4th Grade Math
Curriculum Map
Sheryl Muckey

<table>
<tr><td colspan="2">Unit: Number Concepts</td><td>Time: August-September</td></tr>
<tr><td colspan="3">Standards Taught</td></tr>
<tr><td colspan="3">4. NBT.A.1 Recognize that in a multi-digit whole number, a digit in one place value represents ten times what it represents in the place to its right.
4. NBT.A. 2a Read and write multi-digit whole numbers using base-ten numerals (standard form), number names (word form), and expanded form.
4. NBT.A. 2b Compare two multi-digit numbers based on values of the digits in each place, using <, >, and = symbols to record the results of comparisons.
4. NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.
4. NBT.B.4 Fluently add and subtract multi-digit whole numbers using an algorithm including, but not limited to, the standard algorithm.</td></tr>
<tr><td>Differentiation/Assessment:</td><td>Classroom Management and Environment:</td><td>What will the students be doing?</td></tr>
<tr><td>Students who need the extra help receive guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting. Appropriate modifications will be made in each assignment.</td><td>Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures are in place.</td><td>To practice the various skills students will complete:
Problem of the day
Assignments which correspond with the lesson
Assessments
Use of place value cubes, models, and number lines
Discussions and sharing strategies
Number riddles
Building numbers with number cards
White board practice problems</td></tr>
<tr><td>Relevance</td><td>Vocabulary</td><td>Assessments</td></tr>
<tr><td>Students need these skills for a strong foundation in understanding multi-digit numbers. It will help them look for patterns and understand how place value</td><td>Digit
Value
Place value
Greater than
Less than
Equal to</td><td>Daily lesson sheets
Teacher observation
Chapter Tests
Class Discussion</td></tr>
</table>

is used in addition and subtraction. Rounding numbers allows them to determine reasonableness of work.	*Estimate* *Round* *Standard form* *Word form* *Compare* *Order* *Expanded form* *Periods*	• *Written explanations and student created problems.*

Essential Questions:

- *How do you describe the value of a digit?*
- *How can you read and write numbers through hundred thousand?*
- *How can you compare and order numbers?*
- *How can you round numbers?*
- *How can you rename a whole number as a ten, hundred, or thousand?*
- *How can you add whole numbers?*
- *How can you subtract whole numbers?*
- *How can you use different strategies to compare problems with addition and subtraction?*
- *How can looking for patterns help understanding of place value?*
- *What are some strategies you can use to round whole numbers?*

Unit: Multiply by 1-Digit Numbers	**Time:** *September-October*

Standards Taught

- *4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.*
- *4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and or area models.*
- *4. OA.A. 1a Interpret a multiplication equation as a comparison.*

- *4. OA.A. 1b Know from memory (quick effortless recall of facts) all products of two one-digit numbers.*
- *4. OA.A. 2 Multiply or divide to solve word problems involving multiplicative comparisons, e.g., using drawings and equations with a symbol for the unknown number to represent the problem, and distinguish multiplicative comparison from additive comparison.*
- *4. OA.A. 3 Solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.*

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who need the extra help receive guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting. Appropriate modifications will be made in each assignment. Students will work at appropriate levels to review multiplication facts.	*Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures in place.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *Math facts review with online practice drills and partner games* • *Problem of the day* • *Work with models and diagrams to solve problems*
Relevance	**Vocabulary**	**Assessments**
Students need to explore different strategies for multiplication to understand the operation and become more fluent. They need to understand multiplication and multiplication comparisons in order to develop their problem solving skills.	*Comparisons* *Place Value* *Expanded Form* *Estimate* *Round* *Distributive Property* *Partial Product* *Factor* *Regrouping* *Equation*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*

Essential Questions:

- *How do you model and solve multiplication comparisons?*
- *How does understanding place value help you multiply tens, hundreds, and thousands?*

- *How can you estimate products by rounding and determine if exact answers are reasonable?*
- *How can you use the Distributive Property to multiply a 2-digit number by a 1-digit number?*
- *How can you use expanded form to multiply a multi-digit number by a 1-digit number?*
- *How can you use place value and partial products to multiply by a 1-digit number?*
- *How can you use mental math and properties to help multiply numbers?*
- *When can you use diagrams to solve a multistep multiplication problem?*
- *How can you use regrouping to multiply a 2-digit number by a 1-digit number?*
- *How can you represent and solve multistep problems using equations?*

Unit: Multiply 2-Digit Numbers	**Time:** *October*	
Standards Taught		
• *4. NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and /or area models.* • *4. OA.A.3 solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.*		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures in place.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments*

Instruction may need to be slowed down until an understanding of the process occurs.		• *Problem of the day* • *Work with models and diagrams to solve problems* • *Work with number lines*
Relevance	**Vocabulary**	**Assessments**
Students need to see how and why we multiply each place in one number by each place in another so they will learn to think more abstractly as they move to the standard algorithm. They will learn to evaluate the reasonableness of their work. They need to multiply by 10s and estimate products. These skills prepare the students for division, factors, multiples, and patterns in future work.	• *Compatible numbers* • *Associative Property of Multiplication* • *Commutative Property of Multiplication* • *Estimate* • *Partial Product* • *Product* • *Factor* • *Regroup* • *Area model*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*
Essential Questions: • *What strategies can you use to multiply by tens?* • *What strategies can you use to estimate products?* • *How can you use area models and partial products to multiply 2-digit numbers?* • *How can you use place value and partial products to multiply 2-digit numbers?* • *How can you use regrouping to multiply 2-digit numbers?* • *How can you find and record products of two 2-digit numbers?* • *How is multiplication using partial products different from multiplication using regrouping? How are they similar?* • *How can you use a diagram to solve a multi-step multiplication problem?*		

<table>
<tr><td colspan="2">Unit: Divide by 1-Digit Numbers</td><td>Time: November</td></tr>
<tr><td colspan="3">Standards Taught</td></tr>
<tr><td colspan="3">4. NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and /or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and /or area models.
4. OA.A.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operation, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
4. NBT. A.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
4. OA.A.2 Multiply or divide to solve word problems involving multiplicative comparisons, e.g. by using drawings and equations with a symbol for the unknown number to represent the problem, and distinguish multiplicative comparison from additive comparison.</td></tr>
<tr><td>Differentiation/Assessment:</td><td>Classroom Management and Environment:</td><td>What will the students be doing?</td></tr>
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Assignments which correspond with the lesson
Assessments
White board problems
Problem of the Day
Work with area models/ drawings
Division fact review with games and partner activities
Work with base ten blocks to model division</td></tr>
<tr><td>Relevance</td><td>Vocabulary</td><td>Assessments</td></tr>
<tr><td>Students will learn how to work with place value in division problems. They will</td><td>Compatible Numbers
Multiple
Quotient</td><td>Daily lesson sheets
Teacher observation
Chapter Tests</td></tr>
</table>

learn that division is sharing or partitioning. They will be able to interpret remainders and solve real life problems. Learning division with remainders will aid them with multiplies, fractions, and decimals.	• *Partial Quotient* • *Remainder* • *Dividend* • *Divisor* • *Distributive Property* • *Place value*	• *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*
Essential Questions: • *How can you use multiple to estimate quotients?* • *How can you use models to divide whole numbers that do not divide evenly?* • *How can you use remainders in division problems?* • *How can you divide numbers through thousands by whole numbers to 10?* • *How can you use compatible numbers to estimate quotients?* • *How can you use the Distributive Property to find quotients?* • *How can you use repeated subtraction and multiples to find quotients?* • *How can you use partial quotients to divide by 1-digit divisors?* • *How can you use place value to know where to place the first digit in the quotient?* • *How can you divide multi-digit numbers and check your answers?* • *How can you draw a diagram to solve multistep division problems?*		

Unit: Factors, Multiples, and Patterns	**Time:** *November/December*	
Standards Taught		
• *4.OA. B.4 a-d Find all factor pairs for a given whole number. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number is a multiple of each of a given one-digit number. Determine whether a given whole number is prime or composite.* • *4. OA. C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "add 3" and the starting number is 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers continue to alternate in this way.*		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**

Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures in place.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *Work with tiles to make arrays* • *Drawings to model factors* • *Use of divisibility rules* • *Patterns following number rules* • *White board problems* • *Problem of the day* • *Number line factoring*
Relevance	**Vocabulary**	**Assessments**
When students learn to find factors and multiples it aids in the future work with fractions. To write a fraction in simplest form they need to know common factors of the numerator and the denominator. Multiples will allow them to find common numerators and denominators in fraction comparisons.	*Array,* *Product* *Factor* *Common Factor* *Multiple* *Common Multiple* *Divisible* *Composite Number* *Prime Number* *Pattern* *Term* *Rules*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*

Essential Questions:

- *How can you use models to find factors?*
- *How can you tell whether one number is a factor of another number?*
- *How can you use factor lists of common factors to solve story problems?*
- *How are factors and multiples related?*
- *How can you tell whether a number is prime or composite?*
- *How can you make and describe patterns?*

Unit: Fraction Equivalence and Comparison	**Time:** *December/January*

Standards Taught

- *4. NF. A.1 Explain why a fraction a/b is equivalent to a fraction (n x a)/n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.*
- *4. NF.A.2 Compare two fractions with different numerators and different denominators, by creating common denominators or numerators, or by comparing to a benchmark fraction such as ½. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <, >, =, and justify the conclusions.*

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting. They may also need to use models and fraction bars to aid in their work.	*Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures in place.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *Models and drawings to demonstrate fractions* • *White board problems* • *Problem of the Day* • *Drawings of tables* • *Number lines with fractions* • *Number line factoring*
Relevance	**Vocabulary**	**Assessments**
Students use knowledge of benchmark fractions to compare and order fractions. They will use models and common factors to find equivalent fractions and simplest form of fractions. They will use this to solve word problems involving	*Fraction* *Denominators* *Numerator* *Equivalent fractions* *Simplest form* *Common factor* *Common denominator* *Common multiple* *Common numerator*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.*

equivalent fractions and comparisons.	*Benchmark*	• *White board problems*

Essential Questions:

- *How can you use models to show equivalent fractions?*
- *How can you use multiplication to find equivalent fractions?*
- *How can you write a fraction as an equivalent fraction in simplest form?*
- *How can you write a pair of fractions as fractions with a common denominator?*
- *How can you make a table to solve problems using equivalent fractions?*
- *How can you use benchmarks to compare fractions?*
- *How can you compare fractions using common denominators and numerators?*
- *How can you order fractions?*

Unit: Add Subtract Fractions	**Time:** *January*

Standards Taught

- *4. NF. B. 3a Add and subtract fractions e.g., joining and separating parts referring to the same whole.*
- *4. NF. B.3b Understand a fraction a/b with a >1 as a sum of fractions 1/b. Decompose a fraction into a sum of fractions with like denominators in more than one way, recording each decomposition by an equation. Justify denominators, e.g., by using a visual fraction model.*
- *4. NF. B 3c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and /or by using properties of operations and the relationship between addition and subtraction.*
- *4. NF. B. 3d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.*

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and	*Each student has their own individual desk but tables are available for group work. The*	*To practice the various math skills students will complete:*

aides. If appropriate, they will complete worksheets and test in an alternate setting. Some students may need to use the models and fraction bars to assist in the addition and subtraction problems.	*environment is structured with rules and procedures in place.*	• *Assignments which correspond with the lesson* • *Assessments* • *Area models for addition and subtraction* • *Work with fraction circles, bars, and number lines* • *White board problems* • *Problem of the day* • *Mixed number posters* • *Number line factoring*
Relevance	**Vocabulary**	**Assessments**
Students will start with models to demonstrate the addition and subtraction of fractions. They move to using common denominators to do numerical operations on fractions. They will learn to work with mixed numbers so they can be added and subtracted. All this will be used to solve word problems with fractions.	*Fraction* *Unit fraction* *Mixed number* *Simplest form* *Associative Property of Addition* *Commutative Property of Addition* *Denominator* *Fraction* *Numerator* *Fraction greater than one*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*

Essential Questions:

- *When can you add and subtract parts of a whole?*
- *How can you write a fraction as a sum of fractions with the same denominator?*
- *How can you add fractions with like denominators using models?*
- *How can you subtract fractions with like denominators using model?*
- *How can you add and subtract fractions with like denominators?*
- *How can you rename mixed numbers as fractions greater than 1 and rename fractions greater than 1 as mixed number?*
- *How can you add and subtract mixed numbers with like denominators?*
- *How can you rename a mixed number to help you subtract?*
- *How can you add fractions with like denominators using the properties of addition?*
- *How can you use drawings to solve multistep problems with fractions?*

Unit: Multiply Fractions by Whole Numbers	**Time:** *February*	
Standards Taught		
• *4. NF. B. 4a Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. Understand a fraction a/b as a multiple of 1/b.* • *4. NF. B 4b Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.* • *4. NF. B. 4c Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.*		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures in place.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *Number lines with multiples of fractions* • *Work with fraction models* • *Problem of the day* • *White board problems* • *Number line factoring*
Relevance	**Vocabulary**	**Assessments**
Students will need a good understanding of multiplication of whole numbers to work with fractions. They will use models and real life problems to aid in understanding how fractions work. They will start with multiplying	*Factor* *Fraction* *Multiple* *Product* *Unit fraction* *Identity Property of Multiplication*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.*

fractions and finish with multiplying mixed numbers. These lessons will prepare them to multiply two fractions in the future.		• *White board problems*
Essential Questions: • *How can you write a fraction as a product of a whole number and a unit fraction?* • *How can you use a number line to write multiples of fractions?* • *How can you write a product of a whole number and a fraction as a product of a whole number and a unit fraction?* • *How can you use a model to multiply a fraction by a whole number?* • *How can you multiply a fraction by a whole number to solve a problem?* • *How can you use a diagram to solve comparison problems with fractions?*		

Unit: Relate Fractions and Decimals	**Time:** *February/March*
Standards Taught	
• *4. NF. C. 6 Read and write decimal notation for fractions with denominators 10 or 100. Locate these decimals on a number line.* • *4. NF. C. 5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.* • *4.MD. A. 2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.* • *4. NF. C.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, <, or =, and justify the conclusions.*	

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**

Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but tables are available for group work. The environment is structured with rules and procedures in place.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *Work with decimal squares and number lines* • *White board problems* • *Problem of the Day* • *Work with coins and bills* • *Number line factoring*
Relevance	**Vocabulary**	**Assessments**
Students will learn to equate fractions to denominators of 10 and 100. They will extend their place value knowledge to tenths and hundredths. This is related to money and the solving of work problems with money. They will also learn to add, subtract, and compare decimals using the idea of common denominators.	*Fraction* *Decimal* *Decimal point* *Tenth* *Hundredth* *Equivalent decimals* *Equivalent fractions* *Word form* *Expanded form* *Place value* *Compare*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*
Essential Questions: • *How can you record tenths as fraction and decimals?* • *How can you record hundredths as fractions and decimals?* • *How can you record tenths and hundredths as fractions and decimals?* • *How can you relate fractions, decimals, and money?* • *How can you use the strategy "act it out" to solve problems with money?* • *How can you add fractions when the denominators are 10 or 100?* • *How can you compare decimals?*		

Unit: Two-Dimensional Figures	**Time:** *March*

Standards Taught

- *4. G. A. 1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.*
- *4. G. A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize, and identify categories of right, acute, and obtuse triangles.*
- *4. G. A. 3 Recognize and draw lines of symmetry for two-dimensional figures.*
- *4. OA. C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. Explain informally why the numbers will continue to alternate in this way.*

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who need the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *Geometry foldable* • *Problem of the day* • *White board drawings*
Relevance	**Vocabulary**	**Assessments**
Students will learn to draw and identify two-dimensional figures. They will also learn to classify based on mathematical attributes. The vocabulary of the unit is extensive so a foldable is created with terms, drawings, and examples to aid in understanding and remembering the terms.	*Line* *Line segment* *Ray* *Point* *Angle* *Acute angle* *Obtuse angle* *Right Angle* *Straight angle* *Acute triangle* *Obtuse triangle* *Right triangle* *Intersecting lines* *Parallel lines* *Perpendicular lines* *Quadrilateral* *Parallelogram*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*

	Rectangle *Rhombus* *Square* *Trapezoid* *Symmetry* *Diagonal* *Horizontal* *Vertical*	

Essential Questions:

- *How can you identify and draw points, lines, line segments, rays, and angles?*
- *How can you classify triangles by the size of their angles?*
- *How can you identify and draw parallel lines and perpendicular lines?*
- *How can you sort and classify quadrilaterals?*
- *How can you check if a shape has line symmetry?*
- *How do you find lines of symmetry?*
- *How can you use different strategies to solve pattern problems?*

Unit: Angles	**Time:** *March/April*

Standards Taught

- *4.MD.C.5a Recognize angles as geometric shapes that are formed whenever two rays share a common endpoint, and understand concepts of angle measurement. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a one-degree angle, and can be used to measure angles.*
- *4. MD. C. 5b An angle that turns through in one-degree angles is said to have an angle measure of n degrees.*
- *4. MD. C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.*
- *4. MD. C. 7 Recognize angle measures as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems with a symbol for the unknown angle measure.*

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**

Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Assignments which correspond with the lesson* • *Assessments* • *Geometry foldable* • *White board problems and drawings* • *Problem of the day*
Relevance	**Vocabulary**	**Assessments**
Students will begin work with angles on a circle. They will start measuring angles by relating them to fractional parts. There are 360 degrees on a circle. They will learn measurement of right angles, and straight angles to use as benchmark measures. They will then move to using protractors. The final lessons will be finding angle measures by finding the sum of measures or subtracting measurements to find unknown angle measures.	*Angle* *Circle* *Ray* *Vertex* *Counterclockwise* *Clockwise* *Degrees* *Protractor* *Acute angle* *Right angle* *Obtuse angle* *Straight angle*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*
Essential Questions: • *How can you relate angles and fractional parts of a circle?* • *How are degrees related to fractional parts of a circle?* • *How can you use a protractor to measure and draw angles?* • *How can you determine the measure of an angle separated into parts?* • *How can you use the strategy draw a diagram to solve angle measurement problems?*		

Unit: Relative Sizes of Measurement Units	**Time:** *April*
Standards Taught	

- *4. MD. A. 1 Know relative sizes of measurement units within one system of units including km, m, cm, kg, g, lb, oz, l, ml, hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table.*
- *4. MD. A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.*
- *4. MD. B.4 Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots.*

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students will complete:* • *Assignments which correspond with the lesson* • *Assessments* • *White board problems* • *Problem of the Day* • *Elapsed Time Line Schedules* • *Conversions Foldable*
Relevance	**Vocabulary**	**Assessments**
Students need to develop personal benchmarks for frequently used units of measure. This will assist them in finding reasonable answers. For both customary and metric measures, the students will make comparisons and conversions of larger units to smaller units. Students will make line plots to represent fractional data. They will also work on conversions of units of time	*Benchmark* *Weight* *Liquid Volume* *Mile* *Yard* *Foot* *Inch* *Ounce* *Pound* *Ton* *Cup* *Fluid ounce* *Gallon* *Half gallon* *Pint* *Quart* *Millimeter* *Decimeter* *Kilometer* *Centimeter* *Millimeter* *Gram* *Kilogram* *Liter* *Second*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*

and on elapsed time between two events. Students will also add and subtract mixed measures and learn to trade in the correct unit.	*Hour* *Minute* *Month* *Year* *Week* *Elapsed time* *Line plots*	

Essential Questions:

- *How can you use benchmarks to understand the relative sizes of measurement units?*
- *How can you use models to compare customary units of length?*
- *How can you use models to compare customary units of weight?*
- *How can you use models to compare customary units of liquid volume?*
- *How can you make and interpret line plots with fractional data?*
- *How can you use models to compare metric units of length?*
- *How can you compare metric units of mass and liquid volume?*
- *How can you use models to compare units of time?*
- *How can you use the diagrams to solve elapsed time problems?*
- *How can you solve problems involving mixed measures?*
- *How can you use patterns to write number pairs for measurement units?*

Unit: Algebra: Perimeter and Area	**Time:** *May*	
Standards Taught		
• *4.MD.A. 3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.*		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work.*	*To practice the various math skills students completed:* • *Assignments which correspond with the lesson* • *Assessments* • *Work with decimal squares and number lines* • *White board problems* • *Problem of the Day*

Relevance	Vocabulary	Assessments
Students will begin with area models to determine area and perimeter. They will then develop formulas to calculate area and perimeter and use the formulas to solve story problems using one or more rectangles. They will also use formulas to determine the unknown side measure in story problems. They will use plane figure attributes to build their understanding of area and perimeter.	*Formula* *Perimeter* *Area* *Base* *Height* *Square unit*	• *Daily lesson sheets* • *Teacher observation* • *Chapter Tests* • *Class Discussion* • *Written and oral explanations and student created problems.* • *White board problems*

Essential Questions:

- *How can you use a formula to find the perimeter of a rectangle?*
- *How can you use a formula to find the area of a rectangle?*
- *How can you find the area of combined rectangles?*
- *How can you find an unknown measure of a rectangle given its area or perimeter?*
- *How can you use the strategy "solve a simpler problem" to solve area problems?*