**

For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in al the beakers were redistributed equally.	**Essential Questions** 1. (9-1) How can a line plot help you find an average with data given in fractions? **Learning Targets** I *can* create and use a line plot with a given set of unit fraction measurements. I *can* solve problems using data on a line plot. I *can* organize data using a line plot to determine the answers. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem. I can use addition and multiplication of fractions and/or mixed numbers to determine the total number of items on the line plot.	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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations 6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **Vocabulary:** data, graph, survey, sample, frequency table, bar graph, picture graph, scale, interval, line plot, line graphs **EngageNY** **Module 4** **Topic A: Line Plots of Fraction Measurements**

		Lesson 1 **Instructional Tasks:** **5.MD.B.2. Fractions on a Line Plot** **Journal Topics:** -How does a line plot show data? How does a line plot compare to a bar graph? -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- "Fraction Rock" by Joe Crone "Fraction Rap" by Gigi Shadid **Slideshow Lesson**- Line Plots **Links:** Study Jams- Math- Line Plots BrainPop-Math- adding and subtracting fractions 901 Math Videos

Additional Math Tasks:

Additional Lessons-
Engage NY Modules

K-5 Math Teaching Resources-3rd grade Journals
http://www.k-5mathteachingresources.com/5th-grade-number-activities.html

UnPacking the Standards
http://www.madison-schools.com/Page/111

Fifth Grade Mathematics Curriculum Map, Quarter 4, 2020-2021

Quarter 4		
TN Standards	**Learning Outcomes**	**Content Resources**
Weeks 1 (5.MD.B.2) Line Plots		
5.MD Measurement and Data B. Represent and interpret data. 5.MD.B.2 Make a line plot to display a data set of measurement in fractions of a unit (1/2, ¼, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in al the beakers were redistributed equally.	**Enduring Understandings** 1. Representing and interpreting data helps analyze information and develop critical thinking skills. 2. Data analysis is formulating questions that cn be addressed, explored, and synthesized with relevant information. **Essential Questions** 1. (9-1) How can a line plot help you find an average with data given in fractions? **Learning Targets** I *can* create and use a line plot with a given set of unit fraction measurements. I *can* solve problems using data on a line plot. I *can* organize data using a line plot to determine the answers. I can explain the strategy I used to solve the problem. I can justify my reasoning. I can write a mathematical representation of the problem and solve it using the model I used to solve the problem. I can use addition and multiplication of fractions and/or mixed numbers to determine the total number of items on the line plot.	***INSTRUCTIONAL FOCUS DOCUMENT FOR TENNESSEE** **Achieve the Core: Go Math Guidance Documents** **Go-Math** (9-1), Line Plots (5.MD.B.2) **MP1, MP2, MP4** **Mathematical Practices Focus (Students)** 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. **NCTM Effective Teaching Practices** 1. Establish mathematics goals to focus learning. 2. Implement tasks that promote reasoning and problem solving. 3. Build procedural fluency from conceptual understanding. 4. Pose purposeful questions. 5. Use and connect mathematics representations

		6. Facilitate meaningful mathematics discourse. 7. Elicit and use evidence of student thinking. 8. Support productive struggle in learning mathematics. **Literary Math Focus** 1. Use multiple reading strategies. 2. Understand and use correct mathematical vocabulary. 3. Discuss and articulate mathematical ideas. 4. Write mathematical arguments. **Vocabulary:** data, graph, survey, sample, frequency table, bar graph, picture graph, scale, interval, line plot, line graphs **EngageNY** **Module 4** **Topic A: Line Plots of Fraction Measurements** **Lesson 1** **Instructional Tasks:** **5.MD.B.2. Fractions on a Line Plot** **Journal Topics:** -How does a line plot show data? How does a line plot compare to a bar graph? -Reflections on new learning …How did I do on the learning? What could I do better on in the lesson? **Song**- "Fraction Rock" by Joe Crone "Fraction Rap" by Gigi Shadid **Slideshow Lesson**- Line Plots

		Links: Study Jams- Math- Line Plots BrainPop-Math- adding and subtracting fractions 901 Math Videos

Fifth Grade Mathematics Curriculum Map, Quarter 4, 2020-2021

Quarter 4		
TN Standards	**Learning Outcomes**	**Content Resources**
Week 2 and 3 Review for TN Standards Test		
5.NBT.A.1-4 Understand the place value system	**(Review) Learning Targets for TN Standards** **I *can* read and write numbers through the millions.** **I *can* recognize that each place to the left is 10 times larger and that to the right is 1/10 in a multi-digit number.** **I *can* illustrate and explain a pattern for how the number of zeros of a product-when multiplying a whole number by power of 10-relates to the power of 10 (e.g.500-which is 5 x 100, or 5x10 to the second power-has two zeros in its product.)**	***(Review) Vocabulary for TN Standards:*** ***(5.NBT.A.1-4)*** *place value, period, patterns, standard form, expanded form, word form, comma, units, thousands, millions, exponent, base, squared, cubed* *decimal, decimal place, decimal point, tenths, hundredths, thousandths, compare, greater than, less than, least, between, greatest, number line, before, after, number order* **EngageNY** **Module 1: Place Value and Decimal Fractions** **Topic A: Multiplicative Patterns on the Place Value chart** **Lesson 1** **Lesson 2** **Lesson 3** **Lesson 4**
5.NBT.B.5-7 Perform operations with multi-digit whole numbers and with decimals to hundredths.	**I *can* add and subtract, explain, and illustrate decimals to hundredths using strategies based on place value, properties of operations, or other strategies.** **I *can* round decimals, explain, and estimate to any place.**	***(5.NBT.B.5-7)*** *factors, product, partial products, multiply, multiples, exponent, base, squared, cubed, powers of 10, exponential notation, expanded form, standard form* *division, dividend, divisor, quotient, divisible, remainder, rounding, truncating*

	I *can* explain the standard algorithm for multi-digit whole number and decimal multiplication. **I *can* divide with a one/two-digit divisor and a whole number and decimal dividend.** **I *can* select a reasonable solution to a real-world division problem in which a remainder must be considered.**	**EngageNY** **Topic B: The Standard Algorithm for Multi-Digit Whole Number Multiplication** **Lesson 3** **Lesson 4** **Lesson 5** **Lesson 6- Lesson 7** **Lesson 8** **Lesson 9** **Topic C: Decimal Multi-Digit Multiplication** **Lesson 10** **Lesson 11** **Lesson 12** **Topic E: Multiplying Decimals** **Lesson 11** **Lesson 12**
5.NF.A.1-2 Use equivalent fractions as a strategy to add and subtract fractions.	I *can* add and subtract with unlike denominators and simplify my answer. I *can* use division to change an improper fraction to a mixed number.	***(5.NF.A.1-2)*** *fraction, numerator, denominator, mixed numbers, equivalent fractions, common multiple, least common multiple (LCM), least common denominator (LCD), decimals, add/addition, subtract/subtraction, sum, difference, unlike denominator, benchmark fraction, estimate, reasonableness* *Fraction, decimal, improper fraction, mixed number, Divide, numerator, denominator*
5.NF.B.3-5 Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	**I *can* multiply a fraction by a whole number and by a fraction.** **I *can* create a story context for problems involving multiplication of a fraction and a whole number or multiplication of two**	***(5.NF.B.3-5)*** *fraction, decimal, multiplication/multiply, product, numerator, denominator, area, divide, simplify, scaling*

	fractions by interpreting multiplication with whole numbers.	*fractions, whole numbers, quotient, multiplication/multiply, division/divide, mixed numbers, product, partition, equal parts*
Geometric measurement: understand concepts of volume and relate volume and relate to multiplication and to addition.	**I *can* use the formulas to determine the volume of rectangular prisms.** **I *can* decompose an irregular figure into non-overlapping rectangular prisms to find the volume of the irregular shape by finding the sums of the volumes of each of the decomposed prisms.** **I *can* solve real world problems involving volume.**	***(5.MD.C.3-5)*** *volume, solid figure, unit cube, multiplication, edge lengths, height, area of base, measurement, rectangular prism, unit, unit cube, overlap, cubic units (cubic cm., cubic in., cubic ft.,) multiplication, edge lengths, height, area of base* *EngageNY Lessons-* Module 5: Addition and Multiplication with Volume and Area ***(Review) Songs-*** *"Ones, Tens, Hundreds, That's the Place for Me!"* *Place Value Song- (Words)* *"Ones, Tens, Hundreds, That's the Place for Me!"* *Place Value Song (Audio)* *"Line up the Decimals" (Words)* *"Line up the Decimals" (Audio)* *"Here We Go Rounding Numbers Today" (Words)* *"Here We Go Rounding Numbers Today" (Audio)* *"Let's Take it to the Right of the Decimal Point" (Words)* *"Let's Take it to the Right of the Decimal Point" (Audio)* *"Rhymes and Times" (Audio)* *Long Division" (Audio)* *"Up on the Housetop" (Audio)* *"Dividing Decimals" by Gigi Shadid* *"Fraction Rock" by Joe Crone* *"Fraction Rap" by Gigi Shadid* *"If You Want to Convert a Fraction to a Percent" by Gigi Shadid* *"Volume Song" (Audio)*
5.OA.A.1-3 Write and interpret numerical	**(Review) Learning Targets for TN Standards** -I *can* use the order of operations (pemdas) to	**(Review) Vocabulary for TN Standards:**

expressions.	solve an expression. -I *can* use parentheses, brackets, or braces to group an expression within a multi-step numerical expression. -I *can* evaluate numerical expressions with parentheses, brackets or braces.	(5.OA.A.1-3) order of operations, pemdas, parentheses, brackets, exponents, multiplication, division, addition, subtraction, numerical expressions, expressions, equations tables, charts, expressions, corresponding terms, coordinate plane, ordered pairs **Song**- Pemdas **EngageNY Lessons-** Module 4 H 32- Interpret and evaluate numerical expressions including the Language of scaling and fraction division (5.OA.1) Module 4 H 33- Create story contexts for numerical expressions and tape diagrams, and solve word problems (5.OA.1 and 2)
5.MD.A.1 Convert like measurement units within a given measurement system from a larger unit to a smaller unit.	-I *can* convert (change) measurement units within the same measurement system (e.g. 24 inches to 2 feet). -I *can* measure capacity in customary and metric units. -I *can* differentiate between units of weight and mass. -I *can* convert customary and metric units. -I *can* solve multi-step word problems using measurement conversions.	**(Review) Vocabulary for TN Standards:** (5.MD.A.1 and 5.MD.B.2) Conversion/convert, metric and customary measurement, liquid volume, mass, length, Millimeter(mm), centimeter(cm), meter(m), Kilometer(km), yard(yd), inch(in), foot(ft), mile(mi), kilogram(kg), liter (L), Milliliter (mL), ounce (oz), pound (lb), cup©, pint(pt), quart(qt), gallon(gal), hour, minute, second, formula, area **Song**- Measurement **EngageNY Lessons-** Module 1 A 4- Use exponents to denote powers of 10 with application to metric conversions (5.NBT.3 and 5.MD.1) Module 2 D 15- Solve two step word problems involving measurements and multi-digit multiplication (5.MD.1)
5.G.A.1-2 Graph points on the coordinate plane to solve real-world and mathematical problems	-I *can* understand integers. -I *can* graph ordered pairs. -I *can* find distances on the coordinate plane. I *can* generate two numerical patterns with the same starting number for tow given rules. -I *can* explain the relationship between the two numerical patterns by comparing how each pattern grows or by comparing the relationship between each of the corresponding terms from	**(Review) Vocabulary for TN Standards Part 2:** (5.G.A.1-2) coordinate system, coordinate plane, first quadrant, points, lines, axis/axes, x-axis, y-axis, horizontal, vertical, intersection of lines, origin, ordered pairs, coordinates, x-coordinate, y-coordinate **Song-** ordered pairs and 4 quadrants (words)

	each pattern. -I *can* identify the rule to complete the pattern for the table. -I *can* generate two numerical patterns with the same starting number for two given rules. -I can explain the relationship between the two numerical patterns by comparing how each pattern grows or by comparing the relationship between each of the corresponding terms from each pattern. -I *can* form ordered pairs out of corresponding terms from each pattern and graph them on a coordinate plane.	**EngageNY Lessons-** Module 6 B 12- Create a rule to generate a number pattern, and plot the points (5.OA.3 and 5.G.1) Module 6 D 20- Use Coordinate systems to solve real world problems (5.G.2)
5.G.B.3 Classify two-dimensional figures into categories based on their properties.	-I *can* explain two-dimensional attributes can belong to several two-dimensional figures. -I can identify subcategories using two-dimensional figures. -I can identify subcategories using two-dimensional attributes. -I can group together all shapes that share a single property, and then among these shapes, group together those that share a second property, and then among these, group together those that share a third property.	**(Review) Vocabulary for TN Standards:** (5.G.B.3) polygon, rhombus/rhombi, rectangle, square, triangle, quadrilateral, pentagon, hexagon, cube, trapezoid, half/quarter circle **Song**- Geometry Park by Joe Crone **EngageNY Lessons-** Module 5 D 16- Draw trapezoids to clarify their attributes, and define trapezoids based on those attributes. (5.G.3) Module 5 D 17- Draw parallelograms to clarify their attributes, and define parallelograms based on those attributes (5.G3) Module 5 D 18- Draw rectangles and rhombuses (5.G.3) Module 5 D 21- Draw and identify varied two-dimensional figures from given attributes (5.G.3 and 4)
5.MD.B.2 Make Line Plots and use Operations on Fractions.	-I *can* create a line plot with a given set of unit fraction measurements. -I *can* solve problems using data on a line plot. -I *can* organize data using a line plot.	**EngageNY** **Topic A: Line Plots of Fraction Measurements** **Lesson 1**

Fifth Grade Mathematics Curriculum Map, Quarter 4, 2020-2021

Quarter 4		
TN Standards	**Learning Outcomes**	**Content Resources**
Weeks 4-6 TN Standards Testing		

Fifth Grade Mathematics Curriculum Map, Quarter 4, 2020-2021

Quarter 4		
TN Standards	**Learning Outcomes**	**Content Resources**
Weeks 7-9 Review and Extend		
	Learning Targets I *can* review and extend 5th Grade Skills.	**Go Math- Review Projects** **End of the Year Resources** *Review Project: The Forester –Student Resources P B7- Teacher Resources- PG-PG42 *Review Project: Designing Backpacks Student Resources P B11- Teacher Resources PG-PG44 *Review Project: A Space Capsule- Student Resources P B15- Teacher Resources PG-PG46 **Getting Ready for Grade 6**

		Lessons 1-18- Online- PG-PG48-PG86 **EngageNY Lessons-** Module 6 E 21- Make sense of complex, multi-step problem and persevere in solving them. Share and critique peer solutions (5.NF.2)(5.NF.3)(5.NF.6)(5.NF.7) Module 6 F 28 -Solidify fluency with Grade 5 Skills (5.NBT.3)(5NBT.5)(5.NBT.7)(5.MD.1) Module 6 F 31 -Explore the Febonacci sequence (5.G.1 and 2) Module 6 F 32- Explore patterns in saving money (5.NBT.7) Module 6 F 33- Design and construct boxes to house materials for summer use. Module 6 F 34- Design and construct boxes to house materials for summer use.