

Mathematics Pacing Guide Alignment with Common Core Standards

Sixth Grade

Time Frame:

Unit 1: Developing an Understanding of Operations and Rational Numbers

Common Core	GLCE	Essential Questions	Assessment	Vocabulary	Resources
<p>CRITICAL AREA: Connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems</p> <p>Content moving into 6th Compute fluently with multi-digit numbers and find common factors and multiples 6. NS. 2 Fluently divide multi-digit numbers using the standard algorithm.</p>	<p>FOCAL POINT: Developing an understanding of operations on all rational numbers</p> <p>Content moving into 6th Understand division of whole numbers N.MR.05.06 Divide fluently up to a four-digit number by a two-digit number.</p>	<p>What are rational numbers?</p> <p>What are the operations of rational numbers?</p>		Decimal Dividend Divisibility Division Divisor Multiplication Quotient	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p> <p>Textbook Course 1: 1.1 and 1.2 (include pg 8 #59 for rate and ratio)</p> <p>IXL: K1-K4; L1-L6; X1-X2</p> <p>Minute Math Arizona pg10</p>
<p>Compute fluently with multi-digit numbers and find common factors and multiples. 6. NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p>	<p>Add and subtract integers and rational numbers N.FL.06.10 Add, subtract, multiply, and divide positive rational numbers fluently.</p> <p>Solve decimal, percentage and rational number problems. N.FL.06.14 For applied situations, estimate the answers to calculations involving operations with rational numbers.</p>			Decimal Dividend Divisibility Division Divisor Multiplication Quotient	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p> <p>Textbook Course 1: 4.1, 4.3, 4.4, 4.6</p> <p>IXL: X1, X2, O1, O4</p> <p>Minute Math Arizona pg 11</p>

	N.FL.06.15 Solve applied problems that use four operations with appropriate decimal numbers.				Story Problems pg 172 #30-32 pg 185 #43 pg 189 #43-46 pg 201 #50-51
<p>Apply and extend previous understandings of numbers to the system of rational numbers</p> <p>6. NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.</p> <p>a. Recognize opposite signs of numbers as indicating location on opposite sides of 0 on the number line; recognize that the opposite of a number is the number itself, e.g., $-(-3) = 3$, and that 0 is its own opposite.</p> <p>b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; 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>c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position</p>	<p>Represent rational numbers as fractions or decimals</p> <p>N.ME.06.05 Order rational numbers and place them on the number line.</p> <p>Understand rational numbers and their location on the number line</p> <p>N.ME.06.17 Locate negative rational number (including integers) on the number line; know that numbers and their negatives add to 0, and are on opposite sides and at equal distance from 0 on a number line.</p> <p>N.ME.06.19 Understand that 0 is an integer that is neither negative nor positive.</p>				<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p> <p>Textbook Course 1: 2.6 and 11.1 story problems pg 575 #35-38</p> <p>IXL: a)C1-C4 b)Q1-Q2 Z18 c)B9 Q3</p> <p>Minute Math</p> <p>Arizona pg14</p>

pairs of integers and other rational numbers on a coordinate plane.					
Content moving into 6th Compute fluently with multi-digit numbers and find common factors and multiples 6. NS.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express $36 + 8$ as $4(9 + 2)$.	Content moving into 6th Use factors and multiples N.MR.04.07 Use factors and multiples to compose and decompose whole numbers.			GCF (Greatest Common Factor), Common factor Factors Multiples Whole number LCM (least Common Multiple), Distributive property Less than Greater than Equal to Sum	Homework Help: www.mathisfun.com www.brainpop.com/math/ Textbook Course 1: Distributive IXL: K1-K4; L1-L6; X1-X2 Minute Math Arizona pg10

Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 5 Weeks – November/December

Sixth Grade

Unit 2: Using Concepts of Ratios and Rates

Common Core	GLCE	Essential Questions	Assessment	Vocabulary	Resources
CRITICAL AREA: Completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which	FOCAL POINT: Developing an understanding of operations on all rational numbers Multiply and divide	What are rational numbers? What are the operations of rational numbers?		Fraction Numerator Denominator Mixed number Improper fraction Inverse	Homework Help: www.mathisfun.com www.brainpop.com/math/

<p>includes negative numbers</p> <p>Apply and extend previous understandings of multiplication and division to divide fractions by fractions</p> <p>6. NS.1 Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$-cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi?</p> <p>Reason about and solve one-variable equations and inequalities</p> <p>6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + p + q$ and $px = q$ for cases in which p, q and x are all</p>	<p>fractions</p> <p>N.MR.06.01 Understand division of fractions as the inverse of multiplication, e.g., $4/5 \div 2/3 = \blacksquare$, then $(2/3)(\blacksquare) = 4/5$, so $\blacksquare = (4/5)(3/2) = 12/10$.</p> <p>N.FL.06.02 Given an applied situation involving dividing fractions, write a mathematical statement to represent the situation.</p> <p>N.MR.06.03 Solve for the unknown in equations such as $1/4 \div \blacksquare = 1$, $3/4 \div \blacksquare = 1/4$, and $1/2 = 1(\blacksquare)$.</p> <p>N.FL.06.04 Multiply and divide any two fractions, including mixed numbers, fluently.</p>			<p>Division</p> <p>Multiplication</p> <p>Variable</p> <p>Quotients</p> <p>Negative integer</p> <p>Positive integer</p> <p>Rational number</p> <p>GCF (greatest common factor)</p> <p>LCD (least common denominator)</p> <p>LCM (least common multiple)</p> <p>Factor</p> <p>Common factor</p>	
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nonnegative rational numbers.					
6. NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	<p>N.ME.06.05 Order rational numbers and place them on the number line.</p> <p>N.ME.06.06 Represent rational numbers as fractions or terminating decimals when possible, and translate between these representations.</p> <p>N.ME.06.07 Understand that a fraction or a negative fraction is a quotient of two integers, e.g., $-8/3$ is -8 divided by 3.</p> <p>N.ME.06.17 Locate negative rational number (including integers) on the number line; know that numbers and their negatives add to 0, and are on opposite sides and at equal distance from 0 on a number line.</p> <p>N.ME.06.18 Understand that rational numbers are quotients of integers (non zero denominators), e.g., a rational number is either a fraction or a negative fraction.</p> <p>N.ME.06.19 Understand that 0 is an integer that is neither negative nor positive.</p>			<p>Rational number</p> <p>Fractions</p> <p>Least common multiple</p> <p>Like denominators</p> <p>Point</p> <p>Repeating decimal</p> <p>Terminating decimals</p> <p>Unlike denominators</p> <p>Positive</p> <p>Natural number</p> <p>Counting number</p> <p>Least common denominator (LCD)</p> <p>Decimal</p> <p>Quotient</p>	<p>Homework Help:</p> <p>www.mathisfun.com</p> <p>www.brainpop.com/math/</p>

<p>Content moving into 6th Understand ratio concepts and use ratio reasoning to solve problems 6. RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, “The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak.” “For every vote candidate A received, candidate C received nearly three votes.”</p>	<p>Content moving into 6th Express, interpret, and use ratios; find equivalences N.ME.05.23 Express ratios in several ways given applied situations, e.g., 3 cups to 5 people, 3:5, 3/5; recognize and find equivalent ratios.</p>			Prime factorization Exponent Exponential notation Prime number Composite number	Homework Help: www.mathisfun.com www.brainpop.com/math/
<p>Understand ratio concepts and use ratio reasoning to solve problems 6. RP.2. Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. <i>For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”</i> 6. RP.3. Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or</p>	<p>Find equivalent ratios N.ME.06.11 Find equivalent ratios by scaling up or scaling down. Solve decimal, percentage and rational number problems N.FL.06.12 Calculate part of a number given the percentage and the number. N. MR.06.13 Solve contextual problems involving percentage such as sales tax and tips. Calculate rates A. PA.06.01 Solve applied problems involving rates, including speed, e.g., if a car is going 50 mph, how far will it g</p>			Ratio Rate Equivalent ratio Unit rate Scaling up or down Scale factor	Homework Help: www.mathisfun.com www.brainpop.com/math/

<p>equations.</p> <p>a. Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.</p> <p>b. Solve unit rate problems including those involving unit pricing and constant speed. <i>For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?</i></p> <p>c. Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.</p> <p>d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.</p>	<p>in 3 1/2 hours?</p> <p>Convert within measurement systems M.UN.06.01 Convert between basic units of measurement with a single measurement system, e.g., square inches to square feet.</p>				
<p>Content moving into 6th Apply and extend previous understandings of arithmetic to algebraic expressions 6. EE.1 Write and evaluate numerical expressions involving whole-number exponents.</p>	<p>Content moving into 6th Find prime factorizations of whole numbers N.MR.05.07 Find the prime factorization of numbers from through 50, express in exponential notation, e.g., $24 = 2^3 \times 3^1$, and understand that</p>				

	every whole number greater than 1 is either prime or can be expressed as a product of primes.				
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Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 7 Weeks – December/January/February

Sixth Grade

Unit 3: Writing, Interpreting, and Using Mathematical Expressions and Equations

Common Core	GLCE	Essential Questions	Assessment	Vocabulary	Resources
<p>CRITICAL AREA: Writing, interpreting, and using expressions and equations</p> <p>Apply and extend previous understandings of arithmetic to algebraic expressions</p> <p>6. EE.2 Write, read, and evaluate expressions in which letters stand for numbers.</p> <p>a. Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation “Subtract y from 5” as $5 - y$.</p> <p>b. Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.</p> <p>c. Evaluate expressions at specific values for their variables. Include expressions that arise from formulas in</p>	<p>FOCAL POINT: Writing, interpreting, and using mathematical expressions and equations and solving linear equations</p> <p>Use variables, write expressions and equations, and combine like terms</p> <p>A.FO.06.03 Use letters, with units, to represent quantities in a variety of contexts, e.g., y lbs., k minutes, x cookies.</p> <p>A.FO.06.04 Distinguish between an algebraic expression and an equation.</p> <p>A.FO.06.05 Use standard conventions for writing algebraic expressions, e.g., $2x + 1$ means “two times x, plus 1” and $2(x + 1)$ means “two times the quantity (x + 1).”</p> <p>A.FO.06.06 Represent information given in words using algebraic expressions and equations.</p> <p>A.FO.06.07 Simplify</p>	<p>What are linear equations?</p> <p>How are linear equations expressed?</p>		<p>Algebraic expression</p> <p>Algebraic equation</p> <p>Variable</p> <p>Constant</p> <p>Coefficient</p> <p>Quantities</p> <p>Parenthesis</p> <p>Evaluate</p> <p>Term</p> <p>Similar term</p> <p>Factor</p> <p>Solution</p>	<p>Homework Help:</p> <p>www.mathisfun.com</p> <p>www.brainpop.com/math/</p>

<p>real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.</p> <p>6.EE.3 Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$.</p>	<p>expressions of the first degree by combining like terms, and evaluate using specific values.</p> <p>Represent linear functions using tables, equations, and graphs</p> <p>A.RP.06.08 Understand that relationships between quantities can be suggested by graphs and tables.</p> <p>A.PA.06.09 Solve problems involving linear functions whose input values are integers; write the equation; graph the resulting ordered pairs of integers, e.g., given c chairs, the "leg function" is $4c$; if you have 5 chairs, how many legs?; if you have 12 legs, how many chairs?</p> <p>A.RP.06.10 Represent simple relationships between quantities using verbal descriptions, formulas or equations, tables, and graphs, e.g., perimeter-side relationship for a square, distance-time graphs, and conversions such as feet to inches.</p>				
<p>Content moving into 6th Reason about and solve one-variable equations and inequalities</p>	<p>Not in Grade Level Content Expectations</p>			<p>Coordinate Coordinate graph Coordinate grid point</p>	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>

<p>6.EE.5 Understand solving an equation or inequality as a process of answering a question; which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.</p> <p>6. EE.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solution of such inequalities on number line diagrams.</p>				<p>Graph Horizontal Intersecting lines Line Ordered pairs (x,y) Perpendicular Plot Table Variable Vertical Function tables Functional notation Functional notation symbol f(x)</p>	
<p>Reason about and solve one-variable equations and inequalities</p> <p>6. EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.</p> <p>6. EE.7. Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all</p>	<p>Solve equations</p> <p>A.FO.06.11 Relate simple linear equations with integer coefficients, e.g., $3x = 8$ or $x + 5 = 10$, to particular contexts and solve.</p> <p>A.FO.06.12 Understand that adding or subtracting the same number to both sides of an equation creates a new equation that has the same solution.</p> <p>A.FO.06.13 Understand that multiplying or dividing both sides of an equation by the</p>			<p>Positive number Negative number Integer Opposite</p> <p>Dependent variable Independent variable</p>	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>

<p>nonnegative rational numbers.</p> <p>Represent and analyze quantitative relationships between dependent and independent variables</p> <p>6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation. For example, in a problem involving motion at constant speed list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.</p>	<p>same non-zero number creates a new equation that has the same solutions.</p> <p>A.FO.06.14 Solve equations of the form $ax + b = c$, e.g., $3x + 8 = 15$ by hand for positive integer coefficients less than 20, use calculators otherwise, and interpret the results.</p>				
<p>Content moving into 6th</p> <p>Apply and extend previous understandings of arithmetic to algebraic expressions</p> <p>6. EE.4 Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions $y + y + y$ and $3y$</p>	<p>Not in Grade Level Content Expectations</p>			<p>Like terms Combining like terms Exponents Simplify</p>	

<i>are equivalent because they name the same number regardless of which number y stands for.</i>					
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Mathematics Pacing Guide Alignment with Common Core Standards

Time Frame: 6 Weeks – February/March

Sixth Grade

Unit 4: Developing an Understanding of Statistical Thinking

Common Core	GLCE	Essential Questions	Assessment	Vocabulary	Resources
<p>Apply and extend previous understandings of numbers to the system of rational numbers 6. NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, debits/credits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</p> <p>6. NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent point on the line and in the plane with negative number coordinates.</p> <p>b. Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by</p>	<p>Understand rational numbers and their location on the number line N.ME.06.20 Know that the absolute value of a number is the value of the number ignoring the sign; or is the distance of the number from 0.</p> <p>Understand the coordinate plane A.RP.06.02 Plot ordered pairs of integers and use ordered pairs of integers to identify points in all four quadrants of the coordinate plane.</p>	<p>How do you apply and extend previous understandings of numbers to the system of rational numbers?</p>		<p>Absolute value Base Exponent Positive Negative Greater Than Less Than Equal to Rational number Coordinate plane/system Origin Coordinates Plan x and y axis x and y coordinates y intercept Ordered Pair</p>	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>

<p>reflections across one or both axes.</p> <p>c. Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.</p> <p>Apply and extend previous understandings of numbers to the system of rational numbers</p> <p>6. NS.7 Understand ordering and absolute value of rational numbers</p> <p>a. Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to right.</p> <p>b. Write, interpret, and explain statements of order for rational numbers in real-world contexts <i>For example, write $-3^{\circ}C > -7^{\circ}C$ to express the fact that $-3^{\circ}C$ is warmer than $-7^{\circ}C$.</i></p> <p>c. Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For</p>					
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<p>example, for an account balance of -30 dollars, write $-30 = 30$ to describe the size of the debt in dollars.</p> <p>d. Distinguish comparisons of absolute value from statements about order. <i>For example, recognize that an account balance less than -30 dollars represent a debt greater than 30 dollars.</i></p> <p>6. NS.8. Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.</p>					
<p>Content moving into 6th Develop understanding of statistical variability 6. SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. <i>For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.</i> 6. SP.2 Understand that a set of</p>	<p>Content moving into 6th Represent and solve problems for given data D.RE.04.02 Order a given set of data, find the median, and specify the range of values. Find and interpret mean and mode for a given set of data D.AN.05.03 Given a set of data, find and interpret the mean (using the concept of fair share) and mode. D.AN.05.04 Solve multi-step problems involving means.</p>			<p>Mean Median Mode Circle Graphs Stem & Leaf Plots Histograms Box & Whisker Plot Tally Sample Survey Venn Diagram Tree Diagram Organized List Quartile Interquartile</p>	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>

<p>data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.</p> <p>6. SP.3 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 with a single number.</p> <p>Summarize and describe distributions</p> <p>6. SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.</p> <p>6.SP.5. Summarize numerical data sets in relation to their context, such as by:</p> <ol style="list-style-type: none"> Reporting the number of observations. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. Giving 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 	<p>Represent and interpret data</p> <p>D.RE.07.01 Represent and interpret data using circle graphs, stem and leaf plots, histograms, and box-and-whisker plots, and select appropriate representation to address specific questions.</p> <p>Compute statistics about data sets</p> <p>D.AN.07.04 Find and interpret the median, quartiles, and interquartile range of a given set of data.</p> <p>Draw, explain, and justify conclusions based on data</p> <p>D.AN.08.01 Determine which measure of central tendency (mean, median, mode) best represents a data set, e.g., salaries, home prices, for answering certain questions; justify the choice made.</p>			<p>Range Absolute Deviation Center Spread Overall shape</p>	
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<p>to the context in which the data were gathered.</p> <p>d. Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.</p>					
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**Mathematics Pacing Guide Alignment with Common Core Standards
Sixth Grade**

**Time Frame: 7 Weeks – April/May
Unit 5: Geometry**

Common Core	GLCE	Essential Questions	Assessment	Vocabulary	Resources
<p>Solve real-world and mathematical problems involving area, surface area, and volume</p> <p>6. G.2 Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p> <p>6. G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>FOCAL POINT: Describing three-dimensional shapes and analyzing their properties, including volume and surface area</p> <p>Find volume and surface area</p> <p>M.PS.06.02 Draw patterns (of faces) for a cube and rectangular prism that, when cut, will cover the solid exactly (nets).</p> <p>M.TE.06.03 Compute the volume and surface area of cubes and rectangular prisms given the lengths of their sides using formulas.</p>	<p>How do you solve problems involving area, surface area, and volume?</p> <p>What is the difference between two and three dimensional objects?</p>		<p>Area Base Congruent Cube Cubed Cubic unit Edge Face Formula net Length (l) Parallel Perpendicular Rectangular prism Squared Surface height (h) Surface area (SA) Three – dimensional Unit Vertex (pl, vertice) Volume Width (w) Area of base (B) Opposite</p>	<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>
<p>Content moving into 6th Solve real-world and mathematical problems</p>	<p>Content moving into 6th Solve problems and geometric figures</p>				<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>

<p>involving area, surface area, and volume 6. G.1 Find area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>G.SR.08.04 Find area and perimeter of complex figures by sub-dividing them into basic shapes (quadrilaterals, triangles, circles).</p>				
<p>Content moving into 6th Solve real-world and mathematical problems involving area, surface area, and volume 6. G.3 Draw polygons in the coordinate plane given coordinate for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p>Not in Grade Level Content Expectations</p>				<p>Homework Help: www.mathisfun.com www.brainpop.com/math/</p>

**Mathematics Pacing Guide Alignment with Common Core Standards
 Sixth Grade**

Time Frame: 2 Weeks – May/June
Unit 6: Probability
