Mathematics Essential Standards K-5

Kinder	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade
K.2(B) - Read, write and represent whole numbers 0 to at least 20 with and without objects or pictures	**1.2(C)** - Use objects, pictures, and expanded and standard forms to represent numbers up to 120	**2.2(B)** - Use standard, word and expanded form to represent numbers up to 1,200	**3.2(A)** - Compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate	**4.2(B)** - Represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals.	**5.3(K)** - Add and subtract positive rational numbers fluently
K.2(H) - Use comparative language to describe two numbers up to 20 presented as written numerals	**1.2(G)** - Represent the comparison of two numbers to 100 using the symbols >, <, or =	**2.2(D)** - Use place value to compare and order whole numbers up to 1,200 using comparative language, numbers	**3.2(D)** - Compare and order whole numbers up to 100,000 and represent comparisons using the	**4.2(G)** - Relate decimals to fractions that name tenths and hundredths	**5.3(E)** - Solve for products of decimals to the hundredths, including situations involving money, using strategies

		and symbols (<, >, =)	symbols >, <, or =		based on place-value understandings, properties of operations, and the relationship to the multiplication of whole numbers
K.2(I) - Compose and decompose numbers up to 10 with objects and pictures	**1.5(A)** - Recite numbers forward and backward from any given number between 1 and 120	**2.3(B)** - Explain that the more fractional parts used to make a whole, the smaller the part; and the fewer the fractional parts, the larger the part	**3.3(H)** - Compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models	**4.3(D)** - Compare two fractions with different numerators and different denominators and represent the comparison using the symbols >, =, or <	**5.4(B)** - Represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity
K.5(A) - Recite numbers up to at least 100 by ones and tens beginning with any given number	**1.3(E)** - Explain strategies used to solve addition and subtraction problems up to 20 using spoken words, objects, pictorial models, and number sentences	**2.4(A)** - Recall basic facts to add and subtract within 20 with automaticity	**3.4(A)** - Solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the	**4.5(D)** - Solve problems related to perimeter and area of rectangles where dimensions are whole numbers	**5.4(C)** - Generate a numerical pattern when given a rule in the form y = ax or y = x + a and graph

			relationship between addition and subtraction		
K.3(B) - Solve word problems using objects and drawings to find sums up to 10 and differences within 10	**1.5(D)** - Represent word problems involving addition and subtraction of whole numbers up to 20 using concrete and pictorial models and number sentences	**2.4(C)** - Solve one-step and multi-step word problems involving addition and subtraction within 1,000 using a variety of strategies based on place value, including algorithms	**3.5(A)** - Represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations	**4.9(A)** - Represent data on a frequency table, dot plot, or stem-and-leaf plot marked with whole numbers and fractions	**5.4(F)** - Simplify numerical expressions that do not involve exponents, including up to two levels of grouping
K.6(E) - Classify and sort a variety of regular and irregular two and three-dimensional figure regardless of orientation or size	**1.6G** - Partition two-dimensional figures into two and four fair shares or equal parts and describe the parts using words	**2.4D** - Generate and solve problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers within 1,000	**3.6C** - Determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row	**4.4H** - Solve with fluency one- and two-step problems involving multiplication and division, including interpreting remainders.	**5.4H** - Represent and solve problems related to perimeter and/or area and related to volume.
K.8(B) - Use data to create real object and picture graphs	**1.6(D/E)** - Identify two-dimensional shapes/three-dimensional shapes including circles, triangles,	**2.5(A)** - Determine the value of a collection of coins up to one dollar	**3.4(K)** - Solve one-step and two-step problems involving multiplication and	**4.3(E)** - Represent and solve addition and subtraction of fractions with equal denominators using objects and pictorial	**5.8(C)** - Graph in the first quadrant of the coordinate plane ordered pairs of numbers arising from mathematical

	rectangles, and squares, as special rectangles, rhombuses, and hexagons, and solids, including spheres, cones, cylinders, rectangular prisms (including cubes), and triangular prisms, and describe their attributes using formal geometric language.		division within 100 using strategies based on objects; pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts	models that build to the number line and properties of operations.	and real-world problems, including those generated by number patterns or found in an input-output table
K.8(C) - Draw conclusions from real-objects and picture graphs	**1.7(D)** - Describe a length to the nearest whole unit using a number and a unit	**2.8(B)** - Classify and sort three-dimensional solids, including spheres, cones, cylinders, rectangular prisms (including cubes as special rectangular prisms), and triangular prisms, based on attributes using formal geometric language	**3.5(B)** - Represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations	**4.5(A) -** Represent multi-step problems involving the four operations with whole numbers using strip diagrams and equations with a letter standing for the unknown quantity.	**5.9(C)** - Solve one- and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot
K.4(A) - Identify U.S. coins by name, including pennies, nickles,	**1.7(E)** - Tell time to the hour and half hour using analog and digital clocks	**2.8(C)** - Classify and sort polygons with 12 or fewer sides according to	**3.5(E)** - Represent real-world relationships	**4.6(D)** - Classify two-dimensional figures based on the presence or	**5.3(L)** - Divide whole numbers by unit fractions and unit fractions by

dimes and quarters		attributes, including identifying the number of sides and number of vertices	using number pairs in a table and verbal descriptions	absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.	whole numbers
	1.8(B) - Use data to create picture and bar-type graphs	**2.9(E)** - Determine a solution to a problem involving length, including estimating lengths	**3.6(A)** - Classify and sort two- and three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language	**4.8(C)** - Solve problems that deal with measurements of length, intervals of time, liquid volumes, mass, and money using addition, subtraction, multiplication, or division as appropriate.	**5.3(G)** - Solve for quotients of decimals to the hundredths, up to four-digit dividends and two-digit whole number divisors, using strategies and algorithms, including the standard algorithm
	1.8(C) - Draw conclusions and generate and answer questions using information from picture and bar-type graphs	**2.9(G)** - Read and write time to the nearest one-minute increment using analog and digital clocks and distinguish between a.m. and p.m.	**3.7(B)** - Determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems		
	1.4(C) - Use relationships to count by twos, fives, and tens to determine the	**2.10(C)** - Write and solve one-step word problems involving addition or subtraction	**3.8(A)** - Summarize a data set with multiple categories using		

	value of a collection of pennies, nickels, and/or dimes	using data represented within pictographs and bar graphs with intervals of one	a frequency table, dot plot, pictograph, or bar graph with scaled intervals		