

Mathematics Core Standards –Grade Overviews in Continuum Form

Grade K Overview	Grade 1 Overview	Grade 2 Overview
<p>Counting and Cardinality</p> <ul style="list-style-type: none"> • Know number names and the count sequence. • Count to tell the number of objects. • Compare numbers. 		
<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Represent and solve problems involving addition and subtraction. • Understand and apply properties of operations and the relationship between addition and subtraction. • Add and subtract within 20. • Work with addition and subtraction equations 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Represent and solve problems involving addition and subtraction. • Add and subtract within 20. • Work with equal groups of objects to gain foundations for multiplication.
<p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Work with numbers 11–19 to gain foundations for place value. 	<p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Extend the counting sequence. • Understand place value. • Use place value understanding and properties of operations to add and subtract. 	<p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Understand place value. • Use place value understanding and properties of operations to add and subtract.
<p>Measurement and Data</p> <ul style="list-style-type: none"> • Describe and compare measurable attributes. • Classify objects and count the number of objects in categories 	<p>Measurement and Data</p> <ul style="list-style-type: none"> • Measure lengths indirectly and by iterating length units. • Tell and write time. • Represent and interpret data. 	<p>Measurement and Data</p> <ul style="list-style-type: none"> • Measure and estimate lengths in standard units. • Relate addition and subtraction to length. • Work with time and money. • Represent and interpret data.
<p>Geometry</p> <ul style="list-style-type: none"> • Identify and describe shapes. • Analyze, compare, create, and compose shapes. 	<p>Geometry</p> <ul style="list-style-type: none"> • Reason with shapes and their attributes 	<p>Geometry</p> <ul style="list-style-type: none"> • Reason with shapes and their attributes

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Grade 3 Overview	Grade 4 Overview	Grade 5 Overview
<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Represent and solve problems involving multiplication and division. • Understand properties of multiplication and the relationship between multiplication and division. • Multiply and divide within 100. • Solve problems involving the four operations, and identify and explain patterns in arithmetic. 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Use the four operations with whole numbers to solve problems. • Gain familiarity with factors and multiples. • Generate and analyze patterns. 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Write and interpret numerical expressions. • analyze patterns and relationships.
<p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Use place value understanding and properties of operations to perform multi-digit arithmetic. 	<p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Generalize place value understanding for multi-digit whole numbers. • Use place value understanding and properties of operations to perform multi-digit arithmetic. 	<p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Understand the place value system. • Perform operations with multi-digit whole numbers and with decimals to hundredths.
<p>Number and Operations—Fractions</p> <ul style="list-style-type: none"> • Develop understanding of fractions as numbers 	<p>Number and Operations—Fractions</p> <ul style="list-style-type: none"> • Extend understanding of fraction equivalence and ordering. • Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. • Understand decimal notation for fractions, and compare decimal fractions 	<p>Number and Operations—Fractions</p> <ul style="list-style-type: none"> • Use equivalent fractions as a strategy to add and subtract fractions. • Apply and extend previous understandings of multiplication and division to multiply and divide fractions.
<p>Measurement and Data</p> <ul style="list-style-type: none"> • Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. • Represent and interpret data. • Geometric measurement: understand concepts of area and relate area to multiplication and to addition. • Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures. 	<p>Measurement and Data</p> <ul style="list-style-type: none"> • Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. • Represent and interpret data. • Geometric measurement: understand concepts of angle and measure angles 	<p>Measurement and Data</p> <ul style="list-style-type: none"> • Convert like measurement units within a given measurement system. • Represent and interpret data. • Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.
<p>Geometry</p> <ul style="list-style-type: none"> • Reason with shapes and their attributes. 	<p>Geometry</p> <ul style="list-style-type: none"> • Draw and identify lines and angles, and classify shapes by properties of their lines and angles. 	<p>Geometry</p> <ul style="list-style-type: none"> • Graph points on the coordinate plane to solve real-world and mathematical problems. • Classify two-dimensional figures into categories based on their properties.

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Grade 6 Overview	Grade 7 Overview	Grade 8 Overview
<p>Ratios and Proportional relationships</p> <ul style="list-style-type: none"> Understand ratio concepts and use ratio reasoning to solve problems. 	<p>Ratios and Proportional relationships</p> <ul style="list-style-type: none"> Analyze proportional relationships and use them to solve real-world and mathematical problems 	
<p>The Number System</p> <ul style="list-style-type: none"> Apply and extend previous understandings of multiplication and division to divide fractions by fractions. Compute fluently with multi-digit numbers and find common factors and multiples. Apply and extend previous understandings of numbers to the system of rational numbers. 	<p>The Number System</p> <ul style="list-style-type: none"> Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. 	<p>The Number System</p> <ul style="list-style-type: none"> Know that there are numbers that are not rational, and approximate them by rational numbers
<p>Expressions and Equations</p> <ul style="list-style-type: none"> Apply and extend previous understandings of arithmetic to algebraic expressions. Reason about and solve one-variable equations and inequalities. Represent and analyze quantitative relationships between dependent and independent variables 	<p>Expressions and Equations</p> <ul style="list-style-type: none"> Use properties of operations to generate equivalent expressions. Solve real-life and mathematical problems using numerical and algebraic expressions and equations. 	<p>Expressions and Equations</p> <ul style="list-style-type: none"> Work with radicals and integer exponents. Understand the connections between proportional relationships, lines, and linear equations. Analyze and solve linear equations and pairs of simultaneous linear equations
		<p>Functions</p> <ul style="list-style-type: none"> Define, evaluate, and compare functions. Use functions to model relationships between quantities.
<p>Geometry</p> <ul style="list-style-type: none"> Solve real-world and mathematical problems involving area, surface area, and volume. 	<p>Geometry</p> <ul style="list-style-type: none"> Draw, construct and describe geometrical figures and describe the relationships between them. Solve real-life and mathematical problems involving angle measure, area, surface area, and volume. 	<p>Geometry</p> <ul style="list-style-type: none"> Understand congruence and similarity using physical models, transparencies, or geometry software. Understand and apply the Pythagorean theorem. Solve real-world and mathematical problems involving volume of cylinders, cones and spheres
<p>Statistics and Probability</p> <ul style="list-style-type: none"> Develop understanding of statistical variability. Summarize and describe distributions. 	<p>Statistics and Probability</p> <ul style="list-style-type: none"> Use random sampling to draw inferences about a population. Draw informal comparative inferences about two populations. Investigate chance processes and develop, use, and evaluate probability models. 	<p>Statistics and Probability</p> <ul style="list-style-type: none"> Investigate patterns of association in bivariate data