3rd Grade Math
Curriculum Mapping
2019-2020
Michelle Koch

Unit: *Addition and Subtraction Within 1,000*	**Time: August-September**

Standards Taught

- **3.OA.D.9 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.
- **3.NBT.A.1 Use place value understanding and properties of operation to perform multi-digit arithmetic (A range of algorithms may be used).** Use place value understanding to round whole numbers to the nearest 10 or 100.
- **3.NBT.A.2 Use place value understanding and properties of operation to perform multi-digit arithmetic (A range of algorithms may be used).** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- **3.OA.D.8 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations]).

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to build further understanding of tools, such as addition tables or place-value charts, to identify patterns in addition and subtraction. *Rounding and estimation skills contribute to students' fluency in addition and subtraction within 1,000, and they use these skills to evaluate their answers for reasonableness.*	*Associative Property of Addition* *Commutative Property of Addition* *Compatible numbers* *Estimate* *Identity Property of Addition* *Pattern* *Round*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you use properties to explain patterns on the addition table?*
- *How can you round numbers?*
- *How can you use compatible numbers and rounding to estimate sums?*
- *What mental math strategies can you use to find sums?*
- *How can you add more than two addends?*
- *How can you use the break apart strategy to add 3-digit numbers?*
- *How can you use place value to add 3-digit numbers?*
- *How can you use compatible numbers and rounding to estimate differences?*
- *What mental math strategies can you use to find differences?*
- *How can you use place value to subtract 3-digit numbers?*
- *How can you use the combine place values strategy to subtract 3-digit numbers?*
- *How can you use the strategy draw a diagram to solve one- and two-step addition and subtraction problems?*

Unit: *Represent and Interpret Data*	**Time: September-October**

Standards Taught

- **3.NBT.A.2 Use place value understanding and properties of operation to perform multi-digit arithmetic (A range of algorithms may be used).** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- **3.OA.D.8 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations]).
- **3.MD.B.3 Represent and interpret data.** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve oneand two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.
- **3.MD.B.4 Represent and interpret data.** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to build further understanding of the use of different data representations and to give them more experience in solving problems in a variety of contexts.	*Bar graph* *Frequency table* *Horizontal bar graph* *Key* *Line plot* *Picture graph* *Scale* *Vertical bar graph*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you use the strategy make a table to organize data and solve problems?*
- *How can you read and interpret data in a picture graph?*
- *How can you draw a picture graph to show data in a table?*
- *How can you read and interpret data in a bar graph?*
- *How can you draw a bar graph to show data in a table or picture graph?*
- *How can you solve problems using data represented in bar graphs?*

- *How can you read and interpret data in a line plot and use data to make a line plot?*

Unit: *Understand Multiplication*	**Time: October**

Standards Taught

- **3.OA.D.8 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations]).
- **3.OA.A.1 Represent and solve problems involving multiplication and division.** Interpret products of whole numbers, e.g., interpret 5x7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5x7.
- **3.OA.A.3 Represent and solve problems involving multiplication and division.** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **3.OA.B.5 Understand properties of multiplication and the relationship between multiplication and division.** Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.)

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand the relationship between addition and multiplication. Students use this understanding to model multiplication problems using addition of groups, skip counting, and arrays. These models will also help students to understand how multiplication is applied to real-word problems. Students also learn the Commutative Property of Multiplication and apply that property to solve multiplication problems.	*Array* *Commutative Property of Multiplication* *Equal groups* *Factor* *Identity Property of Multiplication* *Multiply* *Product* *Zero Property of Multiplication*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you use equal groups to find how many in all?*

- *How is multiplication like addition? How is it different?*
- *How can you use a number line to skip count and find how many in all?*
- *How can you use the strategy draw a diagram to solve one- and two-step problems?*
- *How can you use arrays to model multiplication and find factors?*
- *How can you use the Commutative Property of Multiplication to find products?*
- *What happens when you multiply a number by 0 or 1?*

Unit: *Multiplication Facts and Strategies*	**Time: November**

Standards Taught

- **3.OA.D.8 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations]).
- **3.OA.D.9 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.
- **3.OA.A.3 Represent and solve problems involving multiplication and division.** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **3.OA.B.5 Understand properties of multiplication and the relationship between multiplication and division.** Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.)
- **3.OA.C.7 Multiply and divide within 100.** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. Demonstrate fluency (skill in carrying out procedures flexibly, appropriately, efficiently, and accurately) for all products of two one-digit numbers.

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand multiplication word problems involving equal groups, how to apply properties of operations as strategies to multiply, and to fluently multiply within 100.	*Associative Property of Multiplication* *Distributive Property* *Multiple* *Commutative Property of Multiplication* *Counting number* *Identity Property of Multiplication* *Zero Property of Multiplication*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you multiply with 2 and 4?*
- *How can you multiply with 5 and 10?*
- *What are some ways to multiply with 3 and 6?*
- *How can you use the Distributive Property to find products?*

- *What strategies can you use to multiply with 7?*
- *How can you use the Associative Property of Multiplication to find products?*
- *How can you use properties to explain patterns on the multiplication table?*
- *What strategies can you use to multiply with 8?*
- *What strategies can you use to multiply with 9?*
- *How can you use the strategy make a table to solve multiplication problems?*

Unit: *Use Multiplication Facts*	**Time: November**

Standards Taught

- **3.OA.D.9 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.
- **3.OA.A.4 Represent and solve problems involving multiplication and division.** Determine the unknown whole number in a multiplication or division equation relating three whole numbers
- **3.NBT.A.3 Use place value understanding and properties of operation to perform multi-digit arithmetic (A range of algorithms may be used).** Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
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Relevance	**Vocabulary**	**Assessments**
Student need these skills to further understand patterns and the ability to use those patterns to find unknown factors and products. This serves as a foundation for developing the relationship between multiplication and division.	*Equation* *Commutative Property of Multiplication* *Distributive Property* *Multiple* *Pattern* *Place value*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *What are some ways you can describe a pattern in a table?*
- *How can you use an array or a multiplication table to find an unknown factor or product?*
- *How can you use the strategy draw a diagram to multiply with multiples of 10?*
- *What strategies can you use to multiply with multiples of 10?*
- *How can you model and record multiplying 1-digit whole numbers by multiples of 10?*

Unit: *Understand Division*	**Time: December**

Standards Taught

- **3.OA.A.2 Represent and solve problems involving multiplication and division.** Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each.
- **3.OA.A.3 Represent and solve problems involving multiplication and division.** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **3.OA.B.6 Understand properties of multiplication and the relationship between multiplication and division.** Understand division as an unknown-factor problem. For example, find 32÷8 by finding the number that makes 32 when multiplied by 8.
- **3.OA.C.7 Multiply and divide within 100.** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. Demonstrate fluency (skill in carrying out procedures flexibly, appropriately, efficiently, and accurately) for all products of two one-digit numbers.
- **3.OA.B.5 Understand properties of multiplication and the relationship between multiplication and division.** Apply properties of operations as strategies to multiply and divide. (Students need not use formal terms for these properties.)

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand representing and solving problems involving division, as well as understanding the relationship between multiplication and division. Students need the knowledge to gain fluency in the procedural skills necessary to divide numbers with 100 and the rules for dividing with special divisors.	*Divide* *Dividend* *Divisor* *Inverse operations* *Quotient* *Related facts*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you use the strategy act it out to solve problems with equal groups?*
- *How can you model a division problem to find how many in each group?*
- *How can you model a division problem to find how many equal groups?*
- *How can you use bar models to solve division problems?*

- *How is division related to subtraction?*
- *How can you use arrays to solve division problems?*
- *How can you use multiplication to divide?*
- *How can you write a set of related multiplication and division facts?*
- *What are the rules for dividing with 1 and 0?*

Unit: *Division Facts and Strategies*	**Time: January**

Standards Taught

- **3.OA.A.3 Represent and solve problems involving multiplication and division.** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **3.OA.A.4 Represent and solve problems involving multiplication and division.** Determine the unknown whole number in a multiplication or division equation relating three whole numbers
- **3.OA.C.7 Multiply and divide within 100.** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. Demonstrate fluency (skill in carrying out procedures flexibly, appropriately, efficiently, and accurately) for all products of two one-digit numbers.
- **3.OA.D.8 Solve problems involving the four operations, and identify and explain patterns in arithmetic.** Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations]).

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand solving problems involving multiplication and division. Students will use related multiplication facts to solve division problems, building fluency with multiplication skills within 100.	*Order of operations* *Divide* *Dividend* *Divisor* *Factor* *Inverse operations* *Product* *Quotient* *Related facts*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *What does dividing by 2 mean?*
- *What strategies can you use to divide by 10?*
- *What does dividing by 5 mean?*
- *What strategies can you use to divide by 3?*
- *What strategies can you use to divide by 4?*
- *What strategies can you use to divide by 6?*

- *What strategies can you use to divide by 7?*
- *What strategies can you use to divide by 8?*
- *What strategies can you use to divide by 9?*
- *How can you use the strategy act it out to solve two-step problems?*
- *Why are there rules such as the order of operations?*

Unit: *Understand Fractions*	**Time: January-February**

Standards Taught

- **3.NF.A.1 Develop understanding of Fractions as numbers.** Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts (example: 1 part out of 4 equal parts is the same as 1/4); understand a fraction a/b as the quantity formed by a parts of size 1/b. (example:3/4 is the same as 3 one-fourths (1/4, 1/4, 1/4)
- **3.NF.A.2a&b Develop understanding of Fractions as numbers.** Understand a fraction as a number on the number line; represent fractions on a number line diagram. a. Represent a fraction 1/b on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line. b. Represent a fraction a/b on a number line diagram by marking off a lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
- **3.NF.A.3c Develop understanding of Fractions as numbers.** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Note - Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.
  c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers.

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand fractions as numbers and the division of models to make equal shares and relate fractions and whole numbers.	*Denominator* *Eighths* *Equal parts* *Fourths* *Fraction* *Fraction greater than 1* *Halves* *Numerator* *Sixths* *Thirds* *Unit fraction* *Whole*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *What are equal parts of a whole?*
- *Why do you need to know how to make equal shares?*
- *What do the top and bottom numbers of a fraction tell?*
- *How does a fraction name part of a whole?*
- *How can you represent and locate fractions on a number line?*

- *When might you use a fraction greater than 1 or a whole number?*
- *How can a fraction name part of a group?*
- *How can a fraction tell how many are in part of a group?*
- *How can you use the strategy draw a diagram to solve fraction problems?*

Unit: *Compare Fractions*	**Time: February**

Standards Taught

- **3.NF.A.3d Develop understanding of Fractions as numbers.** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. Note - Grade 3 expectations in this domain are limited to fractions with denominators 2, 3, 4, 6, and 8.
  d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols < , =, or >.
- **3.NF.A.3a&b Develop understanding of Fractions as numbers.** a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. b. Recognize and generate simple equivalent fractions, e.g., 1/2 = 2/4, 4/6 = 2/3. Explain why the fractions are equivalent, e.g., by using a visual fraction model.

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Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand fractions as numbers and that a fraction can be compared to another fraction in the same way that whole numbers can be compared.	*Equivalent* *Equivalent fractions* *Equal to (=)* *Greater than (>)* *Less than (<)*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you use the strategy act it out to solve comparison problems?*
- *How can you compare fractions with the same denominator?*
- *How can you compare fractions with the same numerator?*
- *What strategies can you use to compare fractions?*
- *How can you compare and order fractions?*
- *How can you use models to find equivalent fractions?*
- *How can you use models to name equivalent fractions?*

Unit: *Time, Length, Liquid Volume, and Mass*	**Time: March**

Standards Taught

- **3.MD.A.1 Solving problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.** Tell and write time to the nearest minute and measure time intervals in minutes, using an analog and digital clock. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
- **3.MD.B.4 Represent and interpret data.** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
- **3.MD.A.2 Solving problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). (Excludes compound units such as cm3 and finding the geometric volume of a container.) Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Excludes multiplicative comparison problems [problems involving notions of "times as much"; see Table, page 34])

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Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand measurement of time, liquid volume, and mass.	*A.M.* *Elapsed time* *Gram (g)* *Kilogram (kg)* *Liquid volume* *Liter (L)* *Mass* *Midnight* *Minute* *Noon* *P.M.*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you tell time to the nearest minute?*
- *How can you tell when to use A.M. and P.M. with time?*
- *How can you measure elapsed time in minutes?*
- *How can you find a starting time or an ending time when you know the elapsed time?*
- *How can you use the strategy draw a diagram to solve problems about time?*

- *How can you generate measurement data and show the data on a line plot?*
- *How can you estimate and measure liquid volume in metric units?*
- *How can you estimate and measure mass in metric units?*
- *How can you use models to solve liquid volume and mass problems?*

Unit: *Perimeter and Area*	**Time: March-April**

Standards Taught

- **3.MD.D.8 Geometric measurement: understand concepts of area and relate area to multiplication and to addition.** Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.
- **3.MD.C.5a&b Geometric measurement: understand concepts of area and relate area to multiplication and to addition.** Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area. b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.
- **3.MD.C.6 Geometric measurement: understand concepts of area and relate area to multiplication and to addition.** Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
- **3.MD.C.7a-d Geometric measurement: understand concepts of area and relate area to multiplication and to addition.** Relate area to the operations of multiplication and addition. a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. b. Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning. c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and b + c is the sum of a × b and a × c. Use area models to represent the distributive property in mathematical reasoning. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
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Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand geometric measurement and the concept of perimeter and area.	*Area* *Perimeter* *Square unit* *Unit square* *Centimeter (cm)* *Distributive Property* *Length* *Meter (m)*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *How can you find perimeter?*
- *How can you measure perimeter?*
- *How can you find the unknown length of a side in a plane figure when you know its perimeter?*
- *How is finding the area of a figure different from finding the perimeter of a figure?*
- *How can you find the area of a plane figure?*
- *Why can you multiply to find the area of a rectangle?*
- *How can you use the strategy find a pattern to solve area problems?*
- *How can you break apart a figure to find the area?*
- *How can you use area to compare rectangles with the same perimeter?*
- *How can you use perimeter to compare rectangles with the same area?*

Unit: *Two-Dimensional Shapes*	**Time: April-May**

Standards Taught

- **3.G.A.1 Reason with shapes and their attributes.** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
- **3.G.A.2 Reason with shapes and their attributes.** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of a shape.

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 tests in an alternate setting.	*Each student has their own individual desk but tables are available for group work.*	*To practice the various math skills students completed:* • *Practice Sheets* • *Assessments* • *Timed Basic Facts for multiplication and division*
Relevance	**Vocabulary**	**Assessments**
Students need these skills to further understand fractions as numbers as well as geometric measurement using polygons, including triangles, quadrilaterals, pentagons, hexagons, octagons, and decagons. Understanding the basic attributes of these figures allows students to partition them into equal parts and to relate their understanding of fractions to area.	*Angle* *Closed shape* *Line* *Line segment* *Open shape* *Plane shape* *Point* *Polygon* *Ray* *Right angle* *Two-dimensional shapes*	*-Daily workbook sheets* *-Reteach worksheets* *-Teacher Observation* *-Chapter Tests* *-Dibels Math* *-Class discussion*

Essential Questions

- *What are some ways to describe two-dimensional shapes?*
- *How can you describe angles in plane shapes?*
- *How can you use line segments and angles to make polygons?*
- *How can you describe line segments that are sides of polygons?*
- *How can you use sides and angles to help you describe quadrilaterals?*
- *How can you draw quadrilaterals?*
- *How can you use sides and angles to help you describe triangles?*
- *How can you use the strategy draw a diagram to classify plane shapes?*
- *How can you divide figures into parts with equal areas and write the area as a unit fraction of the whole?*