Second Grade Math Syllabus

Investigations Units Covered	Math Concepts
Unit 1: Counting, Coins, and Combinations (Addition, Subtraction, and the Number System 1)	• Using addition and subtraction within 100 to solve one- and two-step word problems. • Fluently add and subtract within 20 using mental strategies. • Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. • Count within 1,000; skip-count by 5s, 10s, and 100s • Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form. • Fluently add and subtract within 100. • Add and subtract within 1,000. • Explain why addition and subtraction strategies work, using place value and the properties of operations. • Represent whole numbers as lengths from 0 on a number line diagram. • Tell and write time from analog and digital clocks to the nearest five minutes using a.m. and p.m. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. • Recognize and draw shapes having specified attributes.
Unit 2: Shapes, Blocks, and Symmetry (2-D and 3-D Geometry)	• Using addition and subtraction within 100 to solve one- and two-step word problems. • Fluently add and subtract within 20 using mental strategies. • Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. • Count within 1,000; skip-count by 5s, 10s, and 100s • Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. • Recognize and draw shapes having specified attributes. • Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. • Partition a rectangle into rows and columns of same-size squares and count to find the total of them
Unit 3: Stickers, Number Strings, and Story Problems (Addition, Subtraction, and the Number System 2 - Supplement with Envision Topic 2-1, 2-2, 2-3, 2-6, 3, and 5, and 6 is optional)	• Using addition and subtraction within 100 to solve one- and two-step word problems. • Fluently add and subtract within 20 using mental strategies. • Determine whether a group of objects (up to 20) has an odd or even number of members; write an equation to express an even number as a sum of two equal addends.

	- Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. - Count within 1,000; skip count by 5s, 10s and 100s. - Fluently add and subtract within 100. - Add up to four two-digit numbers using strategies based on place value and properties of operations. - Explain why addition and subtraction strategies work, using place value and the properties of operations. - Represent whole numbers as lengths from 0 on a number line diagram. - Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. - Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.
Unit 4: Pockets, Teeth, and Favorite Things (Data Analysis)	- Fluently add and subtract within 20 using mental strategies. - Count within 1,000; skip count by 5s, 10s, and 100s. - Fluently add and subtract within 100. - Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. - Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. - Draw a picture graph and bar graph (with single-unit scale) to represent a data set with up to four categories. - Recognize and draw shapes having specified attributes.
Unit 5: How Many Floors? How Many Rooms? (Patterns, Functions and Change)	- Using addition and subtraction within 100 to solve one- and two-step word problems. - Fluently add and subtract within 20 using mental strategies. - Determine whether a group of objects (up to 20) has an odd or even number of members; write an equation to express an even number as a sum of two equal addends. - Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. - Count within 1,000; skip count by 5s, 10s and 100s. - Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form. - Fluently add and subtract within 100. - Add up to four two-digit numbers using strategies based on place value and properties of operations. - Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. - Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. - Draw a picture graph and a bar graph (with single-

| | unit scale) to represent a data set with up to four categories. |
| | • Recognize and draw shapes having specified attributes. |

Unit 6: How Many Tens?
How Many Ones?
(Addition, Subtraction, and the Number System 3)
	• Fluently add and subtract within 20 using mental strategies.
	• Determine whether a group of objects (up to 20) has an odd or even number of members by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.
	• Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones. Understand the following as special cases:
	    o 100 can be thought of as a bundle of ten tens – called a "hundred."
	    o The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
	• Count within 1,000; skip-count by 5s, 10s, and 100s.
	• Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.
	• Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.
	• Fluently add and subtract within 100.
	• Add up to four two-digit numbers using strategies based on place value and properties of operations.
	• Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.
	• Explain why addition and subtraction strategies work, using place value and the properties of operations.
	• Represent whole numbers as lengths from 0 on a number line diagram.
	• Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
	• Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies using $ and ¢ symbols appropriately.
	• Recognize and draw shapes having specified attributes.

| **Unit 7: Parts of a Whole, Parts of a Group**
(Fractions) | • Count within 1,000; skip-count by 5s, 10s, and 100s.
• Fluently add and subtract within 100.
• Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
• Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape. |

Unit 8: Partners, Teams, and Paper Clips (Addition, Subtraction, and the Number System 4)	• Use addition and subtraction within 100 to solve one- and two-step word problems. • Fluently add and subtract within 20 using mental strategies. • Determine whether a group of objects (up to 20) has an odd or even number of members; write an equation to express an even number as a sum of two equal addends. • Understand that the tree digits of three-digit number represent amounts of hundreds, tens, and ones. Understand the following as special cases: o 100 can be thought of as a bundle of ten tens – called a "hundred." • Count within 1,000; skip-count by 5s, 10s, and 100s. • Fluently add and subtract within 100. • Add up to four two-digit numbers sing strategies based on place value and properties of operations. • Add and subtract within 1,000. • Explain why addition and subtraction strategies work, using place value, and the properties of operations. • Represent whole numbers as lengths from 0 on a number line diagram. • Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
Unit 9: Measuring Length and Time (Measurement)	• Fluently add and subtract within 20 using mental strategies. • Fluently add and subtract within 100. • Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. • Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the sized of the unit chosen. • Estimate lengths using units of inches, feet, centimeters, and meters. • Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. • Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units by using drawings and equations with a symbol for the unknown number to represent the problem. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. • Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.