



Course Name Math Course 1

Approved: August 26, 2024

Unit Title Unit 1 Expressions and Equations: Area, Algebraic Expressions, and Exponents

STAGE 1 DESIRED RESULTS Context and relevance for student learning		
Standards	Transfer	
<p>CC.2.1: Numbers and Operations CC.2.1.6.E.3 Develop and/or apply number theory concepts to find common factors and multiples.</p> <p>CC.2.2: Algebraic Concepts CC.2.2.6.B.1 Apply and extend previous understandings of arithmetic to algebraic expressions.</p> <p>CC.2.3: Geometry CC.2.3.6.A.1 Apply appropriate tools to solve real-world and mathematical problems involving area, surface area,</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Develop the ability to apply expressions and equations involving area, algebraic expressions, and exponents to solve practical real-world problems across diverse fields, fostering analytical thinking and informed decision-making. 	
	Meaning	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> You can use what you know about the area of a rectangle to find the area of other two-dimensional figures and to find the surface-area of three-dimensional figures. <input type="checkbox"/> You can use what you know about writing, interpreting, and evaluating numerical 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> How can I use what I know to find the area/surface area of 2 and 3 dimensional figures? <input type="checkbox"/> How can I write, interpret, and evaluate algebraic expressions? <input type="checkbox"/> How can I use my understanding of factors/multiples and exponents in expressions?

<p>and volume.</p>	<p>expressions to understand how to work with algebraic expressions.</p> <ul style="list-style-type: none"> ❑ You can apply your understanding of multiplication to evaluate expressions that include exponents and to find the greatest common factor and least common multiple of two whole numbers. 	
	<p>Acquisition</p>	
<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ❑ I understand numerical and algebraic expressions. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ❑ I can develop and/or apply number theory concepts to find common factors and multiples. ❑ I can apply and extend previous understandings of arithmetic to algebraic expressions. ❑ I can apply appropriate tools to solve real-world and mathematical problems involving area and surface area. ❑ I can apply number theory concepts to show relationships between real numbers in problem solving settings 	

		<p>(specifically, factors and multiples).</p> <ul style="list-style-type: none">❑ I can compute multi-digit numbers and find common factors and multiples.❑ I can write and evaluate numerical and algebraic expressions.❑ I can find area and surface area by applying formulas and using various strategies.
--	--	--



Course Name Math Course 1

Unit Title Unit 2 Decimals and Fractions: Base-Ten Operations, Division with Fractions, and Volume

STAGE 1 | DESIRED RESULTS

Context and relevance for student learning

Standards	Transfer	
<p>CC.2.1: Numbers and Operations CC.2.1.6.E.1 Apply and extend previous understandings of multiplication and division to divide fractions by fractions.</p> <p>CC.2.1.6.E.2 Identify and choose appropriate processes to compute fluently with multi-digit numbers.</p> <p>CC.2.3: Geometry CC.2.3.6.A.1 Apply appropriate tools to solve real-world and mathematical problems involving area, surface area,</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> confidently and accurately apply decimals and fractions in various real-world scenarios such as cooking, measuring, and consumer mathematics. 	
	<p style="text-align: center;">Meaning</p> <p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Knowing about place value and operations with whole numbers will help you understand how to add, subtract, multiply, and divide with decimals. <input type="checkbox"/> You can use what you know about area models and partial quotients to make sense of an algorithm for dividing whole numbers and decimals. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> How do I use place value to add, subtract, multiply, and divide with whole numbers, decimals and fractions?

<p>and volume.</p>	<ul style="list-style-type: none"> ❑ Division of fractions and mixed numbers can be thought of as forming equal groups to find the number or size of the groups. Knowing about the relationship between multiplication and division will help you divide with fractions. 	
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ❑ I understand appropriate processes to compute fluently with multi-digit numbers. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ❑ I can apply and extend previous understandings of multiplication and division to divide fractions by fractions. ❑ I can choose appropriate processes to compute fluently with multi-digit numbers. ❑ I can apply appropriate tools to solve real-world and mathematical problems involving volume with fractional edge lengths. ❑ I can solve real-world and mathematical problems involving division of fractions. ❑ I can compute multi-digit numbers

		<p>using the four arithmetic operations with or without a calculator.</p> <ul style="list-style-type: none"><li data-bbox="1352 305 1745 483">❑ I can find volume with fractional edge lengths by applying formulas and using various strategies.
--	--	---



Course Name Math Course 1

Unit Title Unit 3 Ratio Reasoning: Ratio Concepts and Equivalent Ratios

STAGE 1 | DESIRED RESULTS

Context and relevance for student learning

Standards	Transfer	
<p>CC.2.1: Numbers and Operations CC.2.1.6.D.1 Understand ratio concepts and use ratio reasoning to solve problems.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Develop an understanding of ratio reasoning, including ratio concepts and equivalent ratios, and apply this knowledge to real-world scenarios. 	
	Meaning	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> A ratio is a way to compare two quantities when there are a units of one quantity and b units of the other. <input type="checkbox"/> Equivalent ratios make the same comparison. You can use what you know about multiples and factors to find equivalent ratios. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> How can I compare and reason using ratios?

	<ul style="list-style-type: none"> <input type="checkbox"/> Reasoning about equivalent ratios can help you find the amount of one quantity when you know the amount of the other quantity. 	
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> I understand ratio concepts. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> I can use ratio reasoning to solve problems. <input type="checkbox"/> I can represent and/or solve real world and mathematical problems using rates, ratios, and/or percents.



Course Name Math Course 1

Unit Title Unit 4 Ratio Reasoning: Unit Rates and Percent

STAGE 1 | DESIRED RESULTS

Context and relevance for student learning

Standards	Transfer	
<p>CC.2.1: Numbers and Operations CC.2.1.6.D.1 Understand ratio concepts and use ratio reasoning to solve problems.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Develop a solid understanding of unit rates and percentages and apply this knowledge to real-world situations such as budgeting (finances, travel, groceries). 	
	Meaning	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> A rate is a ratio that tells how many units of one quantity there for every 1 unit of a second quantity. Knowing about rates can help you solve problems involving equivalent ratios. <input type="checkbox"/> You can use a unit rate to find the amount of one quantity in a ratio 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> How can I use a rate/unit rate to solve problems in ratio relationships (specifically percents)?

	<p>relationship when you know the amount of the other quantity.</p> <ul style="list-style-type: none"> ❑ A percent is a way of expressing a rate per 100. You can use what you know about ratios and rates to solve problems about percents. 	
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ❑ I understand ratio concepts. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ❑ I can use ratio reasoning to solve problems.



Course Name Math Course 1

Unit Title Unit 5 Ratio Reasoning: Algebraic Thinking

STAGE 1 | DESIRED RESULTS

Context and relevance for student learning

Standards	Transfer	
<p>CC.2.2: Algebraic Concepts CC.2.2.6.B.1 Apply and extend previous understandings of arithmetic to algebraic expressions.</p> <p>CC.2.2.6.B.2 Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.</p> <p>CC.2.2.6.B.3 Represent and analyze quantitative relationships between dependent and independent variables.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Develop an understanding of equivalent expressions and equations involving variables and apply this knowledge to real-world scenarios. 	
	Meaning	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Writing expressions in different, but equivalent, forms can help you make sense of problems. <input type="checkbox"/> You can perform the same operation on both sides of an equation and the two sides will still be equal. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> How can I write and use equivalent expressions to understand and solve equations/inequalities?

	<ul style="list-style-type: none"> ❑ Solving an equation means finding a value of the variable that makes the equation true. You can use what you know about inverse operations to help you solve equations. ❑ Knowing about patterns can help you describe how two quantities vary with each other. 	
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ❑ I understand the process of solving a one-variable equation or inequality. ❑ I understand numerical and algebraic expressions. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ❑ I can apply and extend previous understandings of arithmetic to algebraic expressions. ❑ I can understand the process of solving a one-variable equation or inequality and apply it to real-world and mathematical problems. ❑ I can represent and analyze quantitative relationships between dependent and independent variables.

		<ul style="list-style-type: none">❑ I can write and evaluate numerical and algebraic expressions.❑ I can interpret and solve one-variable equations and inequalities.❑ I can create, solve, and interpret one variable equations or inequalities in real-world and mathematical problems.❑ I can use variables to represent two quantities in a real-world problem that change in relationship to one another.
--	--	---



Course Name Math Course 1

Unit Title Unit 6 Positive and Negative Numbers

STAGE 1 | DESIRED RESULTS

Context and relevance for student learning

Standards	Transfer	
<p>CC.2.1: Numbers and Operations CC.2.1.6.E.4 Apply and extend previous understandings of numbers to the system of rational numbers.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> ❑ Develop an understanding of positive and negative numbers and apply this knowledge to real-world scenarios such as debt management, temperature tracking and elevation and geographical data. 	
<p>CC.2.2: Algebraic Concepts CC.2.2.6.B.2 Understand the process of solving a one-variable equation or inequality and apply to real-world and mathematical problems.</p> <p>CC.2.3: Geometry CC.2.3.6.A.1 Apply appropriate tools to solve real-world and</p>	<p>Meaning</p> <p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> ❑ You can use positive and negative numbers to describe quantities with opposite values. Every positive and negative number has both a distance and a direction from 0. A number's distance from 0 is called its absolute value. 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> ❑ How can I use positive and negative numbers to understand the world around me?

<p>mathematical problems involving area, surface area, and volume.</p>	<ul style="list-style-type: none"> ❑ You can extend the number line to show and compare positive and negative rational numbers or their absolute values. ❑ An inequality with a variable can have infinitely many solutions. You can show the solutions on a number line. ❑ You can extend the coordinate plane to plot points with negative coordinates. Knowing about absolute value can help you find the distance between points. 	
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ❑ I understand that positive and negative numbers are used together to describe quantities having opposite directions or values and locations on the number line and coordinate plane. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ❑ I can apply and extend previous understandings of numbers to the system of rational numbers. ❑ I understand the process of solving a one-variable equation or inequality and apply it to real-world

	<ul style="list-style-type: none">❑ I understand the ordering and absolute value of rational numbers.	<p>and mathematical problems.</p> <ul style="list-style-type: none">❑ I can apply appropriate tools to solve real-world and mathematical problems involving area, surface area, and volume.❑ I can interpret and solve one-variable equations and inequalities.❑ I can create, solve, and interpret one variable equations or inequalities in real-world and mathematical problems.❑ I can find area, surface area, and volume by applying formulas and using various strategies.
--	---	--



Course Name Math Course 1

Unit Title Unit 7 Statistical Thinking: Data Distributions and Measures of Center and Variability

STAGE 1 | DESIRED RESULTS

Context and relevance for student learning

Standards	Transfer	
<p>CC.2.4: Measurement, Data and Probability CC.2.4.6.B.1 Demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions.</p>	<p><i>Students will be able to independently use their learning to...</i></p> <ul style="list-style-type: none"> ❑ Develop a comprehensive understanding of statistical thinking to encourage effective data analysis, informed decision-making, and interpretation of information across real-world scenarios such as healthcare analysis and scientific research. 	
	Meaning	
	<p>UNDERSTANDINGS <i>Students will understand that...</i></p> <ul style="list-style-type: none"> ❑ Understanding data distributions can help you answer statistical questions. The data you collect to answer a statistical question are likely to vary. ❑ You can use what you know about the number line to organize a set of data. Graphs 	<p>ESSENTIAL QUESTIONS <i>Students will keep considering...</i></p> <ul style="list-style-type: none"> ❑ How can I collect, analyze and describe data to summarize and display relationships and trends?

	<p>based on the number line can help you make sense of the data.</p> <ul style="list-style-type: none"> ❑ You can summarize a data set by using a single number to describe a typical value and a single number to describe how spread out the data are. ❑ The measures you use to describe a data set depend on the statistical question you are trying to answer and on the characteristics of the data set. 	
Acquisition		
	<p><i>Students will know...</i></p> <ul style="list-style-type: none"> ❑ I understand statistical thinking. 	<p><i>Students will be skilled at...</i></p> <ul style="list-style-type: none"> ❑ I can demonstrate an understanding of statistical variability by displaying, analyzing, and summarizing distributions. ❑ I can demonstrate understanding of statistical variability by summarizing and describing distributions. ❑ I can display, analyze, and summarize numerical data sets in relation to their context.

