

Math Curriculum Unit
Gasconade County R-2 School District

Standard Highlights Key	
Highlight	Meaning
Red	We'll Fix (Essential to know, make sure all students understand)
Yellow	I'll Fix (Important to know, address in class and/or RTI)
Green	Drip (Something that repeated exposure will fix)

Grade Level: 6th

Subject: Math

Month	Mathematics Missouri Learning Standards	Key Mathematics and Academic Vocabulary	MathLinks to New MLS	Essential Questions
August	<p>6.NS.B.4a</p> <p>6.NS.B.4b</p> <p>6.RP.A.1</p> <p>6.RP.A.3a</p>	<p>prime number - a number divisible by only 1 and itself</p> <p>composite number - a number divisible by more than 1 and itself.</p> <p>factors - numbers you multiply together to get another number</p> <p>multiples - a number obtained by multiplying a number by another</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level</p>	<p>I can find the greatest common factor (GCF) and the least common multiple (LCM).</p> <p>I can find common factors and multiples using the distributive property to express a sum of two whole numbers with a common factor as a multiple of a sum of two whole numbers.</p> <p>I can understand a ratio as a comparison of two quantities and represent these comparisons.</p> <p>I can solve problems involving ratio and rates, create tables of equivalent ratios, find missing values in the tables, and plot the pairs of values on the Cartesian Coordinate plane.</p>

		<p>whole non-negative number</p> <p>greatest common factor - the greatest factor two numbers have in common.</p> <p>least common multiple - the lowest multiple shared by two or more numbers.</p> <p>distributive property - distributing the common factor does not change the value of the expression.</p> <p>ratio - a way to compare two different quantities.</p> <p>equivalent ratios - two or more ratios that are equal to one another.</p> <p>equivalent - having the same value</p> <p>coordinate plane</p>	<p>Blueprints</p>	
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		<p>- a two-dimensional number line where the vertical line is called the y-axis and the horizontal is called the x-axis. These lines are perpendicular and intersect at their zero points.</p> <p>ordered pair - a pair of numbers used to locate a point on a coordinate plane.</p>		
September	<p>6.RP.A.2 6.RP.A.3b 6.RP.A.3d 6.RP.A.3c 6.NS.C.8</p>	<p>rate - an equivalent ratio that compares the first quantity in a ratio to only one of the second quantity.</p> <p>unit rate - the part of the rate that is being compared to 1.</p> <p>unit price - the price for 1 unit.</p> <p>constant speed - when the speed of an object stays the same.</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level Blueprints</p>	<p>I can understand the concept of unit rate associated with a ratio, and describe the meaning of unit rate.</p> <p>I can solve unit rate problems.</p> <p>I can convert measurement units within and between two systems of measurement.</p> <p>I can solve percent problems.</p> <p>I can extend prior knowledge to generate equivalent representations of rational numbers between fractions, decimals, and percents.</p>

		<p>percent - a rate “for every 100” or “per 100”</p>		
October	<p>6.NS.A.1a 6.NS.B.2 6.NS.B.3</p>	<p>fraction - a number between 0 and 1, expressed as one number over another.</p> <p>numerator - top number in a fraction</p> <p>denominator - bottom number in a fraction</p> <p>mixed number - a whole number and a fraction combined</p> <p>improper fraction - a fraction where the numerator is larger or equal to the denominator.</p> <p>multiplicative inverse - a number is the multiplicative inverse of another number if the product of the two numbers is 1.</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level Blueprints</p>	<p>I can compute and interpret quotients of positive fractions and solve problems involving division of fractions by fractions.</p> <p>I can demonstrate fluency with division of multi-digit whole numbers.</p> <p>I can demonstrate fluency with addition, subtraction, multiplication, and division of decimals.</p>

reciprocal - the multiplicative inverse of a number; with fractions, the numerator and denominator are switched.

quotient - answer to a division problem.

algorithm - a step-by-step way to solve a problem.

dividend -the amount you want to divide up.

divisor - the number you divide by

sum - answer to an addition problem.

addends -any numbers added together

difference -answer to a subtraction problem

minuend - first

		<p>number in a subtraction problem.</p> <p>subtrahend -the second number of a subtraction problem.</p>		
November	<p>6.NS.B.3</p> <p>6.NS.C.5</p> <p>6.NS.C.6a</p> <p>6.NS.C.6b</p> <p>6.NS.C.6c</p> <p>6.NS.C.7</p> <p>6.GM.A.3a</p> <p>6.GM.A.3b</p> <p>6.GM.A.3c</p>	<p>product -the answer to a multiplication problem.</p> <p>positive number -numbers greater than 0 and located to the right of 0 on a number line.</p> <p>negative number -numbers less than 0 and located to the left of 0 on a number line.</p> <p>signed number - positive and negative numbers</p> <p>opposites - numbers that are the same distance from zero but in opposite directions.</p> <p>integers - all whole numbers</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level Blueprints</p>	<p>I can demonstrate fluency with addition, subtraction, multiplication, and division of decimals.</p> <p>I can use positive and negative numbers to represent quantities.</p> <p>I can locate rational numbers on a horizontal or vertical number line.</p> <p>I can write, interpret and explain problems of ordering of rational numbers.</p> <p>I understand that a number and its opposite (additive inverse) are located on opposite sides of zero on the number line.</p> <p>I understand that the absolute value of a rational number is its distance from 0 on the number line.</p> <p>I can understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane.</p> <p>I can recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</p> <p>I can find distances between points with the same first coordinate or the same second coordinate.</p>

and their opposites.

absolute value - a number's distance from 0 on a number line.

rational number - any number that can be expressed as the quotient or fraction of two integers.

quadrants - the four spaces of the coordinate plane that are created when the x-axis and y-axis intersect at the origin.

origin - the point where the x-axis and y-axis intersect on a coordinate plane.

coordinate pair - another name for an ordered pair.

coordinates - a set of values that show an exact position

		<p>coordinate system - a system that uses one or more numbers, or coordinates, to determine the position of points.</p> <p>x-axis - the line that runs horizontally in a coordinate plane.</p> <p>y-axis - the line that runs vertically through a coordinate plane.</p> <p>x-coordinate - the horizontal value of an ordered pair, it is always written first in an ordered pair.</p> <p>y-coordinate - the vertical value of an ordered pair, it is always written second in an ordered pair.</p> <p>plot - to draw on a graph or map.</p>		
December	<p>6.GM.A.1</p> <p>6.GM.A.2a</p> <p>6.GM.A.2b</p> <p>6.GM.A.3a</p>	<p>area - the amount of space within a two-dimensional shape.</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning</p>	<p>I can find the area of polygons by composing or decomposing the shapes into rectangles or triangles.</p>

<p>6.GM.A.3b 6.GM.A.3c 6.GM.A.3d 6.GM.A.4a 6.GM.A.4b</p>	<p>polygon - a two-dimensional shape made with straight lines.</p> <p>compose - a shape made by putting together other shapes</p> <p>decompose -breaking apart a shape into more simple shapes.</p> <p>base -the face of a geometric figure from which the height can be measured.</p> <p>net -a flat, “unfolded” representation of a prism or pyramid.</p> <p>surface area - the sum of the areas of the faces of a figure.</p> <p>triangular prism - three-dimensional figure that has two parallel triangular faces that are the same size and shape.</p>	<p>Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level Blueprints</p>	<p>I understand that the volume of a right rectangular prism can be found by filling the prism with multiple layers of the base.</p> <p>I can find the volume of right rectangular prisms by applying $V = l * w * h$ and $V = Bh$ to find the volume of right rectangular prisms.</p> <p>I can understand signs of numbers in ordered pairs as indicating locations in quadrants of the Cartesian coordinate plane.</p> <p>I can recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.</p> <p>I can find distances between points with the same first coordinate or the same second coordinate.</p> <p>I can construct polygons in the Cartesian coordinate plane.</p> <p>I can represent three-dimensional figures using nets made up of rectangles and triangles.</p> <p>I can use nets to find the surface area of three-dimensional figures whose sides are made up of rectangles and triangles.</p>
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		<p>pyramid - a three-dimensional figure whose base is a polygon and whose other faces are triangles.</p> <p>rectangular prism - three-dimensional figure that has six rectangular faces.</p> <p>cube -three-dimensional figure with 6 square faces.</p> <p>volume - measure of the amount of space in a solid figure.</p>		
January	<p>6.EE1.A.2a</p> <p>6.EE1.A.2b</p> <p>6.EE1.A.2c</p> <p>6.EE1.A.2d</p> <p>6.EE1.A.2e</p>	<p>base - the number that is multiplied by itself when it is raised to a certain power.</p> <p>exponent - a number that shows how many times a base is used as a factor.</p> <p>exponential expression - expressions</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p>	<p>I can create and evaluate expressions involving variables and whole number exponents by identifying parts of an expression using mathematical terminology.</p> <p>I can evaluate expressions at specific values of the variables.</p> <p>I can evaluate non-negative rational number expressions.</p> <p>I can write and evaluate algebraic expressions.</p> <p>I understand the meaning of the variable in the context of the situation.</p>

		<p>written with exponents.</p> <p>expression - numbers, symbols, and operations grouped together to show the value of something.</p> <p>numerical expression - an expression containing only numbers and operations.</p> <p>order of operations - the rule that tells which operations come first in an expression.</p> <p>variable - a letter that stands for an unknown number.</p> <p>term - a known number, a variable, or the product of a known number and variable.</p> <p>variable term - a term that includes variables.</p>	<p>End of Course Blueprints</p> <p>MAP Grade Level Blueprints</p>	
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		<p>constant - a number on its own</p> <p>coefficient - a number used to multiply a variable (a number connected to a variable)</p> <p>algebraic expression - a mathematical phrase that contains numbers, operations, and variables.</p>		
February	<p>6.EE1.A.2b 6.EE1.A.2c 6.EE1.A.2d 6.EE1.A.2e 6.EE1.A.3 6.EE1.B.5 6.EE1.B.6 6.EE1.B.7</p>	<p>commutative property of addition - reordering the terms does not change the value of the expression.</p> <p>associative property of addition - regrouping the terms does not change the value of the expression.</p> <p>distributive</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p>	<p>I can create and evaluate expressions involving variables and whole number exponents by identifying parts of an expression using mathematical terminology.</p> <p>I can evaluate expressions at specific values of the variables.</p> <p>I can evaluate non-negative rational number expressions.</p> <p>I can write and evaluate algebraic expressions.</p> <p>I understand the meaning of the variable in the context of the situation.</p> <p>I can identify and generate equivalent algebraic expressions using mathematical properties.</p>

		<p>property - distributing the common factor does not change the value of the expression.</p> <p>like terms - two or more terms in a variable expression that have the same variable factors.</p> <p>equation - a statement that shows two equivalent expressions.</p>	<p>MAP Grade Level Blueprints</p>	<p>I understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true.</p> <p>I can write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation.</p> <p>I can solve one-step linear equations in one variable involving non-negative rational numbers.</p>
March	<p>6.EE1.B.4 6.EE1.B.5 6.EE1.B.6 6.EE1.B.7 6.EE1.B.8a 6.EE1.B.8b 6.EE1.C.9a 6.EE1.C.9b</p>	<p>isolate the variable -get the variable by itself on one side of the equals sign.</p> <p>balance the equation - keep the two expressions equivalent to each other</p> <p>inverse operations - operations that “undo” each other.</p> <p>inequality - two</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level</p>	<p>I can use substitution to determine whether a given number in a specified set makes a one-variable equation or inequality true.</p> <p>I understand that if any solutions exist, the solution set for an equation or inequality consists of values that make the equation or inequality true.</p> <p>I can write and solve equations using variables to represent quantities, and understand the meaning of the variable in the context of the situation.</p> <p>I can solve one-step linear equations in one variable involving non-negative rational numbers.</p> <p>I can recognize that inequalities may have infinitely many solutions and write an inequality of the form $x > c$, $x < c$, $x \geq c$, or $x \leq c$ to represent a constraint or condition.</p> <p>I can graph the solution set of an inequality.</p>

		<p>unequal values that are compared using less than (<) and greater than (>) signs.</p> <p>greater than - when the first quantity is larger than the second quantity.</p> <p>less than - when the first quantity is smaller than the second quantity.</p> <p>greater than or equal to - when the first quantity is larger than or the same as the second quantity.</p> <p>less than or equal to - when the first quantity is smaller than or the same as the second quantity.</p> <p>greater than or equal to - when the first quantity is larger than or the same as the second quantity.</p> <p>dependent</p>	<p>Blueprints</p>	<p>I can identify and describe the relationship between two variables that change in the relationship to one another by writing an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable.</p> <p>I can analyze the relationship between the dependent and independent variables using graphs, tables, and equations and relate these representations to each other.</p>
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		<p>variable - a variable whose value depends on the values of one or more independent variables.</p> <p>independent variable - a variable whose value determines the value of other variables.</p>		
April	<p>6.DSP.A.1 6.DSP.A.2 6.DSP.A.3 6.DSP.A.4a 6.DSP.A.4b 6.DSP.A.5a 6.DSP.A.5b 6.DSP.A.5c 6.DSP.A.5d</p>	<p>statistical question - questions with answers involving variability.</p> <p>statistics - the collection, organization, analysis, and interpretation of numerical data.</p> <p>statistical variability - measure of the spread of data.</p> <p>data - collection of numbers or values that relate to a</p>	<p>Item Specification Reports</p> <p>K-5 Missouri Learning Standards</p> <p>6-12 Missouri Learning Standards</p> <p>K-6 Math Glossary</p> <p>7-12 Math Glossary</p> <p>Missouri EOC Math Reference Sheet</p> <p>End of Course Blueprints</p> <p>MAP Grade Level Blueprints</p>	<p>I can recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.</p> <p>I understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread and overall shape.</p> <p>I can recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary from a single number.</p> <p>I can display and interpret data by using dot plots, histograms and box plots to display and interpret numerical data.</p> <p>I can create and interpret circle graphs.</p> <p>I can summarize numerical data sets in relation to the context and report the number of observations.</p>

		<p>particular subject.</p> <p>cluster - a group of data points that crowd near each other.</p> <p>skewed left - when most of the data points on a graph are clustered near higher values.</p> <p>skewed right - when most of the data points on a graph are clustered near lower values.</p> <p>symmetrical graphs - graphs that have the same shape on either side of a middle point.</p> <p>peak - what forms when many data points are at one value</p> <p>outlier - a data point far away from the other data points; it doesn't quite fit with the rest of the data</p>		<p>I can describe the nature of the attribute under investigation, including how it was measured and its units of measurement.</p> <p>I can give quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context of the data.</p> <p>I can analyze the choice of measures of center and variability based on the shape of the data distribution and/or the context of the data.</p>
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points.

median - the middle number in an ordered set of numbers.

mode - the most common number in a set of numbers.

range - the difference between the least and greatest values in a data set.

mean absolute deviation (MAD) - the average of the distances of each data point from the mean.

mean - the average of a set of numbers.

measure of center - the value that attempts to describe the center position of the data set.

measure of variability - the value that

describes how far spread out a set of data is.

spread - how much a data set is spread out or scattered.

dot plot - a display of data using dots.

line plot - a graph that displays data as dots above a number line.

histogram - a display where data is grouped in ranges and plotted as bars.

maximum - largest data value in a set of data.

minimum - smallest data value in a set of data.

circle graph - circular chart divided into sections.

lower quartile

(first quartile) - the middle number between the minimum and the median in an ordered set of numbers.

upper quartile (third quartile) - the middle number between the median and the maximum in an ordered set of numbers.

box plot - a 5-number summary that includes the minimum, the lower quartile, the median, the upper quartile, and the maximum.

interquartile range IQR) - the difference between the upper quartile and the lower quartile.

May	Review all			