Overview Focus of Mathematical Content Standards Progression K-8

K	1	2	3	4	5	6	7	8
• Know number names and the count sequence. • Count to tell the number of objects. • Compare numbers. • Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. • Identify and continue patterns. • Work with numbers 11–19 to gain foundations for place value. • Describe and compare measurable attributes. • Classify objects and count the number of objects in categories. • Work with time and money. • Identify and describe shapes. • Analyze, compare, create, and compose shapes.	• Know ordinal names and counting flexibility. • Count to tell the number of objects. • Compare numbers. • Represent and solve problems involving addition and subtraction. • Understand and apply properties of operations and the relationship between addition and subtraction. • Add and subtract up to 20. • Work with addition and subtraction equations. • Identify and continue patterns. • Extend the counting sequence. • Understand place value. • Use place value understanding and properties of operations to add and subtract. • Measure lengths indirectly and by iterating length units. • Work with time and money.	• Represent and solve problems involving addition and subtraction. • Add and subtract up to 20. • Work with equal groups of objects to gain foundations for multiplication. • Identify and continue patterns. • Understand place value. • Use place value understanding and properties of operations to add and subtract. • Measure and estimate lengths in standard units. • Relate addition and subtraction to length. • Work with time and money. • Represent and interpret data. • Reason with shapes and their attributes.	• Represent and solve problems involving multiplication and division. • Understand properties of multiplication and the relationship between multiplication and division. • Multiply and divide up to 100. • Solve problems involving the four operations, and identify and explain patterns in arithmetic. • Use place value understanding and properties of operations to perform multi-digit arithmetic. • Develop understanding of fractions as numbers. •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. • Reason with shapes and their attributes.	• Use the four operations with whole numbers to solve problems. • Gain familiarity with factors and multiples. • Generate and analyze patterns. • Generalize place value understanding for multi-digit whole numbers. • Use place value understanding and properties of operations to perform multi-digit arithmetic. • 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. • Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit and involving time. • Represent and interpret data. • Geometric measurement: understand concepts of angle and measure angles. • Draw and identify lines and angles, and classify shapes by properties of their lines and angles.	• Write and interpret numerical expressions. • Analyze patterns and relationships. • Understand the place value system. • Perform operations with multi-digit whole numbers and with decimals to hundredths. • 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. • Convert like measurement units within a given measurement system and solve problems involving time. • Represent and interpret data. • Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. • Graph points on the coordinate plane to solve real-world and mathematical problems. • Classify two-dimensional figures into categories based on their properties.	• Understand ratio concepts and use ratio reasoning to solve problems. • 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. • 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. • Solve real-world and mathematical problems involving area, surface area, and volume. • Develop understanding of statistical variability. • Summarize and describe distributions.	• Analyze proportional relationships and use them to solve real-world and mathematical problems. • Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers. • Use properties of operations to generate equivalent expressions. • Solve real-life and mathematical problems using numerical and algebraic expressions and equations. • 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. • 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.	• Know that there are numbers that are not rational, and approximate them by rational numbers. • 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. • 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. • Investigate patterns of association in bivariate data. • Define, evaluate, and compare functions. • Use functions to model relationships between quantities.