

Family Support Materials

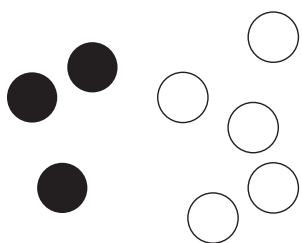
Understanding Addition and Subtraction

In this unit, students relate counting to addition to solve addition and subtraction story problems within 10.

Section A: Count to Add and Subtract

In this section, students are introduced to addition as counting the total number of objects in two groups. The language “add”, “put together”, “subtract”, and “take away” is used throughout the section.

Students also count images in scattered configurations for the first time, recognizing the need to keep track of the images they have counted. For example, students may count all the black dots first and then the white dots, or they may count the black dots and white dots together.



Students may cross off the dots as they count to keep track of the dots they have counted. Students see that although they may count the images in a different order, they arrive at the same total.

Section B: Representing and Solving Story Problems

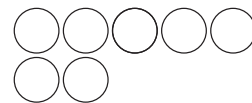
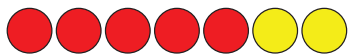
In this section, students represent and solve story problems. This work starts slowly, with students acting out and then

representing story problems that don't have a question in them such as:

There were 5 students jumping rope at recess. 2 more students came out to play with them.

Questionless story problems encourage students to think about the context and the action in the story problem without feeling pressured or rushed to solve the problem. Eventually, students answer questions such as "How many students are jumping rope now?" about stories.

Students represent story problems with objects, math tools, drawings and numbers. They may represent each story problem in any way that makes sense to them. The important thing is for students to be able to explain how their representation connects to the story. While students are not required to create drawings in a particular way, they notice that organized drawings make it easier to see how the drawing matches the story problem. For example, the students may use any of these diagrams to represent a story that matches the expression $5 + 2$.



Section C: Addition and Subtraction Expressions

In this section, students work with expressions for the first time. They match expressions to story problems and drawings.

Students explain why an expression matches a given problem or drawing.

Students move from working with expressions in relation to story problems to finding the value for expressions without a story. Students may add or subtract in a way that makes sense to them, including using fingers, objects, or drawings. With repeated experience, students begin to notice patterns when adding and subtracting, such as that adding 1 results in the next counting number and that adding 0 results in the same number.

Try it at home!

Near the end of the unit, ask your student to draw a picture that goes with this story:

There were 4 students jumping rope at recess.
2 more students came out to play with them.

Questions that may be helpful as they work:

- Explain your picture to me.
- How many students are jumping rope in the end?
- Does this story match the expression $4 + 6$, $6 + 2$ or $4 + 2$?
How do you know?