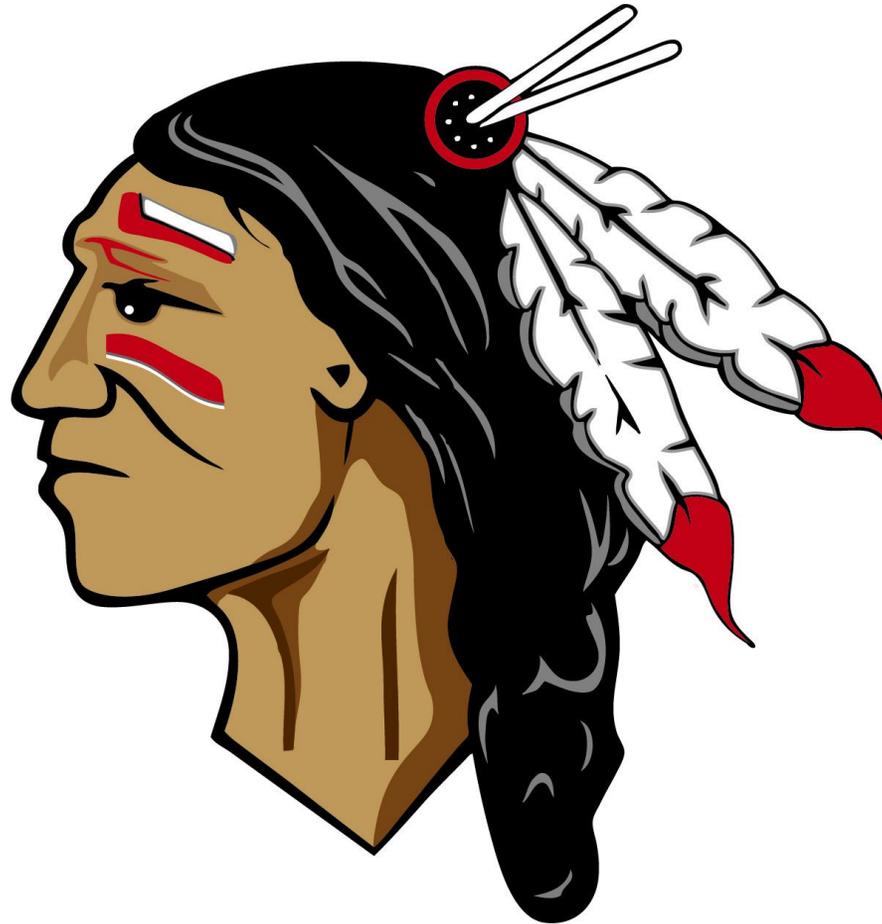# Westside Middle School
6th Grade Math Curriculum Map
2017-2018

Teacher: Crawley & Frisbee   **Revised:** 6.5.17

Map is still under construction and will be revised throughout the year.

WESTSIDE MIDDLE SCHOOL 6TH GRADE MATH CURRICULUM MAP

Teacher: Crawley & Frisbee

Quarter 1

Unit 1 - Essential Question

Students will consider……
● What is a ratio?
● How can ratio and rate reasoning be used to solve real-world and mathematical problems?

AR STANDARDS / SKILLS
CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will….   Standard Coding: Ratios and Proportions, The Number System

Unit 1:
Understand ratio concepts and use ratio reasoning to solve problems.

AR.MATH.CONTENT.6.RP.A.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."

AR.MATH.CONTENT.6.RP.A.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

AR.MATH.CONTENT.6.RP.A.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.

AR.MATH.CONTENT.6.RP.A.3B - 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?

Apply and extend previous understandings of multiplication and division to divide fractions by fractions.

AR.MATH.CONTENT.6.NS.A.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 3/4cup 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?. These standards will be used in this unit, but are not a focus. Unit 3 focuses on operations. Compute fluently with multi digit numbers and find common factors and multiples.

AR.MATH.CONTENT.6.NS.B.2 Fluently divide multi digit numbers using the standard algorithm.

AR.MATH.CONTENT.6.NS.B.3 - Fluently add, subtract, multiply, and divide multi digit decimals using the standard algorithm for each operation.

AR.MATH.CONTENT.6.NS.B.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 1100 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).

***All Ongoing Number System Standards will continue throughout the year.** 6.NS.1, 6.NS.2, 6.NS.3 Addressed all year, in every unit

Activities/Skills	Assessments	Resources	Vocabulary/Terms
Unit 1 ● Students will understand the concept of ratio and be able to describe ratio relationships through discussion. ● Students will understand the concept of ratio and be able to compare ratio relationships through written statements. ● Students will reason about ratios and be able to describe and explain the relationship between the quantities. ● Students will describe a ratio relationship from double number line diagrams and be able to use proposition and support language ● Students will relate quantities using equivalent ratios and be able to compare heights. ● Students will use ratio reasoning to solve real-world problems and be able to question and conjecture. ● Students will use tape diagrams to reason with ratios and be able to describe the relationship. ● Students will understand ratio concepts and use ratio reasoning to solve problems on an assessment. ● Students will use a tape diagram and be able to describe and explain ratio relationships using a graph ● Students will analyze a graph and use ratio relationships and be able to describe and explain the relationships. ● Students will analyze equivalent ratios and will be able to compare quantities ● Students will understand ratio relationships and be able to compare strategies. ● Students will use double number line diagrams and be able to compare ratios. ● Students will compare ratios and be able to compare and contrast strategies. ● Students will reason about ratios and be able to compare pictures. ● Students will find equivalent ratios and be able to sequence. ● Students will reason with ratios using multiplicative thinking and be able to compare relationships. ● Students will compare ratios and be able to contrast pizza amounts. ● Students will analyze ratios and will be able to describe equivalent ratios. ● Students will reason with unit rate by comparing unit prices. ● Students will understand unit rate by comparing and contrasting. ● Students will scale a recipe for potatoes by sequencing their thinking. ● Students will apply ratio reasoning to unit rates and graphing and be able to describe their strategy. ● Students will find equivalent ratios and write an expression by sequencing their thinking. ● Students will represent and analyze quantitative relationships symbolically, graphically, and algebraically on an assessment. ● Students will reason about tables of equivalent ratios by comparing and contrasting ratios and graphing the relationships. ● Students will reason with unit rate by comparing unit prices. ● Students will apply unit rates and be able to compare unit prices. ● Students will apply unit rate reasoning and be able to compare and contrast unit rates. ● Students will apply ratio reasoning and be able to propose and support their answers. ● Students will use unit rate reasoning and be able to describe and elaborate decisions made using this reasoning.	Springdale Activities Chapter tests Projects Exit slips Kahoot District Formative Assessments	Chromebooks My Math Textbooks Informational text Graphic Organizers Khan Academy Reflex Math TpT Interactive Notebooks	**Unit 1** greatest common factor, least common multiple,, rate, ratio, unit price, unit rate, least common denominator, reciprocal, numerator, denominator, dividend, divisor, quotient, product, sum, difference,

● Students will demonstrate their understanding of ratio relationships and forms on a district formative assessment.			

Quarter 2

Unit 2 - Essential Questions

● What is a ratio?
● How can ratio and rate reasoning be used to solve real-world and mathematical problems? When do you use an expression or equation?
● How do equations help to solve real-world and mathematical problems?
● What does it mean to evaluate an expression?
● How do formulas or equations help us solve real-world geometric problems?

AR STANDARDS / SKILLS
CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will….   Standard Coding: Ratios and Proportions Equations and Expressions, The Number System, Geometry
Unit 2:
 Apply and extend previous understandings of arithmetic to algebraic expressions.

AR.MATH.CONTENT.6.RP.A.3.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.

AR.Math.Content.6.RP.A.3 - 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 • Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities

AR.MATH.CONTENT.6.EE.A.1- Write and evaluate numerical expressions involving whole-number exponents.

AR.MATH.CONTENT.6.EE.A.2- Write, read, and evaluate expressions in which letters stand for numbers.

AR.MATH.CONTENT.6.EE.A.2.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.

AR.MATH.CONTENT.6.EE.A.2.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.

AR.MATH.CONTENT.6.EE.A.2.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 =s3 and A = 6 s2 to find the volume and surface area of a cube with sides of length s = 1/2.

AR.MATH.CONTENT.6.EE.A.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.

AR.MATH.CONTENT.6.EE.A.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.

AR.MATH.CONTENT.6.EE.B.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.

AR.MATH.CONTENT.6.EE.B.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 to divide fractions by fractions.

AR.MATH.CONTENT.6.NS.A.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 ¾ 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.

AR.MATH.CONTENT.6.NS.B.2- Fluently divide multi-digit numbers using the standard algorithm.

AR.MATH.CONTENT.6.NS.B.3-Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.

AR.MATH.CONTENT.6.NS.B.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). Solve real-world and mathematical problems involving area, surface area, and volume.

AR.MATH.CONTENT.6.G.A.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.

AR.Math.Content.6.G.A.2 - Find the volume of a right rectangular prism including whole number and 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 including fractional edge lengths in the context of solving real-world and mathematical problems

AR.MATH.CONTENT.6.G.A.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.

***All Ongoing Number System Standards will continue throughout the year. 6.NS.1, 6.NS.2, 6.NS.3 Addressed all year, in every unit

Activities/Skills	Assessments	Resources	Vocabulary/Terms
Unit 2 13 days ● Students will write and solve equations and be able to sequence solution strategies. ● Students will write and evaluate expressions in which letters stand for numbers and be able to describe and elaborate the meaning of each piece of the equation. ● Students will write and use equations to solve problems and will be able to propose and support their solutions. ● Students will find patterns and write expressions and be able to describe and elaborate. ● Students will use substitution to solve equations and will be able to sequence the solution strategy. ● Students will write and solve equations and be able to sequence their thinking. ● Students will write, solve and evaluate equations and perform decimal operations and be able to describe and elaborate on their equation ● Students will write and evaluate expressions and be able to compare and contrast. ● Students will write and evaluate expressions and be able to describe and elaborate. ● Students will write expressions and be able to compare and contrast equivalent expressions ● Students will write and factor expressions and be able to describe and elaborate. 22 days ● Students will apply the properties of operations to generate equivalent expressions and be able to compare and contrast the matches by giving an oral description. ● Students will write and evaluate numerical expressions involving whole number exponents and be able to sequence solution strategies. ● Students will use patterns and perform operations and be able to propose and support a solution. ● Students will use distributive property to express a sum of two whole numbers and be able to describe and elaborate. ● Students will use use the greatest common factor and will be able to describe and explain their strategies. ● Students will use factors, the distributive property, and multiples and be able to question and conjecture about their choices through discussion. ● Students will write and evaluate numerical expressions and will be able to compare rates ● Students will find area by decomposing into triangles and other shapes and be able to describe and elaborate their strategies ● Students will add, subtract, multiply, and divide multi digit decimals using the standard algorithm and will be able to describe and elaborate. ● Students will write expressions to represent area and perimeter and be able to compare and contrast equivalent expressions ● Students will multiply and divide by multi digit numbers with decimals and will	Springdale Activities Chapter tests Projects Exit slips Kahoot District Formative Assessments	Chromebooks My Math Textbooks Informational text Graphic Organizers Khan Academy Reflex Math TpT Interactive Notebooks	**Unit 2** Coordinate plane, equivalent ratio, graph, ordered pair, origin, prime factorization,x-axis, x-coordinate, y-axis, y-coordinate, ratio table, scaling, Algebra, algebraic expressions, Associative Properties, base, coefficient, Commutative Properties, constant, defining the variables, Distributive Property, equivalent expressions, evaluate, factor the expression, Identity Properties, like terms, numerical expressions, perfect square, powers, properties, term, variables, arithmetic sequence, dependent variables, function, function rule, function table, geometric sequence, independent variable, inequality, linear function, sequence, term. Base, composite figure, congruent, formula, height, parallelogram, polygon, rhombus

be able to describe and elaborate. ● Students will decompose shapes into triangles to find the area, use decimal operations and will be able to sequence their strategies. ● Students will divide with multi-digit decimals and will be able to sequence their steps. ● Students will use decimal operations and the net of a triangular prism to find the surface area and will be able to sequence their strategies ● Students will use rational number operations to find the surface area and will be able to sequence their strategies. ● Students will interpret and compute quotients of fractions and will be able to propose and support. ● Students will use decimal operations to find the surface area and will be able to compare and contrast their strategies. ● Students will write numerical expressions to represent surface area problems and will be able to compare and contrast strategies. ● Students will interpret and compute quotients of fractions and will be able to describe and elaborate. ● Students will find the square feet needed to cover a space and will be able to describe and elaborate on their strategies. ● Students will reason about surface area and will be able to propose and support the best possible box by writing 2-3 sentences. ● Students will create nets of a cube and will be able to compare and contrast characteristics of each.			

Quarter 3

Unit 3 - Essential Questions
● How do negative rationals fit into the number line?
● What real-world applications use negative rational numbers?

Unit 4 - Essential Questions
● How are percents and ratios related?
● How can we use unit rates to solve real-world problems?

Unit 5 - Essential Questions
● What does the shape of the data reveal about the data?
● How can we use statistics to answer a question?

AR STANDARDS / SKILLS
CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will….   Standard Coding: The Number System, Equations and Expressions, Geometry

Unit 3:
Apply and extend previous understandings of numbers to the system of rational numbers

AR.MATH.CONTENT.6.NS.C.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.

AR.MATH.CONTENT.6.NS.C.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.

AR.MATH.CONTENT.6.NS.C.6.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.

AR.MATH.CONTENT.6.NS.C.6.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.

AR.MATH.CONTENT.6.NS.C.6.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. © Springdale School District 2016-2026

AR.MATH.CONTENT.6.NS.C.7 Understand ordering and absolute value of rational numbers.

AR.MATH.CONTENT.6.NS.C.7.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.
AR.MATH.CONTENT.6.NS.C.7.B Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write -3C > -7C to express the fact that -3C is warmer than -7C.

AR.MATH.CONTENT.6.NS.C.7.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.

AR.MATH.CONTENT.6.NS.C.7.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.

AR.MATH.CONTENT.6.NS.C.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. Reason about and solve inequalities

AR.MATH.CONTENT.6.EE.B.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.

AR.MATH.CONTENT.6.EE.B.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. Solve real-world and mathematical problems involving area, surface area, and volume

AR.MATH.CONTENT.6.G.A.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.

***All Ongoing Number System Standards will continue throughout the year .6.NS.1, 6.NS.2, 6.NS.3 Addressed all year, in every unit

Unit 4:
Understand ratio concepts and use ratio reasoning to solve problems.
CCSS.MATH.CONTENT.6.RP.A.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.

CCSS.MATH.CONTENT.6.RP.A.3.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.

CCSS.MATH.CONTENT.6.RP.A.3.D- Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. Solve real-world and mathematical problems involving area, surface area,and volume.

CCSS.MATH.CONTENT.6.G.A.2- Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas V = lwh and V = Bh to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

***All Ongoing Number System Standards will continue throughout the year. 6.NS.1, 6.NS.2, 6.NS.3 Addressed all year, in every unit
Unit 5:
Develop understanding of statistical variability.
AR.MATH.CONTENT.6.SP.A.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.

AR.MATH.CONTENT.6.SP.A.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.

AR.MATH.CONTENT.6.SP.A.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. Summarize and describe distributions.

AR.MATH.CONTENT.6.SP.B.4- Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

AR.MATH.CONTENT.6.SP.B.5- Summarize numerical data sets in relation to their context, such as by:

AR.MATH.CONTENT.6.SP.B.5.A- Reporting the number of observations.

AR.MATH.CONTENT.6.SP.B.5.B- Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.

AR.MATH.CONTENT.6.SP.B.5.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.

AR.MATH.CONTENT.6.SP.B.5.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.

***All Ongoing Number System Standards will continue throughout the year. 6.NS.1, 6.NS.2, 6.NS.3 Addressed all year, in every unit

Activities/Skills	Assessments	Resources	Vocabulary/Terms
Unit 3: • Students will understand a rational number as a point on a horizontal and vertical number line and will describe and elaborate their relative positions by speaking. • Students will propose and support reasons for different orders of rational numbers by writing sentences. • Students will understand the absolute value of a rational number as its distance from zero on the number line and will be able to describe the meaning of absolute value • Students will distinguish comparisons of absolute value from statements about order by writing comparison statements • Students will find and position rational numbers on a horizontal number line and will make inequality statements by describing and explaining their discoveries • Students will write an inequality to represent a constraint and will represent the solution on a number line and will be able to describe the graph. • Students will represent a constraint with an inequality and be able to describe their solution in a sentence • Students will use the coordinate plane to find distances and to describe the figures created and solve real world problems and will be able to question and conjecture by writing. • Students will graph polygons in the coordinate plane and will be able to describe and elaborate the shapes formed. • Students will take an assessment. **Unit 4:** **5 days** • Students will find a percent of a quantity as a rate per 100 and will be able to propose and support their answers. • Students will find a percent of a quantity as a rate per 100 and will describe and explain their work. • Students will find a percent of a quantity as a rate per 100 and will be able to propose and support their work. • Students will solve problems involving finding the whole given a part and a percent and will be able to compare and contrast their percents. • Students will solve problems involving finding the whole given a part and a percent and will be able to sequence through discussion. **10 days** • Students will use ratio reasoning to convert measurement units and will be able to compare and contrast by writing. • Students will use ratio reasoning to convert measurement units and will be able to compare and contrast by speaking. • Students will manipulate and transform units appropriately when multiplying and dividing quantities and will be able to describe and explain by discussing • Students will use ratio reasoning to convert measurement units and will be able to sequence and compare and contrast. • Students will manipulate and transform units appropriately when multiplying and dividing quantities and will be able to propose and support • Students will find the volume of a right rectangular prism with fractional edge lengths and will propose and support by writing. • Students will find the volume of a right rectangular prism with fractional edge	Springdale Activities Chapter tests Projects Exit slips Kahoot District Formative Assessments	Chromebooks My Math Textbooks Informational text Graphic Organizers Khan Academy Reflex Math TpT Interactive Notebooks	**Unit 3** Coordinate plane, x-axis, x-coordinate, y-axis, y-coordinate, origin, polygon, area, ordered pair. **Unit 4** Percent, percent proportions, proportions, rational numbers **Unit 5** Average, first quartile, interquartile, mean, mean absolute deviation, measure of center, measures of variation, median, mode, outliers, quartiles, range, statistical question, third quartile, box plot, cluster, distribution, dot plot, frequency distribution, gap, histogram, line graph, line plot, peak, symmetric.

lengths and will be able to describe and explain.
- Students will apply the formulas for volume of right rectangular prisms with fractional lengths in real-world context and will be able to question and conjecture.
- Students will apply the formulas for volume, convert measurement units and will be able to propose and support by writing
- Students will take an assessment.

Unit 5

5 -7 days
- **Students will recognize a statistical question and be able to describe and explain the variability in the measurements by writing a sentence.**
- **Students will display numerical data and be able to support their design decisions by orally presenting their ideas.**
- **Students will relate the shape of the distribution to the way in which it was measured and be able to compare and contrast classmates' displays through trading cards.**
- **Students will take a formative assessment.**

13 - 15 days
- Students will relate the choice of measure of center to the shape of the data distribution.
- Students will summarize numerical data sets by giving quantitative measure of center and will be able to support their choice of measure of center by writing a statement.
- Students will take a formative assessment.
- Students will summarize numerical data sets by giving a measure of variability and be able to support their method.
- Students will relate the choice of measure of variability to the data and the context in which it was gathered by explaining and describing the measure.
- Students will understand that a measure of variation describes how its values vary with a single number and be able to explain what the measure of variability means in the context.
- Students will take a formative assessment.
- Students will describe the nature of the data under investigation and be able to identify the cause and effect of the more precise measuring tool on the data and measures of center and variability
- Students will display numerical data in plots and be able to compare and contrast the new data displays to the less precise data displays.
- Students will give quantitative measures of center and variability with reference to the context in which the data were gathered and be able to describe what the measure tells about the data
- Students will recognize a statistical question as one that anticipates variability and will find measures of center and variability and be able to compare and contrast the measures.
- Students will recognize a statistical question as one that anticipates variability and will find measures of center and variability and be able to compare and contrast the measures.
- Students will take a formative assessment.

Quarter 4

Unit 6 - Essential Questions

● How can we use operations with multidigit numbers and decimals to solve problems?

AR STANDARDS / SKILLS
CONTENT VOCABULARY WITHIN THE STANDARD WILL BE TAUGHT THROUGHOUT DAILY OBJECTIVES / GOALS.

The student will….   Standard Coding: The Number System, Ratios and Proportions, Equations and Expressions

Unit 6:
Compute fluently with multi-digit numbers and find common factors and multiples.

CCSS.MATH.CONTENT.6.NS.B.2- Fluently divide multi-digit numbers using the standard algorithm.

CCSS.MATH.CONTENT.6.NS.B.3- Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. Understand ratio concepts and use ratio reasoning to solve problems.

CCSS.MATH.CONTENT.6.RP.A.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."

CCSS.MATH.CONTENT.6.RP.A.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.

CCSS.MATH.CONTENT.6.RP.A.3.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.

CCSS.MATH.CONTENT.6.RP.A.3.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?

CCSS.MATH.CONTENT.6.RP.A.3.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.

CCSS.MATH.CONTENT.6.RP.A.3.D- Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. Apply and extend previous understandings of arithmetic to algebraic expressions.

CCSS.MATH.CONTENT.6.EE.A.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.

CCSS.MATH.CONTENT.6.EE.A.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.

***All Ongoing Number System Standards will continue throughout the year. 6.NS.1, 6.NS.2, 6.NS.3 Addressed all year, in every unit

Activities/Skills	Assessments	Resources	Vocabulary/Terms
Unit 6: **20 days** - Students will use decimal operations and ratio reasoning to convert capacities and be able to compare and contrast. - Students will use operations with multi-digit numbers to find distances and will be able to propose and support their findings - Students will use operations with decimals to convert distances and will be able to describe and explain their results.	Springdale Activities Chapter tests Projects Exit slips Kahoot District Formative Assessments	Chromebooks My Math Textbooks Informational text Graphic Organizers Khan Academy Reflex Math TpT Interactive Notebooks	**Unit 6:** Unit rate, ratio, equivalent, equivalent ratios, tables, tape diagrams, unit pricing, constant speed.