A Correlation of

Connected Mathematics Project 3 (CMP3) ©2018

to the

Nevada Academic Content Standards in Mathematics

Grade 6

SAVVAS

A Correlation of Connected Mathematics Project 3 (CMP3), ©2018
To the Nevada Academic Content Standards in Mathematics

Nevada Academic Content Standards in Mathematics	Connected Mathematics Project 3 Grade 6 Investigations
Standards for Mathematical Practice	
1. Make sense of problems and persevere in solving them.	The goal for students to make sense of, and persevere in solving, problems is fundamental to the curriculum set forth in *Connected Mathematics Project 3*. In addition to providing practice in critical thinking and problem-solving strategies, the problems are geared to engage students with student-centered problem situations. Student-student and student-teacher dialogues encourage students to persevere in solving problems. Applications, Connections, and Extensions (ACE) homework problems provide students with opportunities to apply what they have learned to make sense of and persevere in solving new problems. The introductions to the problems in each investigation include an initial analysis of the problem situation and the formation of a plan for solving the problem. In *Variables and Patterns*, students apply algebra to represent problems using variables, expressions, equations, tables, graphs, and patterns. Suggested questions in the Teacher Guide provide metacognitive scaffolding to help students monitor and refine their problem-solving strategies; the ACE homework problems enable students to practice and synthesize problem-solving skills. See, for example: **Prime Time:** 1.4: Rectangles and Factor Pairs; 2.3: Bagging Snacks; 3.4: Unraveling the Locker Problem; 4.1: Reasoning With Even and Odd Numbers **Comparing Bits and Pieces:** 2: Connecting Ratios and Rates (ACE 31-33) **Let's Be Rational:** 4.3: Becoming an Operations Sleuth **Covering and Surrounding:** 1.1: Designing Bumper-Car Rides; 1.2: Building Storm Shelters; 1.3 Fencing in Spaces; 4.3 Designing Gift Boxes

ACE = Applications Connections – Extensions
INV = Investigations
MR = Mathematical Reflections

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2. Reason abstractly and quantitatively.	*Connected Mathematics Project 3* helps students develop abstract and quantitative reasoning skills by focusing on student acquisition of mathematical language and various forms of mathematical reasoning (e.g., visual, spatial, logical, graphical, and algebraic reasoning and number sense). Students employ abstract and quantitative reasoning to analyze, represent, and solve problems. They decontextualize problem situations by using variables, expressions, and equations to represent various aspects of the problem. They contextualize abstract representations to justify and verify their solution strategies, explain their reasoning, and state their solution in terms of the original problem situation. See, for example: **Prime Time:** 1.3: The Product Game; 1.4: Rectangles and Factor Pairs; 1: Building on Factors and Multiples (ACE 42, Common Core Mathematical Practices); 2: Common Multiples and Common Factors (ACE 46-53); 3: Factorizations: Searching for Factor Strings (ACE 47) **Let's Be Rational:** 4.3: Becoming an Operations Sleuth; 4: Wrapping Up the Operations (Common Core Mathematical Practices) **Covering and Surrounding:** 4: Measuring Surface Area and Volume (Common Core Mathematical Practices) **Decimal Ops:** 1.3: Take a Hike **Variables and Patterns:** 4.1: Taking the Plunge

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3. Construct viable arguments and critique the reasoning of others.	In the *Connected Mathematics Project 3* classroom, students routinely participate in student-student and student-teacher discourse as they explain their thinking about a problem situation and their reasoning for a solution pathway. Additionally, the problems in each investigation and in the ACE problem sets provide opportunities for students to construct mathematical arguments and to critique other students' solutions and strategies. Teachers Guides include suggested questions to support the development of a classroom culture that includes argument and critique as fundamental components of mathematical problem-solving process. Students make conjectures and construct logical arguments using previously established results, assumptions, and definitions. They reason deductively and inductively and communicate their reasoning to others, providing opportunities for mutual critique of arguments. See, for example: **Prime Time:** 1.2: Playing to Win; 1: Building on Factors and Multiples (ACE 1a, 49d); 2: Common Multiples and Common Factors (ACE 60); 3: Factorizations: Searching for Factor Strings (Common Core Mathematical Practices) **Comparing Bits and Pieces:** 3: Extending the Number Line (Common Core Mathematical Practices) **Let's Be Rational:** 3: Dividing With Fractions (ACE 54); 4: Wrapping up the Operations (ACE 47-55) **Covering and Surrounding:** 1.2: Building Storm Shelters; 1.3: Fencing in Spaces; 2.4: Designing Triangles Under Constraints

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4. Model with mathematics.	Students construct, make inferences from, and interpret concrete, symbolic, graphic, verbal, and algorithmic models of mathematical relationships in problem situations. They translate information from model to another, and modify their models as needed. Students develop fluency with different types of models, and learn to apply them appropriately to different problem situations arising in everyday life, society, and the workplace. See, for example: **Prime Time:** 4.1: Reasoning with Even and Odd Numbers; 4.2: Using the Distributive Property **Comparing Bits and Pieces:** 1.3: Equivalent Fractions on the Line; 2.3: Making Comparisons with Rate Models; 3.1: Extending the Number Line **Let's Be Rational:** 1.3: Land Sections; 2.1: How Much of the Pan Have We Sold?; 2.2: Modeling Multiplication Situations; 3.2: Into Pieces **Covering and Surrounding:** 1.1: Designing Bumper-Car Rides

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5. Use appropriate tools strategically.	Students use tools to explore problem situations, deciding which tools are appropriate for solving a particular problem. Students are able to describe various uses for different tools, including the calculator, graphing tools, polystrips, and plastic two-dimensional shapes. For example, students recognize that calculators can be used to compute, to verify reasoning, to explore possibilities, and to see whether an approach or a solution makes sense; they use polystrips and two-dimensional plastic models to explore properties of geometry and measurement. See, for example: **Comparing Bits and Pieces:** 1.3: Equivalent Fractions on the Line; 4: Working With Percents (Common Core Mathematical Practices) **Covering and Surrounding:** 2.1: Triangles on Grids; 3.4: Polygons on Coordinate Grids; 3: Measuring Parallelograms (Common Core Mathematical Practices) **Decimal Ops:** 4.1: What's the Tax on This Item?; 4.2: Computing Tips; 4.3: Percent Discounts; 4.4: Putting Operations Together **Data About Us:** 3.3: Is It Worth the Wait?

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6. Attend to precision.	*Connected Mathematics Project 3* emphasizes the use of precise terms and definitions with the philosophy that the clarity of a student's reasoning and processing is reflected in the student's use of precise mathematical language. The student textbook includes definitions that are mathematically accurate and student-friendly. Students are expected to attend to precision in mathematical language and also in argument presentation. The Mathematical Reflections pages include questions to help students synthesize and organize their understandings of important concepts and strategies. Additionally, students are expected to perform accurate calculations, expressing numerical answers with an appropriate degree of precision, depending on the context of the problem. See, for example: **Prime Time:** 1.2: Playing to Win; 1.3: The Product Game; 1: Building on Factors and Multiples (ACE 43-44); 3: Factorizations Searching for Factor Strings (ACE 51b); 4: Linking Multiplication and Addition: The Distributive Property (Common Core Mathematical Practices) **Let's Be Rational:** 1.1: Getting Close; 1.2: Estimating Sums and Differences; 1: Extending Addition and Subtraction of Fractions (Common Core Mathematical Practices) **Covering and Surrounding:** 1: Designing Bumper Cars: Extending and Building on Area and Perimeter (ACE 75-77) **Decimal Ops:** 1.2: Getting Close

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7. Look for and make use of structure.	The *Connected Mathematics Project 3* materials are designed to help students build mathematical understandings while illuminating and applying mathematical structure. For example, in Grade 6, students discover patterns in data tables and analyze numbers to determine their prime structure. In all grades, students experience structure in algebraic expressions and properties, functional relationships, measurement formulas, computation algorithms, and number systems. See, for example: **Prime Time:** 1.1: Playing the Factor Game; 1.2: Playing to Win; 1.4: Rectangles and Factor Pairs; 1: Building on Factors and Multiples (ACE 37-38, 48); 3.3: Using Prime Factorizations **Comparing Bits and Pieces:** 2: Connecting Ratios and Rates (Common Core Mathematical Practices) **Let's Be Rational:** 4.1: Just the Facts **Covering and Surrounding:** 1: Designing Bumper Cars: Extending and Building on Area and Perimeter (Common Core Mathematical Practices) **Decimal Ops:** 3.1: Multiplying Decimals I; 3.4: Going the Long Way

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8. Look for and express regularity in repeated reasoning.	As students investigate problems in *Connected Mathematics Project 3*, they are encouraged to look for connections to previously solved problems and employed solution strategies. The titles of the units and investigations are intended to promote the connectedness of mathematical concepts and processes with references to "building," "linking," "connecting," and "extending." For example, in the Prime Time unit, students investigate Building on Factors and Multiples and Linking Multiplication and Addition. They extend the number line to include rational and negative numbers, and they extend computation algorithms to add and subtract fractions. See, for example: **Prime Time:** 1.3: The Product Game; 2: Common Multiples and Common Factors (Common Core Mathematical Practices); 4.3: Ordering Operations **Let's Be Rational:** 3: Dividing With Fractions (ACE 6, Common Core Mathematical Practices); 4.1: Just the Facts; 4.2: Multiplication and Division Fact Families **Covering and Surrounding:** 2.3: Making Families of Triangles; 3.2: Making Families of Parallelograms **Decimal Ops:** 1.3: Take a Hike; 2.3: Connecting Operations
Ratios and Proportional Relationships 6.RP	
A. Understand ratio concepts and use ratio reasoning to solve problems.	
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."	**Comparing Bits and Pieces:** 1.1: Fundraising; 1.2: Fundraising Thermometers; 1.3: Equivalent Fractions on the Line; 1.4: Making Progress; 1.5: Comparing Fundraising Goals **Decimal Ops:** 1.3: Take a Hike

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2. Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. 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."	**Comparing Bits and Pieces:** 2.1: Equal Shares; 2.2: Unequal Shares; 2.3: Making Comparisons with Rate Tables **Decimal Ops:** 1.3: Take a Hike
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 equations.	**Comparing Bits and Pieces:** 1.1: Fundraising; 1.2: Fundraising Thermometers; 1.3: Equivalent Fractions on the Line; 1.4: Making Progress; 1.5: Comparing Fundraising Goals; 2.1: Equal Shares; 2.2: Unequal Shares; 2.3: Making Comparisons with Rate Tables **Decimal Ops:** 1.3: Take a Hike **Variables and Patterns:** 1.1: Getting Ready to Ride; 1.2: From Atlantic City to Lewes; 1.3: From Lewes to Chincoteague Island; 1.4: From Chincoteague to Colonial Williamsburg; 2.1: Renting Bicycles; 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring
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.	**Comparing Bits and Pieces:** 2.3: Making Comparisons with Rate Tables **Variables and Patterns:** 1.1: Getting Ready to Ride; 2.1: Renting Bicycles; 3.2: Moving, Texting, and Measuring
b. Solve unit rate problems including those involving unit pricing and constant speed. 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?	**Comparing Bits and Pieces:** 2.1: Equal Shares **Decimal Ops:** 1.3: Take a Hike **Variables and Patterns:** 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring
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.	**Comparing Bits and Pieces:** 4.1: Who Is the Best? Making Sense of Percents; 4.2: Genetic Traits; 4.3: The Art of Comparison

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(continued) 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.	**Decimal Ops:** 4.1: What's the Tax on This Item?; 4.2: Computing Tips; 4.3: Percent Discounts; 4.4: Putting Operations Together
d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	**Covering and Surrounding:** 1.2: Building Storm Shelters; 1.3: Fencing in Spaces, 4.2: Filling the Boxes; 4.3: Designing Gift Boxes **Decimal Ops:** 4.4: Putting Operations Together
The Number System 6.NS	
A. Apply and extend previous understandings of multiplication and division to divide fractions by fractions.	
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) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (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?	**Let's Be Rational:** 3.1: Preparing Food; 3.2: Into Pieces; 3.3: Sharing a Prize; 3.4: Examining Algorithms for Dividing Fractions
B. Compute fluently with multi-digit numbers and find common factors and multiples.	
2. Fluently divide multi-digit numbers using the standard algorithm.	**Prime Time:** 1.1: Playing the Factor Game; 1.4: Rectangles and Factor Pairs; 3.2: Finding the Longest Factor String; 3.3: Using Prime Factorizations **Let's Be Rational:** 3.1: Preparing Food; 3.2: Into Pieces; 3.3: Sharing a Prize; 3.4: Examining Algorithms for Dividing Fractions **Decimal Ops:** 3.3: How Many Times?; 3.4: Going the Long Way; 3.5: Challenging Cases

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3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	**Decimal Ops:** 2.1: Getting Things in the Right Place; 2.2: What's the Difference; 2.3: Connecting Operations; 3.1: It's Decimal Time(s); 3.2: It Works Every Time; 3.3: How Many Times?; 3.4: Going the Long Way; 3.5: Challenging Cases
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).	**Prime Time:** 2.1: Riding Ferris Wheels; 2.2: Looking at Cicada Cycles; 2.3: Bagging Snacks; 3.2: Finding the Longest Factor String; 3.3: Using Prime Factorizations; 3.4: Unraveling the Locker Problem; 4.2: Using the Distributive Property; 4.3: Ordering Operations **Let's Be Rational:** 1.3: Land Sections; 1.4: Visiting the Spice Shop
C. Apply and extend previous understandings of numbers to the system of rational numbers.	
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, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers **Variables and Patterns:** 2.3: Predicting Profits; 2.4: Interpreting Graphs
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.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers; 3.4 Decimals on the Number Line **Variables and Patterns:** 2.3: Predicting Profits; 2.4: Interpreting Graphs
a. Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g.,–(–3) = 3, and that 0 is its own opposite.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers; 3.4 Decimals on the Number Line

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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.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers **Variables and Patterns:** 2.3: Predicting Profits
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.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers; 3.4 Decimals on the Number Line **Variables and Patterns:** 2.3: Predicting Profits
7. Understand ordering and absolute value of rational numbers.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers; 3.4 Decimals on the Number Line
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.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers; 3.4 Decimals on the Number Line
b. Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3^{o}C > -7^{o}C$ to express the fact that $-3^{o}C$ is warmer than $-7^{o}C$.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers **Variables and Patterns:** 2.3: Predicting Profits
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 example, for an account balance of –30 dollars, write $\|-30\| = 30$ to describe the size of the debt in dollars.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers
d. Distinguish comparisons of absolute value from statements about order. For example, recognize that an account balance less than –30 dollars represents a debt greater than 30 dollars.	**Comparing Bits and Pieces:** 3.1: Extending the Number Line; 3.2: Estimating and Ordering Rational Numbers **Variables and Patterns:** 2.3: Predicting Profits

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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.	**Covering and Surrounding:** 2.1: Triangles on Grids; 3.4: Polygons on Coordinate Grids **Variables and Patterns:** 1.1: Getting Ready to Ride; 1.2: From Atlantic City to Lewes; 1.3: From Lewes to Chincoteague Island; 1.4: From Chincoteague to Colonial Williamsburg
Expressions and Equations 6.EE	
A. Apply and extend previous understandings of arithmetic to algebraic expressions.	
1. Write and evaluate numerical expressions involving whole-number exponents.	**Prime Time: Factors and Multiples:** 3.2: Finding the Longest Factor String; 3.3: Using Prime Factorizations; 3.4: Unraveling the Locker Problem
2. Write, read, and evaluate expressions in which letters stand for numbers.	**Covering and Surrounding:** 4.2: Filling the Boxes; 4.3: Designing Gift Boxes **Variables and Patterns:** 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring; 3.3: Group Discounts and a Bonus Card; 3.4: Getting the Calculation Right; 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together; 4.4: Finding the Unknown Value; 4.5: It's Not Always Equal
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.	**Variables and Patterns:** 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring; 3.3: Group Discounts and a Bonus Card; 3.4: Getting the Calculation Right; 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together; 4.4: Finding the Unknown Value; 4.5: It's Not Always Equal
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.	**Prime Time:** 1.3: The Product Game; 1.4: Rectangles and Factor Pairs; 3.1: The Product Puzzle; 3.2: Finding the Longest Factor String; 3.3: Using Prime Factorizations; 3.4: Unraveling the Locker Problem; 4.2: Using the Distributive Property; 4.3: Ordering Operations

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c. Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in 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 $A = 6 s^2$ to find the volume and surface area of a cube with sides of length s=1/2.	**Covering and Surrounding:** 4.2: Filling the Boxes; 4.3: Designing Gift Boxes **Variables and Patterns:** 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring; 3.3: Group Discounts and a Bonus Card; 3.4: Getting the Calculation Right; 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together; 4.4: Finding the Unknown Value; 4.5: It's Not Always Equal
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.	**Prime Time:** Factors and Multiples: 4.2: Using the Distributive Property; 4.3: Ordering Operations; 4.4: Choosing an Operation **Variables and Patterns:** 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together
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 are equivalent because they name the same number regardless of which number y stands for.	**Prime Time:** Factors and Multiples: 4.2: Using the Distributive Property; 4.3: Ordering Operations; 4.4: Choosing an Operation **Variables and Patterns:** 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together
B. Reason about and solve one-variable equations and inequalities.	
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.	**Variables and Patterns:** 4.4: Finding the Unknown Value; 4.5: It's Not Always Equal
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.	**Variables and Patterns:** 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring; 3.3: Group Discounts and a Bonus Card; 3.4: Getting the Calculation Right; 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together; 4.4: Finding the Unknown Value; 4.5: It's Not Always Equal

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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 nonnegative rational numbers.	**Variables and Patterns:** 4.1: Taking the Plunge; 4.2: More Than One Way to Say It; 4.3: Putting It All Together; 4.4: Finding the Unknown Value
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 solutions of such inequalities on number line diagrams.	**Variables and Patterns:** 4.5: It's Not Always Equal
C. Represent and analyze quantitative relationships between dependent and independent variables.	
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.	**Variables and Patterns:** 1.1: Getting Ready to Ride; 1.2: From Atlantic City to Lewes; 1.3: From Lewes to Chincoteague Island; 1.4: From Chincoteague to Colonial Williamsburg; 2.1: Renting Bicycles; 2.2: Finding Customers; 2.3: Predicting Profits; 2.4: What's the Story?; 3.1: Visit to Wild World; 3.2: Moving, Texting, and Measuring; 3.3: Group Discounts and a Bonus Card; 3.4: Getting the Calculation Right
Geometry 6.G	
A. Solve real-world and mathematical problems involving area, surface area, and volume.	
1. Find the 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.	**Covering and Surrounding:** 1.1: Designing Bumper-Car Rides; 1.2: Building Storm Shelters; 1.3: Fencing in Spaces; 2.1: Triangles on Grids; 2.2: More Triangles; 2.3: Making Families of Triangles; 2.4: Designing Triangles Under Constraints; 3.1: Parallelograms and Triangles; 3.2: Making Families of Parallelograms; 3.3: Designing Parallelograms; 3.4: Polygons on Coordinate Grids; 4.1: Making Rectangular Boxes; 4.2: Filling the Boxes; 4.3: Designing Gift Boxes

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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 = l w h and V = b h to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.	**Covering and Surrounding:** 4.2: Filling the Boxes; 4.3: Designing Gift Boxes
3. Draw polygons in the coordinate plane given coordinates 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.	**Covering and Surrounding:** 2.1: Triangles on Grids; 3.4: Polygons on Coordinate Grids
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.	**Covering and Surrounding:** 4.1: Making Rectangular Boxes; 4.3: Designing Gift Boxes
Statistics and Probability 6.SP	
A. Develop understanding of statistical variability.	
1. Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. 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.	**Data About Us:** 1.1: How Many Letters Are in a Name?; 1.2: Describing Name Lengths; 1.3: Describing Name Lengths; 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?; 4.1: Traveling to School; 4.2: Jumping Rope; 4.3: How Much Taller is a 6th Grader Than A Second Grader?

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2. 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.	**Data About Us:** 1.1: How Many Letters Are in a Name?; 1.2: Describing Name Lengths; 1.3: Describing Name Lengths; 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?; 4.1: Traveling to School; 4.2: Jumping Rope; 4.3: How Much Taller is a 6th Grader Than A Second Grader?
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.	**Data About Us:** 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?
B. Summarize and describe distributions.	
4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots.	**Data About Us:** 1.1: How Many Letters Are in a Name?; 1.2: Describing Name Lengths; 1.3: Describing Name Lengths; 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?; 4.1: Traveling to School; 4.2: Jumping Rope; 4.3: How Much Taller is a 6th Grader Than A Second Grader?
5. Summarize numerical data sets in relation to their context, such as by:	**Data About Us:** 1.1: How Many Letters Are in a Name?; 1.2: Describing Name Lengths; 1.3: Describing Name Lengths; 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?; 4.1: Traveling to School; 4.2: Jumping Rope; 4.3: How Much Taller is a 6th Grader Than A Second Grader?

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a. Reporting the number of observations.	**Data About Us:** 1.1: How Many Letters Are in a Name?; 1.2: Describing Name Lengths; 1.3: Describing Name Lengths; 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?; 4.1: Traveling to School; 4.2: Jumping Rope; 4.3: How Much Taller is a 6th Grader Than A Second Grader?
b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.	**Data About Us:** 1.1: How Many Letters Are in a Name?; 1.2: Describing Name Lengths; 1.3: Describing Name Lengths; 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?; 4.1: Traveling to School; 4.2: Jumping Rope; 4.3: How Much Taller is a 6th Grader Than A Second Grader?
c. 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 to the context in which the data were gathered.	**Data About Us:** 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?
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.	**Data About Us:** 2.1: What's a Mean Household Size?; 2.2: Comparing Distributions With the Same Mean; 2.3: Making Choices; 2.4: Who Else Is in Your Household; 3.1: Estimating Cereal Serving Sizes; 3.2: Connecting Cereal Shelf Location and Sugar; 3.3: Is It Worth the Wait?