Second Grade Math Pacing Guide

ES = Essential Skill

* = Computation & Estimation units that were extended for catch up growth

Noting the 2016 SOLs - 12 additional days were added to all

Computation & Estimation Standards

Strands

N&NS = Number & Number Sense C&E = Computation & Estimation M&G = Measurement & Geometry P&S = Probability & Statistics

Strand	SOL	Envision Unit	Standards and Essential Skills (ES = Essential Skill)	Time
			The student will	*To be
พ&พร	2.2		a) count forward by twos, fives, and tens to 120, starting at various multiples of 2, 5 and 10 using	practiced
Nans			manipulatives, hundred chart, mental math, a calculator, and/or paper & pencil	throughout
			b) count backward by tens from 120	the year
			The student will	
			a) recognize and use the relationships between addition and subtraction to solve single-step practical	
			problems, with whole numbers to 20; and	
			ES1. Recognize and use the relationship between addition and subtraction to solve single-step practical problems, with whole numbers to 20. (a)	
			ES2. Determine the missing number in an equation (number sentence) (e.g., 3 + = 5 or + 2 = 5; 5 - = 3 or	
			5 - 2 = 0, (a)	
			b) demonstrate fluency with addition and subtraction within 20.	
			The student will demonstrate an understanding of equality through the use of the equal symbol and the use	
	2.5	Unit 2	of the not equal symbol.	
C&E	&	Addition	ES1. Identify the equal symbol (=) as the symbol used to indicate that the values on either side are equal.	16 days*
	2.17	Strategies	ES2. Identify the not equal symbol (\neq) as the symbol used to indicate that two values on either side are not equal.	
			ES3. Identify values and expressions that are equal (e.g., $8 = 8$, $8 = 4 + 4$).	
			ES4. Identify values and expressions that are not equal (e.g., $8 \neq 9$, $4 + 3 \neq 8$).	
			ES5. Identify and use the appropriate symbol to distinguish between equal and not equal quantities	
			(e.g., 9 + 24 = 10 + 23; 45 − 9 = 46 − 10; 15 + 16 ≠ 31 + 15).	
			ES6. Use a model to represent the relationship of two expressions of equal value and two expressions	
			that are not equivalent.	

			The student will	
			a) recognize and use the relationships between addition and subtraction to solve single-step practical	
			problems, with whole numbers to 20; and	
			replans, with whole numbers to 20. (a)	
			problems, with whole numbers to 20. (d) ES2. Determine the missing number in an equation (number contense) (e.g. $2 \pm = 5$ or $\pm 2 = 5$; $5 = = -$	
			z_{2} and z_{2	
			5 - 2 = 1 (a)	
			b) demonstrate fluency with addition and subtraction within 20.	
	2.5	Unit 3		
C&E	&	Subtraction	The student will demonstrate an understanding of equality through the use of the equal symbol and the use	14 days*
	2.17	Strategies	of the not equal symbol.	
			ES1. Identify the equal symbol (=) as the symbol used to indicate that the values on either side are equal.	
			ES2. Identify the not equal symbol (\neq) as the symbol used to indicate that two values on either side are not	
			equal.	
			ES3. Identify values and expressions that are equal (e.g., $8 = 8$, $8 = 4 + 4$).	
			ES4. Identify values and expressions that are not equal (e.g., $8 \neq 9$, $4 + 3 \neq 8$).	
			ES5. Identify and use the appropriate symbol to distinguish between equal and not equal quantities (e.g., 9 + 24	
			= 10 + 23; 45 - 9 = 46 - 10; 15 + 16 ≠ 31 + 15).	
			ES6. Use a model to represent the relationship of two expressions of equal value and two expressions that are	
			not equivalent.	
			The student will	
			a) recognize and use the relationships between addition and subtraction to solve single-step practical	
			problems, with whole numbers to 20; and	
		Unit 1	ES1. Recognize and use the relationship between addition and subtraction to solve single-step practical	
		Understandin	problems, with whole numbers to 20. (a)	
C&E	2.5	g Addition	ES2. Determine the missing number in an equation (number sentence) (e.g., $3 + = 5$ or $+2 = 5$; $5 - = -2$	11 days*
001		and	3 or	-
		Subtraction	5-2=). (a)	
			ESS. While the related facts for a given addition or subtraction fact (e.g., given $3 + 4 = 7$, write $7 - 4 = 3$ and $7 - 2 = 4$) (a)	
			7 = 3 - 4. (a) b) demonstrate fluency with addition and subtraction within 20	
			FS1 Demonstrate fluency with addition and subtraction within 20.	
		1	Lor. Demonstrate nucley with addition and subtraction within 20. (b)	

N&NS	2.3	Ordinal Numbers	 The student will a) count and identify the ordinal positions first through twentieth, using an ordered set of objects; and ES1. Count an ordered set of objects, using the ordinal number words <i>first</i> through <i>twentieth</i>. (a) ES2. Identify the ordinal positions first through twentieth, using an ordered set of objects presented in lines or rows from left to right; right to left; top to bottom; and bottom to top. (a) b) write the ordinal numbers 1st through 20th. ES1. Write 1st, 2nd, 3rd, through 20th in numerals. (b) 	4 days
N&NS	2.1 2.2c	Unit 4 Place Value: Numbers to 100 + Rounding (Supplement)	The student will a) read, write, and identify the place and value of each digit in a three-digit numeral, with and without models; ES1.Demonstrate understanding of the ten-to-one relationships among ones, tens, and hundreds, using manipulatives. (a) ES2. Write numerals, using a model or pictorial representation (i.e., a picture of base-10 blocks). (a) ES3. Read three-digit numbers when shown a numeral, a model of the number, or a pictorial representation of the number. (a) ES4. Identify and write the place (ones, tens, hundreds) of each digit in a three-digit numeral. (a) ES5. Determine the value of each digit in a three-digit numeral (e.g., in 352, the 5 represents 5 tens and its value is 50). (a) ES6. Use models to represent numbers in multiple ways, according to place value (e.g., 256 can be 1 hundred, 14 tens, and 16 ones, 25 tens and 6 ones, etc.). (a) b) identify the number that is 10 more, 10 less, 100 more, and 100 less than a given number up to 999 100; ES1. Use place value understanding to identify the number that is 10 more, 10 less, 100 more, or 100 less than a given number, up to 999 100. (b) c) compare and order whole numbers between 0 and 999 100; and ES1. Compare two numbers between 0 and 999 100 represented with concrete objects, pictorially or symbolically, using the symbols (>, <, or =) and the words greater than, less than or equal to. © ES2. Order three whole numbers between 0 and 999 100 represented with concrete objects, pictorially, or symbolically from least to greatest and greatest to least. (c) d) round two-digit numbers to the nearest ten. 2.2C) The student will use objects to determine whether a number is even or odd. ES1. Use objects to determine whether a number is even or odd. ES1. Use objects to determine whether a number is even or odd.	14 days

Strand	SOL	Envision Unit
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			equal groups or pairing objects). C	
PF&A	2.16	Pattern: Supplement	 The student will identify, describe, create, extend, and transfer patterns found in objects, pictures, and numbers. ES1. Identify a pattern as growing or repeating. ES2. Describe the core (the part of the sequence that repeats) of a given repeating pattern. ES3. Describe how a given growing pattern is changing. ES4. Create a growing or repeating pattern, using objects, pictures, or numbers. ES5. Extend a given pattern, using objects, pictures, or numbers. ES6. Transfer a given growing or repeating pattern from one form to another using objects, pictures, or numbers. 	5 days
C&E	2.6b	Unit 6 Mental Addition	b) determine sums and differences, using various methods; and ES1. Determine the sum of two whole numbers whose sum is 99 or less, using various methods.	
C&E	2.6b	Unit 8 not 8-6 Adding Two- Digit Numbers		13 days*
C&E	2.6b	Unit 7 Mental Subtraction	 b) determine sums and differences, using various methods; and ES2. Determine the difference of two whole numbers each 99 or less, using various methods. 	13 days*
C&E	2.6b	Unit 9 Subtracting Two- Digit Numbers		
C&E	2.6	Unit 10 Using Addition and Subtraction	 The student will a) estimate sums and differences; ES1. Estimate the sum of two whole numbers whose sum is 99 or less and recognize whether the estimation is reasonable (e.g., 27 + 41 is about 70, because 27 is about 30 and 41 is about 40, and 30 + 40 is 70). (a) ES2. Estimate the difference between two whole numbers each 99 or less and recognize whether the estimate is reasonable. (a) b) determine sums and differences, using various methods; and ES1. Determine the sum of two whole numbers whose sum is 99 or less, using various methods. (b) ES2. Determine the difference of two whole numbers each 99 or less, using various methods. (b) C) create and solve single-step and two-step practical problems involving addition and subtraction. ES1. Create and solve two-step practical problems involving addition, subtraction, or both addition and subtraction. (c) 	8 days*

Strand	SOL	Envision Unit
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M&G	2.8a	Unit 13: Measurement 13-1 13-2 13-3 13-4 (Inches Only)	The student will estimate and measure a) length to the nearest inch; and ES1. Identify a ruler as an instrument to measure length. (a) ES2. Estimate and then measure the length of various line segments and objects to the nearest inch using a ruler. (a)	4 days
M&G	2.13& 2.12	Unit 11 Geometry (Not 11-6) ? 11-3 - 11-5 11-7 118	 The student will identify, describe, compare, and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms). ES1. Determine similarities and differences between related plane and solid figures (circles/spheres, squares/cubes, rectangles/rectangular prisms), using models and cutouts. ES2. Trace faces of solid figures (cubes and rectangular prisms) to create the set of plane figures related to the solid figure. ES3. Identify and describe plane figures (circles, squares, and rectangles), according to their characteristics (number of sides, vertices, and angles). Squares and rectangles have four right angles. ES4. Identify and describe solid figures (spheres, cubes, and rectangular prisms), according to the shape of their faces, number of edges, and number of vertices, using models. ES5. Compare and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms) according to their characteristics (number of edges, and number of vertices, using models. ES5. Compare and contrast plane and solid figures (circles/spheres, squares/cubes, and rectangles/rectangular prisms) according to their characteristics (number and shape of their faces, edges, vertices, and angles). 2.12 The student will a) draw a line of symmetry in a figure; and b) identify and create figures with at least one line of symmetry. 	8 days
M&G	2.7	Unit 5 Money *Daily counting, coin recognition, and Pattern of the Day	 The student will a) count and compare a collection of pennies, nickels, dimes, and quarters whose total value is \$2.00 or less; and ES1. Determine the value of a collection of coins and one-dollar bills whose total value is \$2.00 or less. (a) ES2. Count by ones, fives, tens, and twenty-fives to determine the value of a collection of coins whose total value is \$2.00 or less. (a) ES3. Compare the values of two sets of coins and one-dollar bills (each set having a total value of \$2.00 or less), using the terms greater than, less than, or equal to. (a) b) use the cent symbol, dollar symbol, and decimal point to write a value of money. Use the cent (¢) and dollar (\$) symbols and decimal point (.) to write a value of money which is \$2.00 or less. 	9 days

P&S	2.14 & 2.15	Unit 16: Graphs and Probability (Omit 16- 4)	 The student will use data from probability experiments to predict outcomes when the experiment is repeated. ES1. Conduct probability experiments using multicolored spinners, colored tiles, or number cubes and use the data from the experiments to predict outcomes if the experiment is repeated. ES2. Record the results of probability experiments, using tables, charts, and tally marks. ES3. Interpret the results of probability experiments. Predict which of two events is more or less likely to occur if an experiment is repeated. The student will a) collect, organize, and represent data in pictographs and bar graphs; and ES1. Collect and organize data using various forms of data collection (e.g., lists, tables, objects, pictures, symbols, tally marks, charts). Data points, collected by students, should be limited to 16 or fewer for no more than four categories. (a) ES2. Represent data in pictographs and bar graphs with up to 25 data points for no more than four categories). (a) ES3. Read and interpret data represented in pictographs and bar graphs with up to 25 data points for no more than six categories (represented horizontally or vertically). State orally and in writing (at least one statement) that includes one or more of the following: Describes the categories of data and the data as a whole (e.g., adding together all data points will equal the total number of responses); Identifies parts of the data that have special characteristics; including categories with the greatest, the least, or the same; Uses the data to make comparisons; and b) read and interpret data represented in pictographs and bar graphs. ES1. Makes predictions and generalizations. (b) 	7 days
N&NS	2.4	Unit 12: Fractions 12-1 12-2 12-3 12-6? Comparing Fractions Using Models (Suppleme nt)	 The student will a) name and write fractions represented by a set, region, or length model for halves, fourths, eighths, thirds, and sixths; ES1. Recognize fractions as representing equal-size parts of a whole. (a) ES2. Name and write fractions represented by a set model showing halves, fourths, eighths, thirds, and sixths. (a, b) ES3. Name and write fractions represented by a region/area model showing halves, fourths, eighths, thirds, and sixths. (a, b) ES4. Name and write fractions represented by a length model showing halves, fourths, eighths, thirds, and sixths. (a, b) ES4. Name and write fractions represented by a length model showing halves, fourths, eighths, thirds, and sixths. (a, b) b) represent fractional parts with models and with symbols; and ES1. Represent, with models and with symbols, fractional parts of a whole for halves, fourths, eighths, thirds, and sixths, using: 	9 days

M&G	2.8b	Unit 14: Measurement: Weight and Capacity 14-1 14-5 14-6 (Pounds Only)	 region/area models (e.g., pie pieces, pattern blocks, geoboards); sets (e.g., chips, counters, cubes); and length/measurement models (e.g., fraction strips or bars, rods, connecting cube trains). (b) c) compare the unit fractions for halves, fourths, eighths, thirds, and sixths, with models. ES1. Compare unit fractions for halves, fourths, eighths, thirds, and sixths), using words (greater than, less than or equal to) and symbols (>, <, =), with models. (c) ES2. Using same-size fraction pieces, from region/area models or length/measurement models, count the pieces (e.g., <i>one-fourth, two-fourths, three-fourths</i>, etc.) and compare those pieces to one whole (e.g., <i>four-fourths</i> will make one whole; <i>one-fourth</i> is less than a whole). b) weight to the nearest pound. ES1. Identify different types of scales as instruments to measure weight. (b) ES2. Estimate and then measure the weight of objects to the nearest pound using a scale. (b) 	1 day (the rest in matter)
		14-8		
M&G	2.9, 2.10 & 2.11	Unit 15: Time and Temperatu re 15-1 15-2? 15-4 Temp. Using Fahrenheit (Supplement)	 2.9 The student will tell time and write time to the nearest five minutes, using analog and digital clock. ES1. Show, tell, and write time to the nearest five minutes, using an analog and digital clock. ES2. Match a written time (e.g., 4:20, 10:05, 1:50) to a time shown on a clock face to the nearest five minutes. ES3. Match the time (to the nearest five minutes) shown on a clock face to a written time. 2.10 The student will a) determine past & future days of the week; and b) identify specific days and dates and given calendar. 2.11 The student will read temperature to the nearest 10 degrees. ES1. Identify different types of thermometers as instruments used to measure temperature. 	7 days

			The student will	
			a) read, write, and identify the place and value of each digit in a three-digit numeral, with and	
			without models;	
			ES1.Demonstrate understanding of the ten-to-one relationships among ones, tens, and hundreds, using	
			The inputatives. (d)	
			ES2. Write numerals, using a model of pictorial representation (i.e., a picture of base-10 blocks). (a)	
			representation of the number (a)	
			FSA Identify and write the place (ones tens bundreds) of each digit in a three-digit numeral (a)	
			ES5. Determine the value of each digit in a three-digit numeral (e.g., in 352, the 5 represents 5 tens and	
		Unit 17:	its value is 50). (a)	
		Numbers	ES6. Use models to represent numbers in multiple ways, according to place value (e.g., 256 can be 1	
N&NS	2.1	and	hundred, 14 tens, and 16 ones, 25 tens and 6 ones, etc.). (a)	12 days
		Patterns to		-
		1,000	b) identify the number that is 10 more, 10 less, 100 more, and 100 less than a given number up to	
			999;	
			ES1. Use place value understanding to identify the number that is 10 more, 10 less, 100 more, or 100	
			less than a given number, up to 999. (b)	
			c) compare and order whole numbers between 0 and 999; and	
			ES1. Compare two numbers between 0 and 999 represented with concrete objects, pictorially or	
			symbolically, using the symbols (>, <, or =) and the words greater than, less than or equal to. (c)	
			ES2. Order three whole numbers between 0 and 999 represented with concrete objects, pictorially, or	
			symbolically from least to greatest and greatest to least. (c)	
			d) round two-digit numbers to the nearest ten.	
	N/A	Unit 19	Multiplication	
	N/A	Unit 20	Division	
	N/A	Unit 18	Three-Digit Addition and Subtraction	