

6th Grade MCCRS Curriculum Map

First Nine Weeks

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Second Nine Weeks

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First Nine Weeks

Unit 1: Statistics and Probability

Module 1: Develop understanding of statistical variability

Standards	Mathematical Practices
<p>6.SP.1</p> <ul style="list-style-type: none"> 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 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.2</p> <ul style="list-style-type: none"> Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.3</p> <ul style="list-style-type: none"> Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.4</p> <ul style="list-style-type: none"> Display numerical data in plots on a number line, including dot plots, histograms, and box plots 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.</p>

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	<p>MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.5</p> <ul style="list-style-type: none"> Summarize numerical data sets in relation to their context, such as by: 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.5a</p> <ul style="list-style-type: none"> Reporting the number of observations. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.5b</p> <ul style="list-style-type: none"> Describing the nature of the attribute under investigation, including how it was measured and its units of measurement. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.SP.5c</p> <ul style="list-style-type: none"> Giving quantitative measures of center (median and/or mean) and variability (interquartile range), as well as describing any overall pattern and any striking deviations 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>

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<p>6.SP.5d</p> <ul style="list-style-type: none"> ● Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>	
Student Learning Target(s)	Essential Vocabulary	
<ul style="list-style-type: none"> ● I can distinguish between a statistical and non-statistical question. ● I can recognize that data can have variability. ● I can describe data distribution by its center (median/mean). ● I can describe data distribution by its spread (range). ● I can describe data distribution by its data clusters, peaks, gaps, symmetry, and overall shape (line plot). ● I can calculate the range, median, mean, and mode of a set of data. ● I can summarize a set of data using the measures of central tendencies. ● I can describe the variability by examining graphs of data for spread and overall shape. 	<ul style="list-style-type: none"> ● Statistical question ● Variability ● Measure of center ● Mean ● Median 	
Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.SP.1 6.SP.2 6.SP.3 6.SP.4 6.SP.5 6.SP.5a 6.SP.5b 6.SP.5c	Lessons 26, 27, 28, 29	Lessons 26, 27, 28, 29

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Unit 2: Ratios and Proportional Relationships

Module 1: Understand ratio concepts and use ratio reasoning to solve problems	
Standards	Mathematical Practices
<p>6.RP.1</p> <ul style="list-style-type: none"> ● Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. <i>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.”</i> 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.RP.2</p> <ul style="list-style-type: none"> ● Understand the concept of a unit rate a/b associated with a ratio $a:b$ with $b \neq 0$, and use rate language in the context of a ratio relationship. <i>For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”</i> 	<p>MP.1. Make sense of problems and persevere in solving them. MP.2. Reason abstractly and quantitatively. MP.3. Construct viable arguments and critique the reasoning of others. MP.4. Model with mathematics. MP.5. Use appropriate tools strategically. MP.6. Attend to precision. MP.7. Look for and make use of structure. MP.8. Look for and express regularity in repeated reasoning.</p>
<p>6.RP.3</p> <ul style="list-style-type: none"> ● 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. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.RP.3a</p> <ul style="list-style-type: none"> ● Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>

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<p>6.RP.3b</p> <ul style="list-style-type: none"> Solve unit rate problems including those involving unit pricing and constant speed. <i>For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?</i> 	<p>MP.8 Look for and express regularity in repeated reasoning.</p> <p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.RP.3c</p> <ul style="list-style-type: none"> Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.RP.3d</p> <ul style="list-style-type: none"> Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>Student Learning Target(s)</p>	<p>Essential Vocabulary</p>
<ul style="list-style-type: none"> I can solve real-world problems involving proportional reasoning by using various diagrams. I can complete a table of equivalent ratios with whole number values including measurements. I can create a function table and compare proportional quantities. I can plot pairs of values on a coordinate plane. I can solve unit rate problems involving unit pricing. I can solve unit rate problems involving constant speed. 	<ul style="list-style-type: none"> Ratio Rate Unit Rate Equivalent ratios Unit price Percent

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MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.RP.1 6.RP.2 6.RP.3 6.RP.3a 6.RP.3b 6.RP.3c 6.RP.3d	Lessons 1, 2, 3, 4 and 5	Lessons 1, 2, 3, 4, and 5

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Second Nine Weeks

Unit 3: Number Systems

Module 1: Apply and extend previous understandings of multiplication and division to divide fractions by fractions	
Standards	Mathematical Practices
<p>6.NS.1</p> <ul style="list-style-type: none"> Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for $(2/3) \div (3/4)$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(2/3) \div (3/4) = 8/9$ because $3/4$ of $8/9$ is $2/3$. (In general, $(a/b) \div (c/d) = ad/bc$.) How much chocolate will each person get if 3 people share $1/2$ lb of chocolate equally? How many $3/4$-cup servings are in $2/3$ of a cup of yogurt? How wide is a rectangular strip of land with length $3/4$ mi and area $1/2$ square mi? 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> I can interpret and compute quotients of fraction and mixed numbers. I can interpret and solve word problems involving division of fractions by fractions using visual fractions models. I can interpret and solve word problems involving division of fractions by fractions using equations. I can create word problems involving division of fractions by fractions. 	<ul style="list-style-type: none"> Multiplicative inverse Reciprocal

MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.NS.1	Lessons 6, 7	Lessons 6, 7

Unit 3: Number Systems (continued)

Module 2: Compute fluently with multi-digit numbers and find common factors and multiples	
Standards	Mathematical Practices
<p>6.NS.2</p> <ul style="list-style-type: none"> Fluently divide multi-digit numbers using the standard algorithm 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others.</p>

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	<p>MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.3</p> <ul style="list-style-type: none"> ● Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> ● I can fluently divide multi-digit whole numbers using the standard algorithm with speed and accuracy. ● I can fluently add multi-digit decimals using the standard algorithm with speed and accuracy. ● I can fluently subtract multi-digit decimals using the standard algorithm with speed and accuracy. ● I can fluently multiply multi-digit decimals using the standard algorithm with speed and accuracy. ● I can fluently divide multi-digit decimals using the standard algorithm with speed and accuracy. 	<ul style="list-style-type: none"> ● Estimate ● Compatible numbers

MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.NS.2	Lessons 8, 9, 10	Lessons 8, 9, 10
6.NS.3		

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Unit 3: Number Systems (continued)

Module 2: Compute fluently with multi-digit numbers and find common factors and multiples (revisited)		
Standards	Mathematical Practices	
<p>6.NS.4</p> <ul style="list-style-type: none"> 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 $4(9 + 2)$. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>	
Student Learning Target(s)	Essential Vocabulary	
<ul style="list-style-type: none"> I can derive the greatest common factor of two whole number less than or equal to 100. I can derive the least common multiple of two whole numbers less than or equal to 12. I can apply the distributive property to express the sum of two whole numbers 1-100. 	<ul style="list-style-type: none"> Greatest common factor (GCF) Least common multiple (LCM) 	
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.NS.4	Lesson 11	Lesson 11

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Unit 3: Number Systems (continued)

Module 3: Apply and extend previous understandings of numbers to the system of rational numbers	
Standards	Mathematical Practices
<p>6.NS.5</p> <ul style="list-style-type: none"> 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. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.6</p> <ul style="list-style-type: none"> Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.6a</p> <ul style="list-style-type: none"> 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 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.6b</p> <ul style="list-style-type: none"> Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.</p>

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	MP.8 Look for and express regularity in repeated reasoning.
<p>6.NS.6c</p> <ul style="list-style-type: none"> ● Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> ● I can represent and describe quantities in real world situations using positive and negative numbers. ● I can explain where zero fits into real world situation represented by integers. ● I can find and position integers on a horizontal and/or vertical number line. ● I can find and position rational numbers (fractions and decimals) on a horizontal and/or vertical number line. ● I can find and position integers on a coordinate plane. ● I can find and position rational numbers (fractions and decimals) on a coordinate plane. ● I can label quadrants on a coordinate plane. ● I can plot a point on the coordinate plane in any quadrant using ordered pairs. ● I can recognize a reflection as being two ordered pairs that differ only in signs. 	<ul style="list-style-type: none"> ● Positive number ● Negative number ● Signed number ● Opposite number ● Integers ● Absolute Value ● Quadrants

Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.NS.5 6.NS.6a 6.NS.6b 6.NS.6c	Lessons 12, 13, 14	Lesson 12, 13, 14

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Unit 3: Number Systems (continued)

Module 3: Apply and extend previous understandings of numbers to the system of rational numbers (revisited)	
Standards	Mathematical Practices
<p>6.NS.7</p> <ul style="list-style-type: none"> Understand ordering and absolute value of rational numbers. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.7a</p> <ul style="list-style-type: none"> Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to right. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.7b</p> <ul style="list-style-type: none"> Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3^{\circ}\text{C} > -7^{\circ}\text{C}$ to express the fact that -3°C is warmer than -7°C. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.7c</p> <ul style="list-style-type: none"> 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. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.</p>

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	<p>MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.7d</p> <ul style="list-style-type: none"> 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 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> I can describe the relative position of two numbers on a number line when given an inequality. I can interpret a given inequality in terms of a real world situation. I can define absolute value as it applies to a number line. I can describe absolute value as the magnitude of the number in a real world situation. I can compare between using a signed number and using the absolute value of a signed number when referring to real world situations. I can interpret statements of inequality as statements about relative position of two numbers on a number line diagram. I can write statements of order for rational numbers in real-world contexts. I can interpret statements of order for rational in real-world contexts. I can explain statements of order for rational numbers in real-world contexts. I can define the absolute value of a rational number as its distance from 0 on a number line. I can use absolute value to describe size or magnitude in a real-world situation. (Example: An ocean depth of -900 feet, write $-900 = 900$ to describe the distance below sea level.) I can distinguish comparisons of absolute value from statements about order and apply to real world context. 	<ul style="list-style-type: none"> Absolute Value

Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.NS.7 6.NS.7a	Lesson 13	Lesson 13

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6.NS.7b 6.NS.7c 6.NS.7d		
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Unit 3: Number Systems (continued)

Module 3: Apply and extend previous understandings of number to the system of rational numbers (revisited)	
Standards	Mathematical Practices
<p>6.NS.8</p> <ul style="list-style-type: none"> Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.9</p> <ul style="list-style-type: none"> Apply and extend previous understandings of addition and subtraction to add and subtract integers; represent addition and subtraction on a horizontal or vertical number line diagram. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.9a</p> <ul style="list-style-type: none"> 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. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.9b</p> <ul style="list-style-type: none"> 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 integers by describing real-world contexts. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.</p>

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	<p>MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.9c</p> <ul style="list-style-type: none"> ● Understand subtraction of integers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two integers on the number line is the absolute value of their difference, and apply this principle in real-world contexts. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.NS.9d</p> <ul style="list-style-type: none"> ● Apply properties of operations as strategies to add and subtract integers. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> ● I can solve real-world and mathematical problems by graphing points in all four quadrants. ● I can find the distance between two points on the coordinate plane given only coordinates. 	<ul style="list-style-type: none"> ● Coordinate plane ● Quadrant ● Coordinates ● X-coordinate ● Y-coordinate ● absolute value ● Origin

Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.NS.8 6.NS.9	Lesson 14	Lesson 14

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Third Nine Weeks

Unit 4: Expressions and Equations

Module 1: Apply and extend previous understandings or arithmetic to algebraic expressions	
Standards	Mathematical Practices
<p>6.EE.1</p> <ul style="list-style-type: none"> • Write and evaluate numerical expressions involving whole-number exponents. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.2</p> <ul style="list-style-type: none"> • Write, read, and evaluate expressions in which letters stand for numbers. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.2a</p> <ul style="list-style-type: none"> • Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation “Subtract y from 5” as $5 - y$. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.2b</p> <ul style="list-style-type: none"> • 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 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p>

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<p>$(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms</p>	<p>MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.2c</p> <ul style="list-style-type: none"> 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 $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.3</p> <ul style="list-style-type: none"> Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.4</p> <ul style="list-style-type: none"> 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 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> I can translate written phrases into algebraic expressions. I can translate algebraic expressions into written phrases. I can evaluate algebraic expressions using variables. I can identify the parts of an expression using mathematical terms. (sum, term, product, factor, quotient, coefficient) I can identify the terms of an expression. 	<ul style="list-style-type: none"> Base Exponent Exponential expressions Variable Term Variable term

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<ul style="list-style-type: none"> ● I can identify parts of an expression as a single entity, even if not a monomial. ● I can identify properties of operations (associative, commutative, distributive, identity, and zero). ● I can apply the properties of operations to generate equivalent expressions. ● I can justify that two equations are equivalent regardless of which value is substituted. 	<ul style="list-style-type: none"> ● Commutative property of addition ● Associative property of addition ● Distributive property ● Like terms
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Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.EE.1 6.EE.2 6.EE.2a 6.EE.2b 6.EE.2c 6.EE.3 6.EE.4	Lessons 15, 16, 17	Lessons 15, 16, 17

Unit 4: Expressions and Equations (continued)

Module 3: Reason about and solve one-variable equations and inequalities

Standards	Mathematical Practices
6.EE.5 <ul style="list-style-type: none"> ● 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. 	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
6.EE.6 <ul style="list-style-type: none"> ● 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. 	MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics.

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	<p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.7</p> <ul style="list-style-type: none"> ● 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. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.EE.8</p> <ul style="list-style-type: none"> ● 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. 	<p>MP.1 Make sense of problems and persevere in solving them.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.3 Construct viable arguments and critique the reasoning of others.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>MP.6 Attend to precision.</p> <p>MP.7 Look for and make use of structure.</p> <p>MP.8 Look for and express regularity in repeated reasoning.</p>
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> ● I can solve equations. ● I can solve inequalities. ● I can determine whether a given number makes an equation or an inequality true using substitution. ● I can use variables to represent unknown numbers. ● I can write variable expressions when solving real-world/mathematical problems. ● I can solve a variable expression using substitution in a real-world situation. ● I can write an inequality based on a number line. ● I can graph solutions to inequalities. ● I can represent possible solutions to inequalities. ● I can solve mathematical equations for real-world situations using nonnegative rational numbers. 	<ul style="list-style-type: none"> ● Inequality ● Equation ● Substitute ● Solve ● Solution

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6.EE.5 6.EE.6 6.EE.7 6.EE.8	Lessons 18, 19, 20	Lesson 18, 19, 20
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Unit 4: Expressions and Equations (continued)

Module 2: Represent and analyze quantitative relationships between dependent and independent variables.	
Standards	Mathematical Practices
<p>6.EE.9</p> <ul style="list-style-type: none"> ● Use variables to represent two quantities in a real-world problem that change in relationship to one another. <ul style="list-style-type: none"> ○ 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. <p>For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.</p>	<ul style="list-style-type: none"> MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Student Learning Target(s)	Essential Vocabulary
<ul style="list-style-type: none"> ● I can define independent and dependent variables. ● I can use variables to represent two different quantities in a real-world problem that change in relationship to one another. ● I can complete a function table for a real-world situation that uses variables. ● I can create a function table for a real-world situation that uses variables. ● I can create a graph that represents two different quantities from a function table. 	<ul style="list-style-type: none"> ● Dependant variable ● Independent variable

Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.EE.9	Lesson 21	Lesson 21

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Unit 5: Geometry

Module 1: Solve real-world and mathematical problems involving area, surface area, and volume.	
Standards	Mathematical Practices
<p>6.G.1</p> <ul style="list-style-type: none"> 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. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.G.2</p> <ul style="list-style-type: none"> Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.G.3</p> <ul style="list-style-type: none"> 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. 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.</p>
<p>6.G.4</p> <ul style="list-style-type: none"> Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems 	<p>MP.1 Make sense of problems and persevere in solving them. MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision.</p>

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	MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.
Student Learning Target(s)	Essential Vocabulary
	<ul style="list-style-type: none"> ● Polygon ● Base ● Net ● Surface area ● Triangular prism ● Pyramid ●

Supplemental Resources		
MCCRS	Ready Mathematics Instruction	Ready Practice and Problem Solving
6.G.1 6.G.2 6.G.3 6.G.4	Lessons 22, 23, 24, 25	Lessons 22, 23, 24, 25