Grade: 1 Subject: Mathematics	Unit of Study: Unit 3 - Story Problem Strategies
Big Idea/Rationale	• Unit 3 review and builds on the telling and solving of story problems. Children will frequently encounter real-life situations that require them to analyze the relationships between know and unknown quantities. Working on story problem strategies helps them apply addition and subtraction skills to the real world. • Addition stories with unknown partners • Subtraction stories • Addition stories with unknown totals • Mixed practice with different unknowns
Enduring Understanding	• Students will understand that: • Addition and subtraction problems can be solved by using a variety of strategies. • Identifying patterns in numbers can help to solve addition and subtraction problems. • If we have two of the three numbers in an equation we can figure out the third. • An unknown partner can be anywhere in the equation
Essential Questions	• Why do we compare numbers? • What is more important, putting together, or taking apart? Why? • How is putting numbers together and taking them apart similar? • If we have two of the three numbers in an equation, can we find the unknown number? How?
Content (Subject Matter)	• Explore relationships between partners and totals. • Find the unknown partner by counting on. • Solve and explain story problems with unknown partners • Practice solving story problems and labeling answers. • Count on to solve equations with unknown partners. • Apply the Counting On strategy to find an unknown partners in picture problems • Apply the Counting On strategy to a real-world scenario. • Count on to solve equations with unknown partners • Create and solve stories with unknown partners. • Identify and find unknown partners. • Count on to solve subtraction problems. • Solve subtraction story problems. • Solve subtraction story problems using numeric methods. • Solve subtraction story problems involving nickels and pennies. • Apply the Counting On strategy to a real-world scenario.

	- Solve subtraction equations by counting on. - Create and solve subtraction stories. - Solve subtraction story problems involving nickels and pennies. - Develop spatial concepts. - Create and solve addition stories with unknown totals. - Solve addition story problems involving nickels and pennies. - Apply the Counting On strategy to a real-world scenario. - Identify and solve for unknown totals in addition equations. - Explore the relationship between known and unknown quantities in story problems. - Solve story problems with unknown partners and totals. - Solve addition and subtraction equations with mixed unknowns. - Develop spatial concepts. - Recognize and solve for unknown partners or total in story problems. - Identify and solve for unknown quantities in addition equations. - Solve a variety of problems using mathematical concepts and skills. - Use mathematical processes in the context of problem solving, connections, reasoning and proof, communication, and representation.
Standards	**1.OA.A.1:** Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.[1] **1.OA.A.3:** Apply properties of operations as strategies to add and subtract.[2] *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known. (Commutative property of addition.) To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12. (Associative property of addition.)* **1.OA.A.4:** Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.* **1.OA.A.5**: Relate counting to addition and subtraction (e.g., by counting on 2 to add 2). **1.OA.A.6:** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 – 4 = 13 – 3 – 1 = 10 – 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 – 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13). **1.OA.A.7:** Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.

	• **1.NBT.B.3:** Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols >, =, and <. • **1.NBT.C.5:** Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. • **1.MD.A.4:** 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. • **1.G.A.1:** Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes. • **1.G.A.2:** Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.[1] • **1.G.A.3:** 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.
Materials and Resources	• First Grade Math Expressions, Math Journals, manipulatives, Math themed literature, IXL Mathematics