

**Utah Core State Standards Learning Trajectories Kindergarten through Sixth Grade**

<b>Domains</b>	<b>Kindergarten</b>	<b>First</b>	<b>Second</b>	<b>Third</b>	<b>Fourth</b>	<b>Fifth</b>	<b>Domains2</b>	<b>Sixth</b>
<b>Counting and Cardinality</b>	Know number names and the count sequence.	Extend the counting sequence (in Number and Operations in Base Ten).					<b>Ratios and Proportional Relationships</b>	Understand ratio concepts and use ratio reasoning to solve problems.
	Count to tell the number of objects.							
	Compare numbers.							
<b>Operations and Algebraic Thinking (all standards are algebra in progressively complex forms)</b>		Represent and solve problems involving addition and subtraction.	Represent and solve problems involving addition and subtraction.	Represent and solve problems involving multiplication and division.	Use the four operations with whole numbers to solve problems.	Write and interpret numerical expressions.	<b>Expressions and Equations (Algebra)</b>	Apply and extend previous understandings of arithmetic to algebraic expressions.
	Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.	Understand and apply properties of operations and the relationship between addition and subtraction.		Understand properties of multiplication and the relationship between multiplication and division.				
		Add and subtract within 20	Add and subtract within 20	Multiply and divide within 100.				
		Work with addition and subtraction equations.	Work with equal groups of objects to gain foundations for multiplication.	Solve problems involving the four operations and identify and explain patterns in arithmetic.	Use the four operations with whole numbers to solve problems. Generate and analyze patterns.	Analyze patterns and relationships.		
								Represent and analyze quantitative relationships between dependent and independent variables.

					Gain familiarity with factors and multiples.		NS ...find common factors and multiples.
<b>Number and Operations in Base Ten</b>	Work with numbers 11-19 to gain foundations for place value.	Understand place value.	Understand place value		Generalize place value understanding for multi-digit numbers.	Understand the place value system.	<b>The Number System</b> Apply and extend previous understandings of numbers to the system of rational numbers.
		Use place value understanding and properties of operations to add and subtract.	Use place value understanding and properties of operations to add and subtract	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Use place value understanding and properties of operations to perform multi-digit arithmetic.	Perform operations with multi-digit whole numbers and with decimals to hundredths.	Compute fluently with multi-digit numbers and find common factors and multiples.
<b>Number and Operations - Fractions</b>				Develop understanding of fractions as numbers.	Extend understanding of fraction equivalence and ordering.	Use equivalent fractions as a strategy to add and subtract fractions.	Apply and extend previous understandings of numbers to the system of rational numbers.
					Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.	Apply and extend previous understandings of multiplication and division to multiply and divide fractions.	Apply and extend previous understandings of multiplication and division to divide fractions by fractions
					Understand decimal notation for fractions and compare decimal fractions.		Apply and extend previous understandings of numbers to the system of rational numbers.
<b>Measurement and Data</b>	Describe and compare measureable attributes.	Measure lengths indirectly and by iterating length units	Measure and estimate lengths in standard units	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.	Convert like units within a given measurement system.	

		Relate addition and subtraction to length	Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.				Solve real world and mathematical problems involving area, surface area, and volume.
<b>Measurement and Data</b>	Tell and write time.	Work with time and money	Solve problems involving measurement and estimation of intervals of time...				
	Classify objects and count the number of objects in categories.	Represent and interpret data.	Represent and interpret data.	Represent and interpret data.	Represent and interpret data	Represent and interpret data.	<b>Statistics and Probability</b> Develop understanding of statistical variability.
							Summarize and describe distributions.
			Geometric measurement: understand concepts of area and relate area to multiplication and addition			Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.	<b>Geometry</b> Solve real world and mathematical problems involving area, surface area, and volume.
			Geometric measurement: understand perimeter as an attribute of plane figures and distinguish between linear and area measures.				
					Geometric measurement: Understand concepts of angles and measure angles.		

**Geometry**

Graph points on the coordinate plane to solve real world and mathematical problems.

Identify and describe shapes.

Reason with shapes and their attributes

Reason with shapes and their attributes.

Reason with shapes and their attributes.

Classify two-dimensional figures into categories based on their properties.

Analyze, compare, create, and compose shapes.

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.