## Mathematics - Third Grade

|  | Operations and Algebraic Thinking | Number and Operations in Base Ten | Numbers and Operations Fractions | Measurement and Data | Geometry |
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| $\begin{aligned} & \text { CCSS } \\ & \text { Cluster } \end{aligned}$ Statement | Represent and solve problems involving multiplication and division. | Use place value understanding and properties of operations to perform multi-digit arithmetic. | Develop understanding of fractions as numbers. | Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. | Reason with shapes and their attributes. |
| $\begin{gathered} \text { CCSS } \\ \text { Standard } \end{gathered}$ | 1. Interpret products of whole numbers, e.g., interpret $5 \times 7$ 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 $5 \times 7$. | 1. Use place value understanding to round whole numbers to the nearest 10 or 100. | 1. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $a / b$ as the quantity formed by a parts of size $1 / \mathrm{b}$. | 1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. | 1. 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. |
| Learning Target | I can show products in multiplication (e.g., $50=5 \times 10$ can be interpreted as 5 groups of 10 , an array with 5 rows and 10 columns, the area of a 5 -by- 10 rectangle, 5 rows of 10 objects). | I can demonstrate place value by rounding whole numbers to the nearest 10. I can demonstrate place value rounding whole numbers to the nearest 100. | I can explain any unit fraction (1/b) as one part of a whole. <br> I can explain any fraction ( $\mathrm{a} / \mathrm{b}$ ) as "a" (numerator) being the numbers of parts and " b " (denominator) as the total number of equal parts in the whole. | I can say and write time to the nearest minute. I can measure duration of time in minutes. <br> I can solve addition and subtraction word problems involving durations of time measured in minutes. | I can use attributes to identify shapes. <br> I can use attributes to classify shapes into categories. <br> I can define quadrilaterals. I can recognize rhombuses, rectangles, and squares as being examples of quadrilaterals. <br> I can draw quadrilaterals other than rhombuses, rectangles, and squares. |


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| CCSS Cluster Statement | Represent and solve problems involving multiplication and division. | Use place value understanding and properties of operations to perform multi-digit arithmetic. | Develop understanding of fractions as numbers. | Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. | Reason with shapes and their attributes. |
| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. | 5. Use appropriate tools strategically. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 6. Attend to precision. | 5. Use appropriate tools strategically. <br> 6. Attend to precision. <br> 7. Look for and make use of structure. |
| MP Learning Targets | I can explain products in multiplication. | I can explain rounding whole numbers to the nearest 10. I can explain rounding whole numbers to the nearest 100. | I can explain any unit fraction (1/b) as one part of a whole. <br> I can explain any fraction (a/b)*a* (numerator) being the numbers of parts and * ${ }^{*}$ (denominator) as the total number of equal parts in the whole. | I can explain time to the nearest minute. <br> I can explain elapsed time in minutes (e.g., gym class is 40 minutes long). <br> I can explain how to solve addition and subtraction word problems with elapsed time measured in minutes. | I can explain how to use objects to identify shapes. I can explain how to use objects to classify shapes into categories. <br> I can explain quadrilaterals, rhombuses, rectangles, and squares. I can create quadrilaterals other than rhombuses, rectangles, and squares. |


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| CCSS <br> Standard | 2. Interpret whole-number quotients of whole numbers, e.g., interpret <br> $56 \div 8$ 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. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$. | 2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. | 2. Understand a fraction as a number on the number line; represent fractions on a number line diagram. <br> 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 end point of the part based at 0 locates the number $1 / b$ on the number line. <br> 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. | 2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (I). 6 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. | 2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $1 / 4$ of the area of the shape. |


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| Learning Target | I can explain division as a set of objects partitioned into an equal number of shares. I can identify parts of division equations (dividend, divisor, and quotient). I can show quotients in division (e.g., $50 / 10=5$ can be 5 groups with 10 items in each group or 10 groups with 5 items in each group) | I can add within 1000 with ease by using an algorithm or strategy based on place value. <br> I can subtract within 1000 with ease by using an algorithm or strategy based on place value. <br> I can use other strategies for adding and subtracting within 1000 with ease. | I can explain and show how 1/b can be represented on a number line in two ways: (1) as a number that is located a distance of $1 / b$ to the right of 0 , and (2) as the size of each of the parts when a whole is partitioned into b equal parts. <br> I can explain and show how $a / b$ can be represented on a number line in two ways: <br> (1) as a number that is located a distance of $a / b$ to the right of 0 , and (2) as the size of a parts when a whole is partitioned into $b$ equal parts. <br> I can represent a unit fraction (1/b) on a number line between 0 and 1 . <br> I can represent any fraction ( $\mathrm{a} / \mathrm{b}$ ) on a number line. | I can estimate liquid volumes and masses of objects using standard units of measure (grams, kilograms, and liters). <br> I can measure liquid volumes and masses of objects using standard units of measure (grams, kilograms, and liters). <br> I can use a drawing to represent one-step word problems involving masses or volumes. <br> I can solve one-step word problems involving masses or volumes using addition, subtraction, multiplication, or division. | I can partition (divide) shapes into equal parts with equal areas. <br> I can explain any unit fraction (1/b) as one part of a whole divided into $b$ equal parts (e.g., $1 / 2,1 / 4,1 / 8$ ). |


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| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. | 2. Reason abstractly and quantitatively. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. | 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 4. Model with mathematics. <br> 5. Use appropriate tools strategically. <br> 6. Attend to precision. | 2. Reason abstractly and quantitatively. <br> 4. Model with mathematics. <br> 5. Use appropriate tools strategically. |
| MP Learning Targets | I can explain division as objects placed into equal groups. <br> I can discuss parts of division problems (dividend, divisor, and quotient). <br> I can explain quotients in division (e.g., $50 / 10=5$ can be 10 groups of 5 or 5 groups of 10). | I can explain within 1000 how to add using a strategy based on place value. <br> I can explain how to subtract within 1000 using a strategy based on place value. I can describe other strategies (such as Commutative or Associative Property) for adding or subtracting within 1000. | I can explain to others fractions with denominators limited to $2,3,4,6$, and 8 . | I can explain estimation of liquid volumes and masses of objects using standard units of measure (grams, kilograms, and liters) I can demonstrate and measure liquid volumes and masses of objects using standard units of measure (grams, kilograms, and liters). <br> I can explain a picture to represent one-step word problems involving masses or volumes). <br> I can describe one-step word problems involving masses or volumes using addition, subtraction, multiplication, and division. | I can describe how to divide shapes into equal parts with equal areas. <br> I can explain any unit fraction as one part of a whole divided into equal parts (e.g., $1 / 2,1 / 4,1 / 8$ ). |


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| CCSS <br> Standard | 3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, <br> e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. 1 | 3. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., $9 \times$ 80, $5 \times 60$ ) using strategies based on place value and properties of operations. | 3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. <br> a. Understand two fractions as equivalent (equal) if they are the <br> same size, or the same point on a number line. <br> 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. <br> c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <br> Examples: Express 3 in the form $3=3 / 1$; recognize that $6 / 1=6$; locate $4 / 4$ and 1 at the same point of a number line diagram. <br> 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 $<$, and justify the conclusions, e.g., by using a visual fraction model. |  |  |


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| CCSS Cluster Statement | Represent and solve problems involving multiplication and division. | Use place value understanding and properties of operations to perform multi-digit arithmetic. | Develop understanding of fractions as numbers. | Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. | Reason with shapes and their attributes. |
| Learning Target | I can determine when to multiply and divide in word problems. <br> I can represent multiplication and division word problems using drawings, and equations with unknowns in all positions. <br> I can solve word problems involving equal groups, arrays, and measurement quantities using drawings and equations. | I can multiply one-digit numbers by 10 . <br> I can multiply one-digit numbers by multiples of 10 using strategies based on place value and operation properties (e.g., $9 \times 80=9 \times(8 \times 10)=(9 \times 8) \times 10$ <br> or $9 \times 80=(9 \times 50)+(9 \times 30))$ | I can use models to show and explain equivalent fractions. <br> I can locate equivalent fractions on a number line. I can use models to show and explain whole numbers as fractions. <br> I can locate whole numbers as fractions on a number line. <br> I can use models to compare two fractions and record the comparison using >, <, or $=$. I can explain how the size of equal parts can be used to compare two fractions with the same numerator, and explain how the number of equal parts can be used to compare two fractions with the same denominator. |  |  |


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| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. | 2. Reason abstractly and quantitatively. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. | 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 3. Construct viable arguments and critique the reasoning of others. <br> 4. Model with mathematics. <br> 6. Attend to precision. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. |  |  |
| MP Learning Targets | I can explain when to use multiplication and division in a word problem. I can discuss pictures to show multiplication and division problems. I can explain drawings of arrays and equal groups to solve word problems. | I can discuss multiplication by using one-digit numbers times 10. | I can explain how objects show equivalent fractions. I can describe how to locate equivalent fractions on a number line. <br> I can explain models to show whole numbers as fractions on a number line. <br> I can explain how to compare two fractions using, >, <, and $=$. <br> I can discuss how the size of the equal parts can be used to compare two fractions with the same numerator. I can explain how the number of equal parts can be used to compare two fractions with the same denominator. |  |  |


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| CCSS Standard | 4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times$ ? $=48,5=$ $\square$ $\div 3,6 \times 6=$ ? |  |  |  |  |
| Learning Target | I can determine the unknown number in any location in multiplication and division problem. |  |  |  |  |
| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 6. Attend to precision. <br> 7. Look for and make use of structure. |  |  |  |  |
| MP Learning Targets | I can explain strategies to figure out the unknown number in multiplication and division problems. |  |  |  |  |


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| $\begin{gathered} \text { CCSS } \\ \text { Cluster } \\ \text { Statement } \end{gathered}$ | Understand properties of multiplication and the relationship between multiplication and division. |  |  | Represent and interpret data. |  |
| CCSS <br> Standard | 5. Apply properties of operations as strategies to multiply and divide. 2 Examples: If $6 \times 4$ $=24$ is known, then $4 \times 6=$ 24 is also known. <br> (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5=15$, then $15 \times 2=30$, or by $5 \times$ $2=10$, then $3 \times 10=30$. (Associative property of multiplication.) Knowing that $8 \times 5=40$ and $8 \times 2=16$, one can find $8 \times$ 7 as $8 \times(5+2)=(8 \times 5)+$ $(8 \times 2)=40+16=56$. (Distributive property.) |  |  | 3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets. |  |
| Learning Target | I can explain the commutative, associative, and distributive property of multiplication. <br> I can apply the commutative, associative, and distributive properties to decompose, regroup, and/or reorder factors to make it easier to multiply two or more factors. I can explain how the operation properties can and cannot apply to division and use those properties that can apply to make it easier to find the quotient. |  |  | I can make a scaled picture graph or bar graph with several categories to represent data (e.g., one square or picture represents 5 objects). <br> I can read and interpret scaled bar graphs in order to solve one- and two-step "how many more" and "how many less" problems. |  |


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| CCSS <br> Cluster Statement | Understand properties of multiplication and the relationship between <br> multiplication and division. |  |  | Represent and interpret data. |  |
| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. |  |  | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 6. Attend to precision. <br> 7. Look for and make use of pattern. |  |
| MP Learning Targets | I can explain the Commutative, Associative, and Distributive Property of Multiplication |  |  | I can describe a picture graph or bar graph to represent data. I can explain how to read a picture graph or bar graph to solve problems (e.g., how many more, how many less, and how many in all). |  |


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| CCSS <br> Cluster Statement | Understand properties of multiplication and the relationship between multiplication and division. |  |  | Represent and interpret data. |  |
| CCSS <br> Standard | 6. Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8. |  |  | 4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units- whole numbers, halves, or quarters. |  |
| Learning Target | I can explain the relationship between multiplication and division. <br> I can turn a division problem into a multiplication problem with an unknown factor. |  |  | I can use a ruler to measure lengths in whole, half, and quarter inches. <br> I can gather and record measurement data using whole, half, and quarter inches. <br> I can make a line plot with the horizontal scale marked off in whole number, half, or quarter units. |  |
| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 7. Look for and make use of structure. |  |  | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 6. Attend to precision. |  |
| MP Learning Targets | I can explain how multiplication and division are related. <br> I can explain how division problems turn into multiplication problems using an unknown factor. |  |  | I can explain how to use a ruler to measure lengths in whole, half, and quarter inches. <br> I can explain how to gather and record measurement data using whole, half, and quarter inches. <br> I can describe a line plot with the horizontal scale marked off in whole number, half, or quarter units. |  |


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| CCSS Cluster Statement | Multiply and divide within 100. |  |  | Geometric measurement: understand concepts of area and relate area to multiplication and to addition. |  |
| CCSS <br> Standard | 7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5=$ 40, one knows $40 \div 5=8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. |  |  | 5. Recognize area as an attribute of plane figures and understand concepts of area measurement. <br> 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. <br> 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. |  |
| Learning | I can multiply any two numbers with a product within 100 with ease by picking and using strategies that will get to the answer fairly quickly. <br> I can divide whole numbers with a divisor within 100 and with a whole number quotient with ease by picking and using strategies that will get to the answer fairly quickly. <br> I can instantly recall from memory the products of any two one-digit numbers. |  |  | I can define a unit square. I can define area as the measure of space with a plane figure and explain why area is measured in square units. |  |


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| CCSS Cluster Statement | Multiply and divide within 100. |  |  | Geometric measurement: understand concepts of area and relate area to multiplication and to addition. |  |
| Mathematics Practices | 2. Reason abstractly and quantitatively. <br> 7. Look for and make use of structure. <br> 8. Look for and express regularity in repeated reasoning. |  |  | 2. Reason abstractly and quantitatively. <br> 4. Model with mathematics. <br> 5. Use appropriate tools strategically. <br> 6. Attend to precision. |  |
| MP Learning Targets | I can describe how two factors can be used to find the product within 100 . I can explain how to divide whole numbers with a divisor within 100 to find the dividend. <br> I can discuss how to recall from memory the product of any two one-digit numbers |  |  | I can explain a unit square. I can discuss area as the measure of space with a plane figure and why it is measured in square units. |  |
| CCSS <br> Standard |  |  |  | 6. Measure areas by counting unit squares (square cm , square $m$, square in, square ft , and improvised units). |  |
| Learning Target |  |  |  | I can measure the area of shape or flat surface by covering it with unit squares-with no gaps or overlaps-and count the number of unit squares used. |  |
| Mathematics Practices |  |  |  | 5. Use appropriate tools strategically. <br> 6. Attend to precision. |  |
| MP Learning Targets |  |  |  | I can explain what the area of a shape or flat surface is by covering it with unit squares-with no gaps or overlaps-and count the number of squares used. |  |


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| $\begin{gathered} \text { CCSS } \\ \text { Standard } \end{gathered}$ |  |  |  | 7. Relate area to the operations of multiplication and addition. <br> 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. <br> 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 wholenumber side lengths $a$ and $b$ $+c$ is the sum of $a \times b$ and $a$ $\times \mathrm{c}$. Use area models to represent the distributive property in mathematical reasoning. <br> d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into nonoverlapping rectangles and adding the areas of the nonoverlapping parts, applying this technique to solve real world problems. |  |


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| CCSS Cluster Statement | Multiply and divide within 100. |  |  | Geometric measurement: understand concepts of area and relate area to multiplication and to addition. |  |
| Learning Target |  |  |  | I can use tiles to find the area of rectangles. <br> I can explain the relationship between tiling and multiplying side lengths to find the area of rectangles. I can multiply adjacent side lengths of rectangles to solve word problems. <br> I can use area models to explain the distributive property. <br> I can decompose an irregular figure into non-overlapping rectangles. <br> I can explain area as additive and use this understanding to solve word problems. |  |
| Mathematics Practices |  |  |  | 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 4. Model with mathematics. <br> 5. Use appropriate tools strategically. <br> 6. Attend to precision. |  |
| MP Learning Targets |  |  |  | I can explain how to use tiles to find the area of a rectangle. <br> I can explain the relationship between tiling and multiplying side lengths to find the area of a rectangle. I can describe models to explain Distributive Property. |  |


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| CCSS Cluster Statement | Solve problems involving the four operations, and identify and explain patterns in arithmetic. |  |  | Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. |  |
| CCSS Standard | 8. 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. 3 |  |  | 8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, <br> finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters. |  |
| Learning Target | I can choose the correct operation to perform the first computation, and choose the correct operation to perform the second computation in order to solve two-step word problems. <br> I can write equations using a letter for the unknown number. <br> I can decide if my answers are reasonable using mental math and estimation strategies including rounding. |  |  | I can identify polygons. I can define perimeter. I can find the perimeter of polygons when given the lengths of all sides. <br> I can find unknown side lengths of polygons when given the perimeter. <br> I can show how rectangles with the same perimeter can have different areas and show rectangles with the same area can have different perimeters. <br> I can solve word problems involving perimeter. |  |


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| :---: | :---: | :---: | :---: | :---: | :---: |
| CCSS <br> Cluster Statement | Solve problems involving the four operations, and identify and explain patterns in arithmetic. |  |  | Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. |  |
| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 4. Model with mathematics. <br> 5. Use appropriate tools strategically. |  |  | 1. Make sense of problems and persevere in solving them. <br> 4. Model with mathematics. <br> 7. Look for and make use of structure. |  |
| MP Learning Targets | I can explain what the correct operations are to solve two-step problems. I can discuss an equation using a letter as an unknown number. <br> I can explain that my answers are reasonable by using mental math and estimation. |  |  | I can explain polygons. I can explain and find the perimeter when given the length of all sides. I explain how to find unknown sides of polygons when given the perimeter. I can explain how rectangles with the same perimeter can have different areas and show rectangles with the same area can have different perimeters. <br> I can discuss word problems involving perimeter. |  |


|  | Operations and Algebraic Thinking | Number and Operations in Base Ten | Numbers and Operations Fractions | Measurement and Data | Geometry |
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| CCSS Cluster Statement | Solve problems involving the four operations, and identify and explain patterns in arithmetic. |  |  | Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. |  |
| CCSS Standard | 9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends |  |  |  |  |
| Learning Target | I can identify and describe arithmetic patterns in number charts, addition tables, and multiplication tables. <br> I can explain arithmetic patterns using properties of operations. |  |  |  |  |
| Mathematics Practices | 1. Make sense of problems and persevere in solving them. <br> 2. Reason abstractly and quantitatively. <br> 3. Construct viable arguments and critique the reasoning of others. <br> 6. Attend to precision. <br> 7. Look for and make use of structure. |  |  |  |  |
| MP Learning Targets | I can explain arithmetic patterns in number chars, addition tables, and multiplication tables. I can explain arithmetic patterns using properties of operations. |  |  |  |  |

