

Grade: 1 Subject: Mathematics	Unit of Study: Unit 9 – Analyze Story Problems
Big Idea/Rationale	<ul style="list-style-type: none"> • Understanding how to sort information and place it into similar categories or what information is not needed to solve the problem. • Unit 9 reviews and builds on children’s growing knowledge of story problems. Whereas, previously, children worked with story problems that involved actions, here they solve story problems that involve categories and subcategories of objects-for example, apples and bananas as subcategories of fruit. Children also work to solve story problems that contain extra information, as well as some that require multiple steps to solve. • Teen problems with various unknowns • Multi-step story problems • Story problems with extra information
Enduring Understanding	<ul style="list-style-type: none"> • Addition and subtraction problems can be solved in a variety of ways. • Identifying patterns in numbers can help to solve addition and subtraction stories. • Some problems require more than one step or operation to get the answer.
Essential Questions	<ul style="list-style-type: none"> • Why is it important to read a story problem carefully before solving it? • What are some key words to help you know if you should add or subtract when solving a number story? • How should we label category problems? • Why is it necessary to categorize information? • How will you know if there is extra information in a problem? • How does using the ten-partner grouping strategy help solve multiple step problems?
Content (Subject Matter)	<ul style="list-style-type: none"> • Determine known and unknown values in story problems. • Solve problems using Math Mountains and equations. • Solve story problems with 2-digit addends using any method. • Identify unknown 2-digit partners and totals. • Learn how to classify terms in a category story problem. • Create, solve, and label category story problems with unknown partners and totals. • Sort items and classify them into broader categories. • Create and solve category story problems with unknown partners and totals. • Solve category story problems. • Classify objects for use in category story problems. • Solve multiple-step story problems. • Apply 10-structured methods for solving equations with 3 addends and teen totals.

- Find 10-partners to solve multiple-step addition equations.
- Solve story problems requiring mixed operations.
- Solve equations requiring mixed operations with 2-digit numbers.
- Practice various methods for solving multiple-step story problems requiring mixed operations with decade numbers and extra ones.
- Create and solve multiple-step problems involving categories, 2-digit quantities, and mixed operations.
- Construct and solve equations with mixed operations.
- Recognize unnecessary information in story problems, and retell using only relevant information.
- Classify and label groups of objects.
- Practice solving story problems with extra information.
- Solve a variety of story problems and compare solution strategies.
- 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.2:** Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- **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.8:** Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.*
- **1.NBT.A.1:** Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.
- **1.NBT.B.2.B:** The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
- **1.NBT.C.6:** Subtract multiples of 10 in the range 10-90 from multiples of

	10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
Materials and Resources	<ul style="list-style-type: none">• First Grade Math Expressions, Math Journals, manipulatives, Math themed literature, IXL Mathematics