Unit 2 Family Support Materials

Addition and Subtraction Story Problems

In this unit, students solve new types of story problems within 10 and learn new ways to think about adding and subtracting. They develop an understanding of the meaning of the equal sign and connect story problems to equations.

Section A: Add To and Take From Story Problems

In this section, students revisit familiar types of story problems. Students use their bodies, objects, and drawings to act out stories in which an amount is added or taken away. Students also work with problems in which they have to figure out how much is being added:

Diego had 7 pencils.
His sister gave him some pencils.
Now, Diego has 9 pencils.
How many pencils did Diego's sister give him?

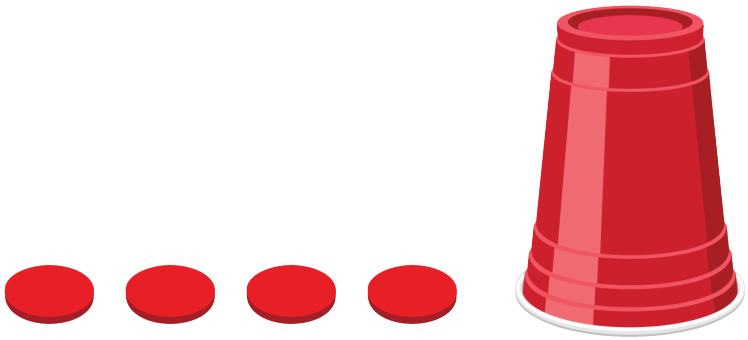
Students see that they can think about this problem as "7 and some number is 9." They use objects or drawings to act out adding the unknown amount. They also think about ways to count to find how much was added. For example, they may use objects or fingers to keep track of counting on

from 7 to 9 (7, . . . 8, 9. There are 2 more pencils.).

Section B: Put Together/Take Apart Problems

In this section, students solve problems in which there are no actions (such as getting more of something or taking away something). In these problems, there are two (2) groups and a total number of objects. In some problems, students find the total. In other problems, the total is given and they find one or both unknown groups. Students solve problems in the context of *Shake and Spill*, a game that uses two-color counters. Counters are put into a cup and spilled out. Students make observations about what they see or different combinations that might occur. Students also play a version of the game in which they know the total number of counters, but some counters are hidden.

There are 9 counters total.
How many counters are under the cup?



With this type of problem, students may think about it as "4 and some number is 9." They learn that they can think about how many to add on to 4 to get to 9. They also see that they can start with 9, remove 4, and count what is left. This helps students develop an understanding of how addition and subtraction are related.

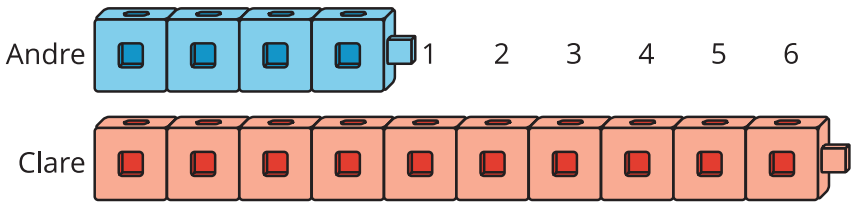
Section C: Compare Story Problems

In this section, students solve story problems in which they find "how many more?" or "how many fewer?" one group has than another group, such as:

There are 8 glue sticks and 3 scissors at the art station. How many fewer scissors are there than glue sticks?

Students learn that these problems have a greater amount, a lesser amount, and a difference. They start by considering ways to match the amounts and count the difference. For example:

How many more cubes does Clare have than Andre?



For this problem, students may count the cubes in Clare's

tower that are unmatched. Others may remove the matched cubes (4) and count the remaining cubes in Clare's tower. Students analyze addition equations ($4 + \boxed{6} = 10$) and subtraction equations ($10 - 4 = \boxed{6}$) equations and see that both can be used to represent the problem.

Section D: All Kinds of Story Problems

This section brings the work of the unit together as students solve a variety of problem types. Students match equations to story problems and write their own equations to match story problems. They make sense of and use equations with a symbol for the unknown, such as $10 = \square + 6$.

Try it at home!

Near the end of the unit, ask your first grader to solve the following word problems:

1. Clare has 8 pencils. Andre has 10 pencils. How many more pencils does Andre have?
2. Diego has 6 pens. His mother gives him some pens. Now he has 9 pens. How many pens does Diego's mother give him?

Questions that may be helpful as they work:

- How could you draw the problem?

- How can you count on or take away to find the answer?
- What equation can you write to represent this problem?

Solution:

1. Andre has 2 more pencils than Clare.
2. Diego's mom gives him 3 pens.

Sample response:

- For the first problem, I can draw 8 boxes to represent Clare's pencils. Underneath, I can draw 10 boxes to represent Andre's pencils. I can count and label to show how many more Andre has.
- For the second problem, I can draw 6 pens. Then I can keep drawing more pens until I get to 9 pens. I will circle and label the new pens to represent my answer.
- For the first problem, I can start counting at 10 and stop when I get to 8: 10, . . . 9, 8. I counted back 2 numbers. For the second problem, I can start at 6 and count on until 9: 6, . . . 7, 8, 9.
- $8 + 2 = 10$ or $10 - 8 = 2$.
- $6 + 3 = 9$ or $9 - 3 = 6$.