



Montezuma Community Schools

504 N 4th Street
Montezuma, IA 50171
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Common Core Standards: 5th Grade

Operations and Algebraic Thinking:

- Use parentheses, brackets or braces in numerical expressions, and evaluate expressions with these symbols. {5.OA.1}
- Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. {5.OA.2}
- Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. {5.OA.3}

Numbers and Operations in Base Ten:

- Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. {5.NBT.2}
- Read, write, and compare decimals to thousandths. {5.NBT.3}
- Use place value understanding to round decimals to any place. {5.NBT.4}
- Fluently multiply multi-digit whole numbers using the standard algorithm. {5.NBT.5}
- Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. {5.NBT.6}
- Add, subtract, multiply and divide decimals to the hundredths place and relate the strategy to a written method and explain the reasoning used. {5.NBT.7}

NUMBER AND OPERATIONS – FRACTIONS

- Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions. {5.NF.1}
- Solve real-world problems involving addition and subtraction of fractions and mixed numbers with unlike denominators. {5.NF.2}
- Interpret a fraction as division of the numerator by the denominator. Solve real-world problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. {5.NF.3}
- Apply and extend previous understandings of multiplication and division to multiply and divide a fraction or a whole number by a fraction. {5.NF.4}
- Solve real-world problems involving multiplication of mixed numbers and fractions. {5.NF.6}

Measurement and Data:

- Convert among different sized standard measurement units within a given measurement system and use these conversions in solving multi-step real-world problems. {5.MD.1}
- Make a line plot to display a data set of measurements in fractions of a unit. ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving information presented in the line plot. {5.MD.2}
- Measure volumes by counting unit cubes (cubic ft., cubic in., cubic cm.) {5.MD.4}

Geometry:

- Use perpendicular number lines, called axes, to define a coordinate system, with the intersection of the line (origin) arranged to coincide with 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). {5.G.1}
- Represent real world mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of a situation. {5.G.2}

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<ul style="list-style-type: none"> Classify two-dimensional figures based on their attributes. {5.G.4} 		
Learning Targets:	Student <i>I Can</i> Statements:	Report Card:
<ul style="list-style-type: none"> Students understand that there are conventions in mathematics such as, order of operations, that are arbitrary but have been agreed to for communication purposes, and mathematical symbols in expressions communicate the order of operations. {5.OA.1} Students understand that the operations of addition and subtraction, multiplication, and division all arise in multiple contexts, and that mathematical symbols in equations communicate the order of operations. {5.OA.2} Students understand that sequences of ordered pairs of corresponding numbers can be represented on a coordinate graph, different representations of mathematical situations reveal different features of the situation and aid in problem identification and solving, and noticing structure and regularities in mathematical statements and rules reveals connections that are useful in interpreting and utilizing the rules. {5.OA.3} Students understand that patterns and regularity in the number system can be used to solve problems. {5.NBT.2} 	<ul style="list-style-type: none"> I can write and evaluate expressions using order of operations. {5.OA.1} I can interpret the meaning of mathematical expressions using multiplication properties. {5.OA.2} I can explain number patterns. I can graph ordered pairs on a coordinate plane. I can use logical reasoning and informal language to explain relationships between corresponding terms in two sequences. {5.OA.3} I understand that additional zeroes in the product relates to powers of 10. I can convert powers of 10 from standard form to exponential form. I can accurately compute products and quotients. {5.NBT.2} 	<ul style="list-style-type: none"> Order of Operations Write and solve mathematical expressions Write and solve mathematical expressions Plotting points on a coordinate plane. Place Value using decimals and exponents. Multiplication by 2 and 3 digits, division by a 2-digit divisor, multiplying and dividing basic facts to 12. Place Value using decimals and exponents.



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<ul style="list-style-type: none"> • Students understand that rounding estimates quantities by changing the original number to the closest multiple of a power of 10 and rounding place values is a useful strategy to be chosen from a repertoire of estimation strategies when they consider it to be the most appropriate. {5.NBT.4} • Students understand that efficient application of computation strategies is based on the numbers and operations in the problems and the steps used in the standard algorithm for multiplication can be justified by using properties and understanding of place value. {5.NBT.5} • Students understand that division problems can be solved using a variety of strategies, models, and representations and efficient application of division computation strategies is based on the relationships between the numbers in the problem. {5.NBT.6} • Students understand that decimal computation problems can be solved using a variety of strategies, models, and representations and efficient application of decimal computation strategies is based on the numbers and operations in the problems. {5.NBT.7} • Students understand that addition and subtraction of fractions are applied to fractions referring to the same whole, the operation of addition of whole numbers and/or fractions represents both putting together and adding to contexts, the operation of subtraction with 	<ul style="list-style-type: none"> • I can find the best estimate by rounding to the appropriate place value. {5.NBT.4} • I can choose and apply appropriate strategies for multiplying using a standard algorithm. {5.NBT.5} • I can accurately compute quotients with or without remainders and interpret the results of the problem. {5.NBT.6} • I can model and compute problems with decimals. {5.NBT.7} • I can explain the difference between number models and symbols. (5.NBT.7) • I can choose and apply a variety of representations to solve addition and subtraction word problems involving fractions with unlike denominators. • I can explain and support my answers. • I can accurately compute sums and differences 	<ul style="list-style-type: none"> • Estimating products, Estimating quotients • Multiplication by 2 & 3 digits, multiplying basic facts 0 - 12 • Division by a 2-digit divisor, dividing basic facts 0 – 12 • Adding and Subtracting with Decimals. • Interprets the meaning of fractions and decimals. • Adding and Subtracting of Fractions. • Interprets the meaning of fractions and decimals.
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<p>whole numbers and fractions represents taking apart, taking from, and the operations are performed with like labels and denominators. {5.NF.2}</p> <ul style="list-style-type: none"> • Students understand that objects are divided into b equal parts, the each part will contain a piece of size a/b. {5.NF.3} • Students understand that connections between representations and symbols provide justifications for solutions and solution paths and properties allow manipulation of mathematical expressions for sense making and easier computation. {5.NF.4} • Students understand that multiplication may be viewed as putting together equal sized groups and as comparisons, and mathematical problems (multiplication of whole numbers and fractions) can be solved using a variety of strategies, models, and representations. {5.NF.6} • Students understand the size of the unit of measurement and the number of minutes in the measurement are inversely related and when adding measurements a common unit allows for meaningful computation. {5.MD.1} 	<p>of fractions using unlike denominators. {5.NF.2}</p> <ul style="list-style-type: none"> • I can use models to relate quotients that involve fractions and mixed numbers. {5.NF.3} • I can use models to relate products that involve fractions and mixed numbers. • I can accurately compute products of fractions or whole numbers by fractions. {5.NF.4} • I can choose and apply a variety of strategies to solve multiplication word problems involving fractions and mixed numbers. • I can apply knowledge of the properties of multiplication with knowledge of fractions to accurately compute products fractions, and mixed numbers. • I can explain my answers. {5.NF.6} • I can convert to the appropriate unit of measurement to solve real-world problems. • I can explain my answers. {5.MD.1} 	<ul style="list-style-type: none"> • Adding and Subtracting of Fractions. • Interprets the meaning of fractions and decimals. • Multiplying and Dividing Fractions • Multiplying and Dividing Fractions • Multiply and Divide Fractions • Interprets meaning of fractions and decimals • Multiply and Divide Fractions • Converts units in standard and metric measurement.
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<ul style="list-style-type: none"> • Students understand that questions concerning mathematical contexts (in particular, measurement contexts) can be generated and answered by collecting, organizing and analyzing data and data displays. {5.MD.2} • Students understand that the volume of a rectangular prism is measured by the number of same-size cubes that exactly fill the interior space of the object, multiplication is putting together equal sized groups or arrays, rectangular arrays represent groups of equal size and layers of arrays can be used to determine volume. {5.MD.4} • Students understand that graphing points on a coordinate plane provides a representation of mathematical context which aids in visualizing situations and solving problems. {5.G.1} • Students understand that a variety of representation can be used to illustrate mathematical situations and relationships and the representations help in conceptualizing ideas and in solving problems. • Students understand that graphing points on a coordinate plane provides a representation of a mathematical context which aids in visualizing situations and solving problems. {5.G.2} 	<ul style="list-style-type: none"> • I can measure to the nearest 1/8 inch. • I can apply strategies for solving problems involving all four operations with fractions. • I can explain my answers. {5.MD.2} • I can measure the volume of a cube using standard and non-standard cubic units. {5.MD.4} • I can make a coordinate graph. • I can explain how to identify the coordinates of a point on a coordinate graph. • I can graph ordered pairs on a coordinate graph. {5.G.1} • I can represent real world and mathematical problems on a coordinate graph. {5.G.2} 	<ul style="list-style-type: none"> • Measurement (Measuring to 1/8 inch) • Add and Subtract Fractions • Multiply and Divide Fractions • Interprets meaning of fractions and decimal • Volume Concepts • Plotting Points on a Coordinate Plane • Plotting Points on a Coordinate Plane • Plotting Points on a Coordinate Plane • Plotting Points on a Coordinate Plane
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<ul style="list-style-type: none">Students understand that shapes are classified based on the properties of their attributes and belonging to a category of 2-D figures also belong to all subcategories of that category. {5.G.4}	<ul style="list-style-type: none">I can explain which category a shape fits into based on their characteristics. {5.G.4}	<ul style="list-style-type: none">Triangle/Geometric Concepts – Not sure how to word this.
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