First Grade Math Syllabus

Investigations Units Covered	Math Concepts
Unit 1: How Many of Each? (Addition, Subtraction, and the Number System 1)	• Using addition and subtraction within 20 to solve word problems. • Apply properties of operations as strategies to add and subtract. • Understand subtraction as an unknown-addend problem • Relate counting to addition and subtraction • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. • Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false • Count to 120 starting at any number less than 120. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <
Unit 2: Making Shapes and Designing Quilts (2-D Geometry)	• Distinguish between defining attributes and non-defining attributes; build and draw shapes to possess defining attributes • Compose two-dimensional shapes or three-dimensional shapes to create a composite shape and compose new shapes from the composite shape
Unit 3: Solving Story Problems (Addition, Subtraction, and the Number System 2)	• Using addition and subtraction within 20 to solve word problems. • Solve word problems that call for additions of three whole numbers whose sum is less than or equal to 20. • Apply properties of operations as strategies to add and subtract. • Understand subtraction as an unknown-addend problem • Relate counting to addition and subtraction • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. • Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false • Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. • Count to 120 starting at any number less than 120. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <
Unit 4: What Would You Rather Be? (Data Analysis)	• Count to 120, starting at any number less than 120. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. • Tell and write time in hours and half-hours using analog and digital clocks • Organize, represent, and interpret data with up to

	three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another • Distinguish between defining attributes versus non-defining attributes
Unit 5: Fish Lengths and Animal Jumps (Measurement)	• Using addition and subtraction within 20 to solve word problems. • Count to 120, starting at any number less than 120. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. • Order three objects by length; compare the lengths of two objects indirectly by using a third object • Express the length of an object as a whole number of length units. • Tell and write time in hours and half-hours using analog and digital clocks • Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than another • Compose two-dimensional shapes or three-dimensional shapes to create a composite shape and compose new shapes from the composite shape • Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.
Unit 6: Number Games and Crayon Puzzles (Addition, Subtraction, and the Number System 3)	• Using addition and subtraction within 20 to solve word problems. • Solve word problems that call for additions of three whole numbers whose sum is less than or equal to 20. • Apply properties of operations as strategies to add and subtract. • Understand subtraction as an unknown-addend problem • Relate counting to addition and subtraction • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. • Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false • Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. • Count to 120 starting at any number less than 120. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. • Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the

	following as special cases: 10 can be thought of as a bundle of ones – called a "ten"
Unit 7: Color, Shape, and Number Patterns (Patterns and Functions)	• Use addition and subtraction within 20 to solve word problems. • Solve word problems that call for additions of three whole numbers whose sum is less than or equal to 20. • Relate counting to addition and subtraction • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. • Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. • Determine the unknown whole number in an additions or subtraction equation relating to three whole numbers • Count to 120, starting at any number less than 120. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. • Tell and write time in hours and half-hours using analog and digital clocks

Unit 8: Twos, Fives and Tens
(Addition, Subtraction, and the Number System 4 - Supplement with Envision Topic 10)
	• Using addition and subtraction within 20 to solve word problems.
	• Solve word problems that call for additions of three whole numbers whose sum is less than or equal to 20.
	• Apply properties of operations as strategies to add and subtract.
	• Relate counting to addition and subtraction
	• Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.
	• Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false
	• Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers.
	• Count to 120 starting at any number less than 120.
	• Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <.
	• Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:
	    o 10 can be thought of as a bundle of ten ones – called a "ten."
	    o The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones
	    o The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones)
	• Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10.
	• Given a two-digit number, mentally find 10 more or

	• 10 less than the number, without having to count; explain the reasoning used • Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10 – 90 (positive or zero differences). • Tell and write time in hours and half-hours using analog and digital clocks
Unit 9: Blocks and Boxes (3-D Geometry)	• Using addition and subtraction within 20 to solve word problems. • Solve word problems that call for additions of three whole numbers whose sum is less than or equal to 20. • Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. • Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. • Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. • Tell and write time in hours and half-hours using analog and digital clocks • Distinguish between defining attributes and non-defining attributes; build and draw shapes to possess defining attributes • Compose two-dimensional shapes or three-dimensional shapes to create a composite shape and compose new shapes from the composite shape