Curriculum Scope & Sequence

School: Pike Creek Charter School Grade or Course: 6th Grade Math Teacher _____

Unit Order By unit title and/or time frame	Learning Targets Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	Theme/Big Idea/Concept	Enduring Understandings and/or Essential Questions
Trimester 1: Sept 1, 2014- November 21, 2014 **Number Properties**	6.EE.2. Write, read, and evaluate expressions in which letters stand for numbers. 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.* 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.* 6.EE.3. Apply the number properties 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* 6.NS.2. Fluently divide multi-digit numbers using the standard algorithm. 6.NS.3. Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.	**Apply and extend previous understandings of arithmetic to algebraic expressions.** **Compute fluently with multi-digit numbers and find common factors and multiples.**	**I can write numerical expressions involving whole-number exponents.** **I can evaluate numerical expressions involving whole-number exponents.** **I can translate words into expressions.** **I can read expressions using appropriate mathematical terms.** **I can evaluate expressions using the order of operations.** **I can use number properties to create equivalent expressions** **I can explain what an equation and inequality represents.** **I can fluently divide multi-digit numbers.** **I can fluently add, subtract, multiply, and divide multi-digit decimals.**
Data and Graphs	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. *For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a*	**Develop understanding of statistical variability.**	**I can identify and develop statistical questions.**

Attachment 4: Scope and Sequence, 6th Grade Math

	statistical question because one anticipates variability in students' ages. 6.SP.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. 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. 6.SP.4. Display numerical data in plots on a number line, including dot plots, histograms, and box plots. 6.SP.5. Summarize numerical data sets in relation to their context, such as by: the following a. Reporting the number of observations. b. Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. 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. 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.	**Summarize and describe distributions.**	**I can explain how data answers statistical questions.** **I can communicate numerical data on a number line (dot plots, histograms, and box plots).** **I can summarize numerical data sets.** **I can describe a statistical data set using center, spread, and shape.** **I can compare a measure of center with a measure of variation.** **I can analyze the relationship between measures of center and the data distribution.**
Expressions and Equations	6.EE.2. Write, read, and evaluate expressions in which letters represent numbers. 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.* 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;*		**I can write numerical expressions involving whole-number exponents.** **I can evaluate numerical expressions involving whole-number exponents.** **I can translate words into expressions.** **I can read expressions using appropriate mathematical terms.**

Attachment 4: Scope and Sequence, 6th Grade Math

	view (8 + 7) as both a single entity and a sum of two terms. 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.* 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. 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. 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 nonnegative rational numbers.		**I can evaluate expressions using the order of operations.** **I can determine whether a given number makes an equation or inequality true.** **I can explain what an equation and inequality represents.** **I can explain what a variable represents.** **I can use variables to solve problems involving expressions.** **I can write equations to represent real-world problems.** **I can solve one-step equations involving positive numbers.**

Curriculum Scope & Sequence

School Pike Creek Charter School **Grade or Course 6th Grade Math** **Teacher _____**

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 2: November 24, 2014-March 6, 2015 **Number Theory**	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. 6.EE.1. Write and evaluate numerical expressions involving whole-number exponents. 6.EE.2. Write, read, and evaluate expressions in which letters stand for numbers. 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.* 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.* 6.EE.3. Apply the properties of operations to generate equivalent expressions. 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 are equivalent because they name the same number regardless of which number y stands for. Reason about and solve one-variable equations and inequalities.*	**Compute fluently with multi-digit numbers and find common factors and multiples.** **Apply and extend previous understandings of arithmetic to algebraic expressions.** **Reason about and solve one-variable equations and inequalities.**	**I can find the greatest common factors of two whole numbers (up to 100).** **I can find the least common multiple of two whole numbers (less than or equal to 12).** **I can use the distributive property to express a sum of two whole numbers.** **I can explain the difference between an expression and an equation.** **I can write numerical expressions involving whole-number exponents.** **I can evaluate numerical expressions involving whole-number exponents.** **I can read expressions using appropriate mathematical terms.** **I can evaluate expressions using the order of operations.** **I can use the properties of operations to create equivalent expressions.** **I can identify equivalent expressions.**

Attachment 4: Scope and Sequence, 6th Grade Math

Fraction Operations	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) ÷ (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? Compute fluently with multi-digit numbers and find common factors and multiples.* 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. 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 nonnegative rational numbers.	**Apply and extend previous understandings of multiplication and division.** **Reason about and solve one-variable equations and inequalities.**	**I can solve word problems involving division of fractions by fractions.** **I can represent the context of a fraction word problem using a variety of models.** **I can explain what a variable represents.** **I can use variables to solve problems involving expressions.** **I can write equations to represent real-world problems.** **I can solve one-step equations involving positive numbers.**
Ratios and Percents	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."* 6.RP.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."*[1] 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 equations. 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. 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?* 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. d. Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.	**Understand ratio concepts and use ratio reasoning to solve problems.**	**I can explain the concept of ratio.** **I can describe the relationship between two quantities using ratio language.** **I can explain the relationship between rate, ratio, and percent.** **I can explain the concept of unit rate.** **I can describe a ratio relationship using rate language.** **I can solve word problems using ratio and rate reasoning.**

Curriculum Scope & Sequence

School: Pike Creek Charter School **Grade or Course: 6th Grade Math** **Teacher _____**

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 3: March 9, 2015-June 5, 2015 **Geometry and Measurement**	6.G.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. 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 $V = l\ w\ h$ 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. 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.	**Solve real-world and mathematical problems involving area, surface area, and volume.**	**I can find the area of polygons by composing or decomposing them into basic shapes.** **I can apply my understanding of shapes to solve real-world problems.** **I can explain the volume formula of a rectangular prism using unit cubes.** **I can find the volume of a rectangular prism using formulas.** **I can solve real-world problems involving volume.** **I can represent three-dimensional shapes using nets.** **I can find the surface area of three-dimensional shapes (using nets).** **I can solve for surface area in real-world problems involving three-dimensional shapes.**
Integers and 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, 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.	**Apply and extend previous understandings of numbers to the system of rational numbers.** **Reason about and solve one-variable equations and**	**I can explain the meaning of positive and negative numbers.** **I can use positive and negative numbers to represent quantities in real-world**

	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. 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. b. .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. 6.NS.7. Understand ordering and absolute value of rational numbers. 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.* a. Write, interpret, and explain statements of order for rational numbers in real-world contexts. *For example, write –3 °C > –7 °C to express the fact that –3 °C is warmer than –7 °C.* b. 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.* c. Distinguish comparisons of absolute value from statements about order. *For example, recognize that an account balance less than –30 dollars represent a debt greater than 30 dollars.* 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. 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 solutions of such	**inequalities.**	**contexts.** **I can explain the meaning of 0 in a variety of situations.** **I can explain the concept of rational numbers.** **I can locate and plot rational numbers on a number line (horizontal and vertical) and a coordinate plane.** **I can explain the concept of absolute value.** **I can interpret statements of inequality using a number line.** **I can explain the order and absolute value of rational numbers in real-world contexts.** **I can explain what an equation and inequality represents.** **I can determine whether a given number makes an equation or inequality true.** **I can explain the difference between an equation and an inequality.** **I can write an inequality to represent a real-world problem.** **I can identify multiple solutions to an inequality.** **I can represent solutions of inequalities on a number line.**

	inequalities on number line diagrams.		
Coordinate Plane	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. 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. 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 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. 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. 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. 6.G.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.	**Apply and extend previous understandings of numbers to the system of rational numbers.** **Represent and analyze quantitative relationships between dependent and independent variables.** **Solve real-world and mathematical problems involving area, surface area, and volume.**	**I can explain the concept of rational numbers.** **I can locate and plot rational numbers on a number line (horizontal and vertical) and a coordinate plane.** **I can graph points in all four quadrants of a coordinate plane.** **I can find distances between points using my knowledge of coordinates and absolute value.** **I can use variables to represent the relationship between quantities in real-world problems.** **I can explain the relationship between dependent and independent variables.** **I can analyze the relationship between dependent and independent variables.** **I can draw polygons in the coordinate plane.** I can identify the length of a side using coordinates. I can solve real-world problems involving coordinate planes.

Attachment 4: Scope and Sequence, 6th Grade Math

Curriculum Scope & Sequence

School: Pike Creek Charter School **Grade or Course: 7th Grade Math** **Teacher _____**

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 1: September 1, 2014- November 21, 2014 **Integers and Rational Numbers**	7.NS1. Apply and extend previous understandings of addition and subtraction of fractions to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram. a. Describe situations in which opposite quantities combine to make 0. *For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.* b. Understand $p + q$ as the number located a distance $\|q\|$ from p, in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts. c. Understand subtraction of rational numbers as adding the additive inverse, $p – q = p + (–q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. d. Apply properties of operations as strategies to add and subtract rational numbers. 7.NS2. Apply and extend previous understandings of multiplication and division of fractions to multiply and divide rational numbers. a. Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as $(–1)(–1) = 1$ and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts. b. Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If p and q are integers, then $–(p/q) = (–p)/q = p/(–q)$. Interpret quotients of rational numbers by describing real- world contexts. c. Apply properties of operations as strategies to multiply and divide rational numbers. d. Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually	**Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.** **Solve real-life mathematical problems using numerical and algebraic expressions and equations.**	**I can add and subtract rational numbers.** • **I can represent addition and subtraction on horizontal and vertical number lines.** • **I can subtract a rational number by adding its opposite (additive inverse).** • **I can use the absolute values of numbers on a number line to illustrate both addition and subtraction.** **I can apply properties of operations (commutative, associative, and distributive) to add and subtract rational numbers.** **I can multiply and divide rational numbers.** **I can apply the commutative, associative, and distributive properties appropriately in multiplying and dividing rational numbers** **I can convert a fraction to a decimal using long division.** **I can use a variety of methods to explain the difference between a rational and an irrational number.**

	repeats. 7.NS3. Solve real-world mathematical problems involving the four operations with rational numbers 7.EE3. Solve multi-step real-life mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.		**I can use the four operations to solve problems involving rational numbers.** **I can write, solve, and interpret two-step equations using known and unknown values.**
Equations & Inequalities	7.EE1. Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. 7.EE2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."* 7.EE3. Solve multi-step real-life mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. *For example: If a woman making $25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or $2.50, for a new salary of $27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.* 7.EE4. Use variables to represent quantities in a real-world mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. a. Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?* 7.EE.4.B *b. Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.*	**Use properties of operations to generate equivalent expressions.** **Solve real-life mathematical problems using numerical and algebraic expressions and equations.** **Solve real-life mathematical problems using numerical and algebraic expressions and equations.**	**I can use the properties of operations to solve linear expressions with rational coefficients.** **I can rewrite an expression in different forms to help me understand and solve problems.** **I can use properties of operations to analyze and solve problems with rational numbers in any form (whole numbers, fractions, and decimals).** **I can convert between whole numbers, fractions, decimals and percents.** **I can estimate and compute in my head to determine whether an answer makes sense.** **I can write, solve, and interpret two-step equations using known and unknown values.** **I can write, solve, and interpret two-step equations using known and unknown values**

Curriculum Scope & Sequence

School: Pike Creek Charter School **Grade or Course: 7th Grade Math** **Teacher _____**

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 2: November 24, 2014, March 6, 2015 **Ratios, Rates and Proportions**	7RP1. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction 1/2/1/4 miles per hour, equivalently 2 miles per hour.* 7.RP2. Recognize and represent proportional relationships between quantities. a. Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin. b. Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships. c. Represent proportional relationships by equations. *For example, if total cost t is proportional to the number n of items purchased at a constant price p, the relationship between the total cost and the number of items can be expressed as t = pn.* d. Explain what a point *(x, y)* on the graph of a proportional relationship means in terms of the situation, with special attention to the points (0, 0) and (1, *r)* where *r* is the unit rate. 7.G1. Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	**Analyze proportional relationships and use them to solve real-world and mathematical problems.** **Draw, construct, and describe geometrical figures and describe the relationships between them.**	**I can determine the appropriate unit rates to use in a given situation, including those with fractions.** **I can recognize, represent, and explain proportions using tables, graphs, equations, diagrams, and verbal descriptions).** **This means that:** • **I can compute unit rates.** • **I can determine whether two quantities represent a proportional relationship.** **I can transfer my understanding of unit rates to multiple real-world problems.** **I can solve problems with scale drawings of geometric figures.** **I can compute actual lengths and area from a scale drawing.** **I can reproduce a scale drawing using a different scale.**
Percents	7.RP3. Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and*	**Analyze proportional relationships and use them to solve real-world and**	**I can solve the following types of multistep and percent problems: simple interest, taxes, markups, gratuities and commissions, fees,**

	decrease, percent error. 7.EE2. Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. *For example, a + 0.05a = 1.05a means that "increase by 5%" is the same as "multiply by 1.05."* 7.EE3. Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	**mathematical problems.** **Use properties of operations to generate equivalent expressions.** **Solve real-life and mathematical problems using numerical and algebraic expressions and equations.**	**percent increase and decrease, and percent error.** **I can rewrite an expression in different forms to help me understand and solve problems.** **I can use properties of operations to analyze and solve problems with rational numbers in any form (whole numbers, fractions, and decimals).** **I can convert between whole numbers, fractions and decimals.** **I can estimate and compute in my head to determine whether an answer makes sense.**
Geometry and Area	*7.G2. Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.* *7.G4. Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.* *7.G5. Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.* *7.G6. Solve real world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.*	**Draw, construct, and describe geometrical figures and describe the relationships between them.** **Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.**	**I can draw (freehand, with ruler and protractor, with technology) geometric shapes with given conditions.** **I can construct triangles from three measures of angles or sides.** **I can notice when the given conditions determine a unique triangle, more than one triangle, or no triangle.** **I can describe the two-dimensional figures that result from slicing three-dimensional figures** **I know the formulas for the area and circumference of a circle.** **I can use circle formulas to solve problems.** **I can explain the relationship between the circumference and area of a circle.** **I can use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.**

Curriculum Scope & Sequence

School: Pike Creek Charter School **Grade or Course: 7th Grade Math** **Teacher _____**

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 3: March 9, 2015- June 5, 2015 **Surface Area and Volume**	*7.G3. Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.* *7.G6. Solve real world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.*	**Solve real-life and mathematical problems using numerical and algebraic expressions and equations.** **Draw, construct, and describe geometrical figures and describe the relationships between them.** **Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.**	**I can write, solve, and interpret two-step inequalities using known and unknown values.** **I can represent the solution of an inequality graphically and algebraically.** **I can draw (freehand, with ruler and protractor, with technology) geometric shapes with given conditions.** **I can construct triangles from three measures of angles or sides.** **I can notice when the given conditions determine a unique triangle, more than one triangle, or no triangle.** **I can describe the two-dimensional figures that result from slicing three-dimensional figures** **I know the formulas for the area and circumference of a circle.** **I can use circle formulas to solve problems.** **I can explain the relationship between the circumference and area of a circle.** **I can use facts about supplementary, complementary, vertical, and adjacent angles**

			in a multi-step problem to write and solve simple equations for an unknown angle in a figure. **I can solve real-world and mathematical problems involving 2-dimensional area (triangles, quadrilaterals, polygons) and 3-dimensional volume and surface area (cubes, right prisms).**
Analyzing Data	7.SP1. Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. 7.SP2. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.* 7.SP3. Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. *For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.* 7.SP4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.*	**Use random sampling to draw inferences about a population.** **Draw informal comparative inferences about two populations.**	**I can determine whether generalizations are valid by examining sample size and sampling methods.** **I can use data from a random sample to draw conclusions and make reasonable arguments about a population.** **I can describe sample size and sampling methods that will allow me to make more accurate conclusions and arguments.** **I can compare and draw informal inferences about two populations using measures of center (median, mean) and measures of variation (range), visual overlap, and mean absolute deviation.** **I can compare the degree of visual overlap of the data plots from two different populations.** **I can explain what the difference between the two data plots means.** **I can use measures of center and measures of variability to draw informal inferences about two populations.**
Probability	7.SP5. Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability	**Draw informal comparative inferences about two populations.**	**I can explain why the numeric probability of an event must be between 0 and 1.**

	around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event. 7.SP6. Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.* 7.SP7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.* Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?* 7.SP8. Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. a. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space, which compose the event. Design and use a simulation to generate frequencies for compound events. *For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?*	**Investigate chance processes and develop, use, and evaluate probability models.**	**I can explain the likeliness of an event occurring based on probability.** **I can determine probability for a single event by collecting and analyzing frequency in a chance process.** **I can explain the difference between experimental and theoretical probability.** **I can compare and contrast probability models and explain discrepancies using those probability models.**

Attachment 4: Scope and Sequence, 7th Grade Math

Curriculum Scope & Sequence

School: Pike Creek Charter School Grade or Course: 8th Grade Math Teacher _____

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 1: September 1, 2014- November 21, 2014 **Real Numbers and Coordinate Planes**	8.NS1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. 8.NS2. Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., $\sqrt{2}$). *For example, by truncating the decimal expansion of* $\sqrt{2}$*, show that* $\sqrt{2}$ *is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.* 8.EE2. Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational. 8.G6. Explain a proof of the Pythagorean Theorem and its converse. 8.G7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. 8.G8. Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	**Know that there are numbers that are not rational, and approximate them by rational numbers.** **Work with radicals and integer exponents.** **Understand and apply the Pythagorean Theorem.**	**I can identify whether a number is rational or irrational by whether its decimal form is exact, repeating, or does not repeat.** **I can convert repeating decimal numbers into their fraction equivalents.** **I can estimate rational and irrational numbers in order to compare their relative size and location on a number line.** **I can solve one-step equations requiring square or cube roots and determine when the solution is rational or irrational.** **I can evaluate square roots of small perfect squares and cube roots of small perfect cubes.** **I can explain why $\sqrt{2}$ is irrational.** **I can describe a proof of the Pythagorean Theorem and its converse.** **I can determine the unknown side lengths in a right triangle problem using the Pythagorean Theorem.** **I can determine the distance between**

			two points in a coordinate plane using the Pythagorean Theorem.
Solving Linear Equations	8.EE7. Solve linear equations with one variable. a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form *x = a*, *a = a*, or *a = b* results (where *a* and *b* are different numbers). b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	**Analyze and solve linear equations and pairs of simultaneous linear equations.**	**I can write, solve, and interpret the solution set of multi-step linear equations in one variable.** • **I can determine when a solution gives one solution, infinitely many solutions, or no solutions.** • **I can apply the distributive property to algebraic expressions.** • **I can combine like terms to simplify expressions and equations.**
Introduction to Functions	8.EE5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.* 8.F1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. 8.F3. Interpret the equation *y = mx + b* as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function A = s2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.* 8.F5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	**Understand the connections between proportional relationships, lines, and linear equations.** **Define, evaluate, and compare functions.** **Use functions to model relationships between quantities.**	**I can graph proportional relationships by using the unit rate as the slope of the graph.** **I can compare and contrast two different proportional relationships that are represented in different ways.** **I can determine if a relation is a function using a table, graph, or set of ordered pairs.** **I can determine if a function is linear or non-linear from a table, equation, graph, or verbal model.** **I can describe the relationship between two quantities when given a graph.** **I can sketch a graph from a verbal description of a function.**

Attachment 4: Scope and Sequence, 8th Grade Math

Graphing Functions	8.EE5. Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. *For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.*. 8.F1. Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. 8.F2. Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). *For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.* 8.F3. Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. *For example, the function A = s2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.* 8.F4. Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, *y)* values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	**Understand the connections between proportional relationships, lines, and linear equations.** **Define, evaluate, and compare functions.** **Use functions to model relationships between quantities.**	**I can graph proportional relationships by using the unit rate as the slope of the graph.** **I can compare and contrast two different proportional relationships that are represented in different ways, i.e. an equation with a graph.** **I can determine if a relation is a function using a table, graph, or set of ordered pairs.** **I can compare and contrast multiple representations of (tables, graphs, equations, and verbal models) of two functions.** **From any type of representation:** • **I can determine whether the relationship is a function.** • **I can identify the rate of change and y-intercept for a linear function.** **I can determine if a function is linear or non-linear from a table, equation, graph, or verbal model.** **I can write, graph, and interpret linear functions and their shape.** • **I can construct a function to model a linear relationship from a table of values, two points, or verbal description.** • **I can determine the rate of change (slope) and initial value (y-intercept) from a table and graph.** **I can explain the meaning of the rate of change and initial value of a linear function in terms of the situation it models**

Curriculum Scope & Sequence

School: Pike Creek Charter School Grade or Course: 8th Grade Math Teacher _____

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 2: November 24, 2014-March 6, 2015 **Systems of Linear Equations**	8.EE8. Analyze and solve pairs of simultaneous linear equations. a. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.* c. Solve real-world and mathematical problems leading to two linear equations in two variables. *For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.*	**Analyze and solve linear equations and pairs of simultaneous linear equations.**	**I can write, solve, and interpret the solutions to systems of linear equations with two variables graphically and algebraically.** **This means, in part:** • **I can recognize and explain the solution to a system of linear equations graphically (as a point of intersection.)** • **I can describe instances when a system of equations will yield one solution, no solutions, or infinitely many solutions.**
Exponents	8.EE1. Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example, 32 × 3–5 = 3–3 = 1/33 = 1/27.* 8.EE3. Use numbers expressed in the	**Work with radicals and integer exponents.**	I can describe and apply the properties of integer exponents to expressions. I can estimate and compare very

	form of a single digit times an integer power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other. *For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger.* 8.EE4. Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.		**large and very small quantities using scientific notation.** **I can determine how many times bigger one number is than another using scientific notation.** **I can describe when and where to use scientific notation and choose appropriate units for very large and very small numbers.** **I can compare, interpret and calculate values using scientific notation and decimal equivalents in the same problem.**
Intro to Geometry	8.EE6. Use similar triangles to explain why the slope *m* is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at *b*. 8.G2. Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of	**Understand the connections between proportional relationships, lines, and linear equations.** **Understand congruence and similarity using physical models, transparencies, or geometry software.**	**I can write and interpret an equation for a line in slope-intercept form and determine the relationship is linear using similar triangles to show the slope is the same between any two points.** **I can describe how two figures are congruent if the first figure can be rotated, reflected, and/or translated to create the second figure.** **Given two congruent figures,**

	rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. 8.G4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. 8.G5. Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles.		**I can describe the transformations needed to create the second from the first.** **I can describe how two figures are similar if the first figure can be rotated, reflected, dilated and/or translated to create the second figure.** **Given two similar figures, I can describe the transformations needed to create the second from the first.** **I can informally prove the following:** • **The angle-sum theorem;** • **The properties of angles when parallel lines are cut by a transversal;** • **The angle-angle criterion for similar triangles.**

Curriculum Scope & Sequence

School: Pike Creek Charter School Grade or Course: 8th Grade Math Teacher _____

Unit Order By unit title and/or time frame	**Learning Targets** Content Standards, Grade Level Expectations, Proficiency Level Expectations, or Grade Cluster Benchmarks	**Theme/Big Idea/Concept**	**Enduring Understandings and/or Essential Questions**
Trimester 3: March 6, 2013- June 5, 2013 **Transformations**	8.G1. Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and line segments to line segments of the same length. b. Angles are taken to angles of the same measure. c. Parallel lines are taken to parallel lines. 8.G3. Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates. 8.G4. Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two- dimensional figures, describe a sequence that exhibits the similarity between them.	**Understand congruence and similarity using physical models, transparencies, or geometry software.**	**I can describe and apply the properties of translations, rotations, and reflections on lines, line segments, angles, parallel lines and geometric figures.** **I can describe and apply dilation, translation, rotation, and reflection to two-dimensional figures in a coordinate plane.** **I can describe and apply dilation, translation, rotation, and reflection to two-dimensional figures in a coordinate plane.** **I can describe how two figures are similar if the first figure can be rotated, reflected, dilated and/or translated to create the second figure.** **Given two similar figures, I can describe the transformations needed to create the second from the first.**
Geometry and Measurement	8.G7. Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions. 8.G9. Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	**Understand and apply the Pythagorean Theorem.** **Solve real-world mathematical problems involving volume of cylinders, cones, and spheres.**	**I can determine the unknown side lengths in a right triangle problem using the Pythagorean Theorem.** **I know and can apply the formulas for volumes of cones, cylinders, and spheres.**

Data Analysis	8.SP1. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. 8.SP2. Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line. 8.SP3. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.* 8.SP4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.	**Investigate patterns of association in bivariate data.**	**I can construct and interpret scatter plots.** • **I can describe the relationships shown in a scatter-plot by identifying patterns such as: clustering; outliers; positive or negative association; linear association; nonlinear association.** **I can sketch a line of best fit on a scatter plot, justify the location of the line, and explain why or why not a given line is a good fit.** **I can write the equation of a line of best fit and use it to make predictions.** **I can use the slope and y-intercept to describe he relationship represented in a data set.** **I can construct two-way frequency and relative frequency tables to summarize categorical data.** **I can use relative frequencies to describe the possible association between two variables of categorical data.**