

MATH									
	K	1	2	3	4	5	6	7	8
Numbers and Operation									
Numeracy	Number notation & Place Value	Number notation & Place Value (ones and tens)	Number notation & Place Value (hundreds)	Number notation & Place Value (10,000 place)	Word, standard, & expanded forms up to 1,000,000; Place Value to 1,000,000	Word, standard, & expanded forms up to 1,000,000,000; Place Value to 1,000,000,000	rational numbers on number lines	derived quantities: density, velocity, weighted averages	square root, cube roots, negative integers,
	counting to 100 skip counting by 5's & 10's, patterns	skip counting by 1's, 2's, 5's, 10's to 110, patterns	skip counting by 3's & 4's, patterns	skip counting by 6's, 7's, 8's & 9's; Even and Odd Numbers	Factors and Multiples	Prime factors	exponents	rates, ratios , proportions	
					Composite/Prime Numbers	Prime and composite factorization	scientific notation	irrational, rational numbers	irrational, rational numbers
Add Subtract	Whole numbers; simple sentences	Whole numbers; 2-digit numbers	Whole numbers; 3-digit without regrouping: money	Whole numbers; 2-digit with regrouping: fractions: money	Whole numbers both positive & negative;		Integers	Negative rational numbers	
Multiply Divide			Basic strategies	Arrays, Whole numbers: up to 10 x 10: remainders	3-digit by a 2-digit multiplication; 4-digit by 1-digit division	Whole numbers both positive & negative; decimals; ratios; percents; fractions; 4-digit by 2-digit division with and w/out remainders; powers of 10 to 1,000	Integers -10 through +10	Negative rational numbers	

Problem Solving	Problem Solving	Problem Solving	Problem Solving	Problem Solving	variables; estimation	sums and differences of fractions with unlike denominators; variables; estimation; rounding	Decimal percentage and rational number problems	Operations with integers and derived quantities	decimals, ratios, percents, fractions, variables
Fractions / Decimal / Percent	Halves	Equal Parts	Unit Fractions	Simple Fractions	equivalent; improper; mixed numbers	multiplication and division of fractions and whole number by a fraction; equivalent fractions; improper; mixed numbers	Basic operations with fractions		
					decimals; percents; fractions (unlike denominators); 1/2, 1/4, 1/8, 1/3, 1/6, 1/12	multiply whole numbers by decimals up to two places and repeating decimals	Basic operations with decimals		
				Simple decimal fractions in relation to money	2 decimal places; money; place value; terminating	fractions/decimals as percentages (parts of 100) and vice versa; equivalent ratios	equivalent ratios		
Algebra									
patterns, relations, and functions							Rates, equations	linear functions, equations and slope combination of algebraic expressions	Linear and non-linear functions, quadratic functions, linear inequalities,

algebraic symbols					Variables	Variables	coordinate plane, tables, graphs, linear functions		quadratic functions on coordinate plane
quantitative relations								proportional and linear relationships	
Basic Properties					Commutative; associative; distributive; order of operations	Positive and negative numbers; unknowns in equations with variables in fractions and decimals		Basic properties of real numbers: additive and multiplicative identities and inverses, commutativity, associativity, and distributive property of multiplication over addition	common formulas
Problem Solving							Algebraic Expressions	Inversely Proportional Relationships	Simple Quadratic Equations
Measurement									
units, systems and processes of measure	length, weight, capacity, comparisons, landmark time	non-standard - units - length, time, money	standard and metric - length, time, money, temperature	standard and metric - length, weight, temperature, time, money	conversions of temperature, length, weight, money, time	conversions of length, time, weight, area, and volume	conversions of temperature, length, time, weight		
tools and formulas	clocks and calendars		area	area, perimeter	area, perimeter; straight edge; compass	area, perimeter; volume; abbreviations for cubic measurements; parallelograms $A=bh$; triangle $A=1/2bh$; protractor	volume and surface area of solids and faces		

Problem Solving	Problem Solving	Problem Solving	Problem Solving	Problem Solving	estimate; two dimensional figures	estimate	Problem Solving		
Geometry									
Shapes / Properties	shapes in the environment and their attributes	two-dimensional and three-dimensional shapes (color and shape)	two-dimensional and three-dimensional shapes	two-dimensional shapes, three-dimensional solids, components - angles, sides, vertices, line segment	geometric shapes, components (triangles and 3-dimensional)	parallelograms; triangles; rectangles; quadrilaterals, rhombuses, trapezoids	Constructions of geometric shapes	Constructions of geometric shapes, concepts of similar polygons	geometric shapes, components
lines and angles		length with non-standard units, length comparisons	curves and straight lines	points, line segments, lines and distance	line characteristics; angles (acute, right, obtuse, straight, supplementary, complementary, vertical)	interior and unknown angles of quadrilateral, triangles, parallelograms, rectangles, rhombuses, trapezoids	Basic properties of lines, angles, triangles	sides, angles, triangles	coordinate planes,
Dimensions / Volume				faces, surfaces, bases, edges, vertices	faces, edges, and vertices of cubes, rectangular prisms, and pyramids		perpendicular lines, line segments, angle bisectors		3-D drawings, Pythagorean theorem, complex shapes, surface area,
Transformations			slide, turn, flip				reflections, rotations, translations, and congruence of polygons	reflections, rotations, translations	reflections, rotations, translations and dilations

						measurement of angles; 90, 180, 270, and 360 degrees; unknown angles		concepts of similar polygons and scale drawings	area and volume of triangles, quadrilaterals, and circles
problem solving	problem solving	problem solving	problem solving	problem solving	symmetry and transformation		problem solving		
Data Analysis & Probability									
Data Analysis		pictograph	scale representation	horizontal and vertical bar graphs	Tables and bar graphs	Line, distance-time graphs		median, quartiles, interquartile range, relative frequencies, and cumulative frequencies	measures of central tendency, procedures for data collection and display
Probability							Concepts and simple probability experiments		Simple and compound events, relative frequencies, independent and dependent events,
Graphs		pictograph	pictographs	bar graphs	bar graphs with two sets of data	two and three line graphs; graphs include axis labels and scale		Representations of circle graph, stem and leaf plots, histograms, box-and-whisker plots, and scatter plots	
Conclusions based on data		pictograph	scale representation	comparisons of bar graphs	mean, median, and mode	mean and mode; multi-step problems		Interpretations of graphs	conclusions based on data

