



Montezuma Community Schools

504 N 4th Street
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Common Core Standards: Third Grade

Operations and Algebraic Thinking:

- Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. {3.OA.1}
- 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 in 8 shares or into shares of 8 equal objects. {3.OA.2}
- Use multiplication and division within 100 to solve word problems into situations involving equal groups, arrays, and measurement quantities, e.g. by using drawings and equations with a symbol for the unknown number to represent. {3.OA.3}
- Determine the unknown whole number in a multiplication or division equation relating three whole numbers, e.g. $6 \times b = 24$. {3.OA.4}
- Applies properties of operations as strategies to multiply and divide. (Commutative, Distributive, and Associative properties.) {3.OA.5}
- 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.6}
- Fluently multiply and divide within 100, using strategies such as relationship between multiplication and division of properties. By the end of third grade know all products of two-one digit numbers. {3.OA.7}
- Solve two-step problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess reasonableness of answer using mental computation and estimation strategies including rounding. {3.OA.8}
- Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain the using patterns 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. {3.OA.9}

Numbers and Operations in Base Ten:

- Use place value understanding to round whole numbers to the nearest 10 or 100. {3.NBT.1}
- 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.NBT.2}
- 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. {3.NBT.3}

Numbers and Operations – Fractions:

- 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 parts of size $1/b$. {3.NF.1}
- Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. {3.NF.3}

Measurement and Data:

- 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. {3.MD.1}
- 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 bars graphs. {3.MD.3}
- 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 horizontal scale is marked off in appropriate units – whole numbers, halves, or quarters. {3.MD.4}
- Measure areas by counting unit squares (square cm, square m, sq. in, sq. ft and improvised units) {3.MD.6}

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- Relate area to operations of multiplication and division using arrays. {3.MD.7}
- 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.8}

Geometry:

- Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 equal parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape. {3.G.2}

Learning Targets:	Student <i>I Can</i> Statements:	Report Card:
<ul style="list-style-type: none"> • Students understand that putting together equal sized groups may be represented by multiplication equations and totals found through multiplication. {3.OA.1} 	<ul style="list-style-type: none"> • I can use pictures and objects to demonstrate my understanding of multiplication operations. • I can use vocabulary, factors and products, to show the connection in multiplication problems. • I can write word problems with factors and products. 	<ul style="list-style-type: none"> • Multiplication Operations • Multiplication Process By 1 Digit
<ul style="list-style-type: none"> • Students understand that both partitioning into equal-sized shares and partitioning equally among a given number of groups may be modeled by division equations and the desired results found through division. {3.OA.2} 	<ul style="list-style-type: none"> • I can use pictures and objects to demonstrate my understanding of division operations. • I can use vocabulary, divisors, dividends, & quotients, to show the connection in division operations. 	<ul style="list-style-type: none"> • Division Operations • Division Process By 1 Digit
<ul style="list-style-type: none"> • Students understand characteristics of multiplication and division contexts and multiplication and division strategies. {3.OA.3} 	<ul style="list-style-type: none"> • I can consistently solve multiplication and division facts. • I can use basic facts to solve equations where there is one unknown. • (Multiplication/Division Process By 1 Digit) 	<ul style="list-style-type: none"> • Multiplication & Division Basic Facts (1-10) • Multiplication/Division Process By 1 Digit
<ul style="list-style-type: none"> • Students understand that equalities contain phrases that name the same amount on each side of the equal sign. {3.OA.4} 	<ul style="list-style-type: none"> • I can use fact families to relate multiplication and division. 	<ul style="list-style-type: none"> • Multiplication/Division Operations

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<ul style="list-style-type: none"> • Students understand that the order in which factors are multiplied does not change the product. {3.OA.5} • Students understand that the relationship between multiplication and division (that one “undoes” the other) can be used to solve problems and efficient application of computation strategies are based on the numbers in the problems. {3.OA.6} • Students understand that efficient application of computation strategies are based on the numbers in the problems. {3.OA.7} • Students understand characteristics of addition, subtraction, multiplication and division situation, strategies, and can find sums, differences, products, and quotients mentally. {3.OA.8} • Students understand the characteristics of numbers of operations justify patterns, which can be used to reason about mathematical situations, form conjectures, and solve problems. {3.OA.9} • Students are that rounding and place value can be used to estimate quantities by changing the original number to the closest multiple of a power of 10. {3.NBT.1} 	<ul style="list-style-type: none"> • I understand how multiplication and division are connected. • I can solve two-step word problems using strategies for addition, subtraction, multiplication, and division. • I can justify reasonable solutions by using mental computation strategies (mental math). • I can use and explain number patterns. • I can round to the nearest 10 or 100. • I can use place value vocabulary and justify solutions to rounding problems by logical reasoning. 	<ul style="list-style-type: none"> • Multiplication/Division Operations • Multiplication/Division Process By 1 Digit • Multiplication/Division Process By 1 Digit • Mental Computation Strategies • Use Number Patterns • Place Value- Compare, Order, Forms • Rounding to the Identified Digit • Estimation
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<ul style="list-style-type: none">• Students understand that relationships between models of addition and subtraction problems and symbolic recordings of those models can be used to justify solutions and solution strategies. {3.NBT.2}• Students understand that patterns in the place value system and properties of operations can be used to efficiently compute products. {3.NBT.3}• Students understand fractions and strategies for creating models of fractional quantities. {3.NF.1}• Students understand that two fractions are equivalent if they are the same portion of the same whole or are the same point on a number line and that comparisons of fractions are valid only when two fractions refer to the same whole. {3.NF.3}	<ul style="list-style-type: none">• I can use objects, write, and share to demonstrate strategies when solving addition and subtraction problems.• I can use mental strategies, such as estimation of numbers, to find products.• I can write and create fractions using pictures and number form (a/b)• I can understand the relationship between fraction models and corresponding written fractions.• I can create equivalent fractions pictures.• I can understand that whole number fractions can be described in different ways ($4=4/1=8/2$).• I can compare two fractions by using logical reasoning or objects.	<ul style="list-style-type: none">• Addition/Subtraction Process• Place Value- Compare, Order, Forms• Rounding to the Identified Digit• Place Value- Compare, Order, Form)• Estimation• Mental Computation Strategies• Fraction Concepts• Fraction Concepts
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<ul style="list-style-type: none"> • Students understand that analog and digital clocks represent the time at any particular moment and that clock show the passage of time with the movement of the hands or the changing of the digits. These representations can be used to solve problems. {3.MD.1} • Students understand that questions concerning mathematical contexts can be answered by collecting and organizing data scaled pictographs and bar graphs and that logical reasoning and connection between representations provide justification for solutions. {3.MD.3} • Students understand that questions concerning mathematical contexts can be answered by collecting, organizing, and analyzing data and data displays. {3.MD.4} • Students understand that the area of a plane figure is measured by counting the number of the same-size squares (unit squares) that exactly cover the interior space of the figure. {3.MD.6} • Students understand that multiplication is putting together equal sized groups and that rectangular arrays represent groups (rows) of equal size (number of columns) and that multiplication is distributive over the addition of whole numbers. {3.MD.7} 	<ul style="list-style-type: none"> • I can read and write time to the nearest minute from analog and digital clocks. • I can use methods for showing elapsed time to solve word problems. • I can organize and collect data. • I can read and understand graphs. • I can use various standard units and tools to measure length to the nearest quarter inch. • I can organize and represent lengths on a line plot. • I can use various standard and non-standard units to measure to the nearest whole unit. • I can use arrays to demonstrate the Distributive Property in Multiplication and Addition problems. • I can find the area and perimeter of 2-D objects. 	<ul style="list-style-type: none"> • Time- Half and Quarter Hour, Minute, and Elapsed Time • Read and Interpret Data From Graphs • Probability • Read and Interpret Data From Graphs • Choose Correct Measurement • Multiplication Operations • Choose Correct Measurement
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<ul style="list-style-type: none">• Students understand that perimeter is measured in length units and is the distance around a 2-D figure and that area of a plane figure is measured by the number of same-size squares that exactly cover the interior space of the figure. {3.MD.8}• Students understand that the same fractional parts of same-size 2-D shapes have equal area but do not have to be congruent. {3.G.2}	<ul style="list-style-type: none">• I can show equal parts in circles, squares, and rectangles.• I can use 2-D shapes to show fractional parts.• I can understand that same size 2-D shapes have equal area but do not have to be congruent.	<ul style="list-style-type: none">• Geometry -- Shapes & Concepts• Geometry -- Shapes & Concepts
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