

Vertical Articulation Technical Assistance Document - Kindergarten Through Grade 3

	Kindergarten	Grade 1	Grade 2	Grade 3
Counting/Cardinality/Place Value	K.1 given two sets ID/describe one set as having more/fewer/same number of members/1-1	1.1 a) count/write numbers to 100; b) group up to 100 objects into tens/ones and write numeral - place value	2.1 a) read/write/ID place value in 3-digit numeral; b) round 2-digit numbers to nearest ten; c) compare two whole numbers 0-999 w/symbols/words	3.1 a) read/write 6-digit numerals, ID place value/value of each digit; b) round whole numbers 9,999 or less to nearest 10/100/1000; c) compare two whole numbers 0 - 9,999 w/ symbols/words
	K.2 a) tell how many in a set by counting orally; b) write numeral; c) select numeral	1.4 a) select order of magnitude from three quantities; b) explain reasonableness		
	K.4 a) count to 100 and from 10; b) ID one more/less than a number; c) count by 5/10 to 100	1.2 count by 1/2/5/10 to 100 and back by 1 from 30	2.4 a) count by 2/5/10 to 100, starting at multiples of 2/5/10; b) count backward by 10 from 100; c) recognize even/odd numbers	
	K.3 ordinal numbers 1st - 10th		2.2 a) ID ordinal positions w/numbers 1st - 20th; b) write ordinal numbers	
Modeling/Comparing/Ordering	K.5 ID halves and fourths	1.3 ID/write halves, thirds, fourths	2.3 a) ID b) write c) compare halves, thirds, fourths, sixths, eighths, tenths	3.3 a) name/write fractions rep by model; b) model/write fraction's names; c) compare fractions w/like/unlike denominators
	K.6 model add/sub whole numbers up to 10		2.9 recognize/describe related facts and inverse relationship between add/sub	3.6 represent mult/div using area/set/number line models, create/solve problems involving mult of two whole numbers 99 or less and 5 or less
Estimation			2.6 given two whole numbers whose sum is 99 or less, a) estimate the sum	3.4 estimate/solve single-step and multistep problems involving sum/diff of two whole numbers 9,999 or less
		1.4 a) select order of magnitude from three quantities; b) explain reasonableness	2.7 given two whole numbers each 99 or less, a) estimate the difference	
Operations/Recall			2.6 given two whole numbers whose sum is 99 or less, b) find the sum	3.7 add/sub proper fractions w/ like denominators 12 or less
			2.7 given two whole numbers each 99 or less, b) find the difference	3.2 recognize/use inverse relationships between add/sub and mult/div to complete fact sentences/solve problems
		1.5 recall add/sub facts w/ sums to 18 or less	2.5 recall add/sub facts w/sums to 20 or less	3.5 recall mult/div facts through twelves table
Solve Pract Probs		1.6 create/solve one-step story/picture problems using add/sub facts w/ sums to 18 or less	2.8 create/solve one-/two-step add/sub problems w/ data from tables and picture/bar graphs	3.4 estimate/solve single-step and multistep problems involving sum/diff of two whole numbers 9,999 or less
Alg Patt/Seq	K.16 ID/describe/extend repeating patterns	1.17 recognize/describe/extend/create growing/repeating patterns	2.20 ID/create/extend patterns	3.19 recognize/describe/extend patterns using numbers/tables/ pictures

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Properties				3.20 a) identity/commutative properties for add/mult; b) ID examples of identity/commutative properties for add/mult
Equations and Inequalities		1.18 demonstrate equality using equal sign	2.22 demonstrate understanding of equality = and \neq	
			2.21 solve problems by completing numerical sentences involving basic facts	
Probability			2.18 predict outcomes if an experiment is repeated	3.18 investigate/describe probability as chance/list possible results
Collect/Represent Data	K.13 gather data by counting/tallying	1.14 investigate/ID/describe forms of data collection using tables/picture graphs/object graphs	2.17 construct picture/picto/bar graphs	3.17 a) collect/organize data; b) construct line plot/picture graph/bar graph; c) read/interpret/analyze data from line plot/picture graph/bar graph
	K.14 display data in object graphs/picture graphs/tables and answer questions	1.15 interpret information displayed in a picture/object graph	2.19 analyze data in picture/picto/bar graphs	
Measurement Apps - Geom Figures	K.8 ID instruments to measure length/weight	1.9 use nonstandard units to measure length/weight/mass/volume	2.11 a) estimate and measure length to nearest cm/in; b) weight/mass; c) liquid volume	3.9 a) estimate/use U.S. Cust/metric units to measure length; b) liquid volume; c) weight/mass; d) area/perimeter
	K.10 compare two objects/events w/ nonstandard units - length/height/weight	1.10 a) compare volumes of two containers; b) weight/mass of two objects		3.10 a) measure distance around a polygon to determine perimeter; b) count number of square units to cover to determine area
Plane and Solid Figures	K.11 a) ID/describe/trace plane figures; b) compare size/shape	1.13 construct/model/describe objects as geometric shapes	2.15 a) draw line of symmetry in a figure; b) ID/create figures w/ one line of symmetry	3.15 ID/draw representations of points/line segments/rays/angles/lines
	K.12 describe location of objects relative to others/ID representations of plane figures	1.12 ID/trace/describe/sort plane figures according to number of sides/vertices/angles	2.16 ID/describe/compare/contrast plane and solid figures	3.14 ID/describe/compare/contrast characteristics of plane/solid figures
	K.15 sort/classify objects by attributes	1.16 sort/classify objects by color/size/shape/thickness		3.16 ID/describe congruent/ nongongruent plane figures
Measurement - Money/Time/ Temperature	K.7 recognize penny/nickel/dime/quarter, determine value of collection of coins w/ total value of 10 cents or less	1.7 a) ID number of pennies equiv to nickel/dime/ quarter; b) determine value of collection of coins w/ value of 100 cents or less	2.10 a) count/compare collection of coins w/ value of \$2.00 or less; b) use cent/dollar symbol/decimal point	3.8 determine the value of a collection of bills/coins (\$5.00 or less), compare values of bills/coins, make change
	K.9 tell time to hour	1.8 tell time to half-hour	2.12 tell and write time to nearest 5 min	3.11 a) tell time to nearest minute; b) determine elapsed time in 1-hr increments over 12-hour period
	K.8 ID instruments to measure time(clock/calendar)/temperature	1.11 use calendar language appropriately	2.13 a)determine past/future days of the week; b) ID days/dates on calendar	3.12 ID equiv periods of time
	K.10 compare two objects/events w/ nonstandard units - temperature		2.14 read temperature on thermometer in C or F to nearest 10 degrees	3.13 read temperature to nearest degree in C and F