Our Sister's Surprise

A book about missing-addend subtraction

Aim

Subtraction can be represented using three different models: missing addend, take away, and difference (comparison). *Our Sister's Surprise* introduces missing-addend subtraction.

These whole-class activities provide students with the opportunity to:

- listen to a story about a subtraction situation
- use materials and pictures to act out subtraction situations
- make links between subtraction and missing addends
- write related addition and subtraction facts

Activities

1. Listening to the story
2. Using materials to act out the story
3. Using pictures and materials to act out the story
4. Using the teaching tool to act out the story
5. Identifying combinations
6. Writing a story about missing-addend subtraction
7. Using the think-addition strategy
8. Writing related facts

I. Listening to the story

Resources
- *Our Sister's Surprise*

Activity
Show the cover of *Our Sister's Surprise* and read the title aloud. Encourage volunteers to predict what they think the story might be about. Read the story without discussion. Read the story again and ask, **What is happening in the story? What do you see in each picture?** Encourage students to explain that in the toy store the toys are paid for with peanuts. On each double-page spread, one of the monkeys is figuring out whether they have enough nuts to pay for a toy. Have the students identify the cost of each toy and how many nuts each monkey has. At the end of the story, discuss how the monkeys decide to combine their nuts to buy a present.

2. Using materials to act out the story

Resources
- 20 cubes or counters for each student

Activity
Read pages 4–5 of *Our Sister's Surprise*. Ask, **How much does the lion cost? How many nuts does the monkey have? Is it enough to buy the lion? How much more does the monkey need?** Encourage the students to use the cubes to show their thinking. Discuss the students' ideas – some may have counted out seven cubes then taken two away, while others may have started with two cubes then counted as they added extra cubes to get to seven. Repeat for each double-page spread in the storybook.

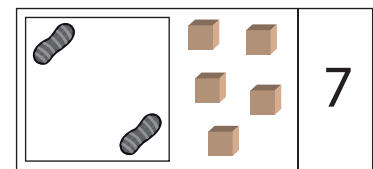# 3. Using pictures and materials to act out the story

Resources
- Supports 1 and 2 (see attached)
- Scissors for each pair of students
- Base-ten ones blocks – 20 for each pair of students

Preparation
Make copies of Support 1 – one set of peanut cards from 1–6 for each pair of students. Make one copy of Support 2 for each pair of students.

Activity
Move the students into pairs and distribute the materials. Direct the students in each pair to cut out their peanut cards. Read pages 4–5 of *Our Sister's Surprise.* Refer to Support 2 and ask the students to identify the strip that shows 7. Say, **The seven on this strip tells us how many nuts we need in total. How many nuts does the monkey have?** Direct each pair of students to identify their peanut card that shows exactly two peanuts and have them place it on the left side of the 7-strip. Say, **We have two nuts. We need seven nuts in total. How many more nuts do we need to make seven?** Guide the students in placing five blocks on the 7-strip as shown right to demonstrate the two parts and the total. Repeat with each double-page spread.

4. Using the teaching tool to act out the story

Resources
- *Our Sister's Surprise*
- *Teaching Tool*

Activity
Make sure all the students can see the *Teaching Tool*. Read pages 4–5 of *Our Sister's Surprise*. Ask, **How many nuts does the lion cost?** Invite a student to use the drawing tool to write *7* on the price tag in the work area. Ask, **How many nuts does the monkey have?** Direct the student to click and drag two nuts onto the monkey's hand in the work area. Ask, **How many more nuts does the monkey need to pay for the lion?** The student should then click and drag extra nuts into the bag to show the amount that is needed. Write *2 nuts and 5 nuts is 7 nuts* and *7 nuts take 2 nuts is 5 nuts* in the white panel at the bottom of the screen. Repeat for each double-page spread of the storybook.

5. Identifying combinations

Resources
- *Our Sister's Surprise*

Activity
Read *Our Sister's Surprise* to the students. Discuss the last double-page spread. On the board, write what each toy is and how much it costs. Then draw five bags. Write the number of nuts for each monkey inside a bag. Say, **The monkeys figured out that if they put all the nuts together they can buy a something from the toy store for their sister. What toys could they buy if they work together?** Have the students work in pairs to identify combinations of nuts that will let them buy certain toys. For example, using three nuts and four nuts will let the monkeys buy the lion. Discuss the students' ideas, pointing out that some combinations of nuts will be more than what they need to pay for a given item. In such cases, the students can figure out how much "change" will be given.

6. Writing a story about missing-addend subtraction

Resources
- *Our Sister's Surprise*

Activity
Read *Our Sister's Surprise* to the students. Discuss how each monkey wants to buy a toy but they do not have enough nuts to pay for it. Challenge the students to make up a story where somebody wants to buy, make, or use something but does not have enough of what they need. Provide suggestions such as a builder needing 12 bricks to finish a wall but they only have four bricks in the wheelbarrow, or a chef wanting to cook 12 sausages but only having four left in the pack. Each story should feature the sentence, "How many more do they need?" The students can write and/or illustrate the story. Afterward, invite a few students to share their story.
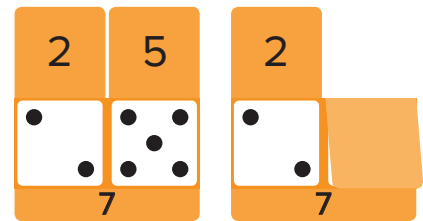
7. Using the think-addition strategy

Resources
- *Our Sister's Surprise*
- Think-addition cards from *The Box of Facts: Addition and Subtraction*

Activity
Read pages 4–5 of *Our Sister's Surprise*. Display the think-addition card shown below left. Say, **When we add we put together parts to make a total. On this card, one part is two and the other part is five. The total is seven. Two plus five is seven.** Fold the flap on the right so that only two dots are showing as shown below right. Say, **Look at the card now. What do you know?** (The total is seven and one of the parts is two.) On the board, write *2 + _____ = 7*. Say, **We could figure out what number is hidden by thinking of addition. What addition fact can help?** Repeat with each double-page spread of *Our Sister's Surprise*. Then repeat with other facts.
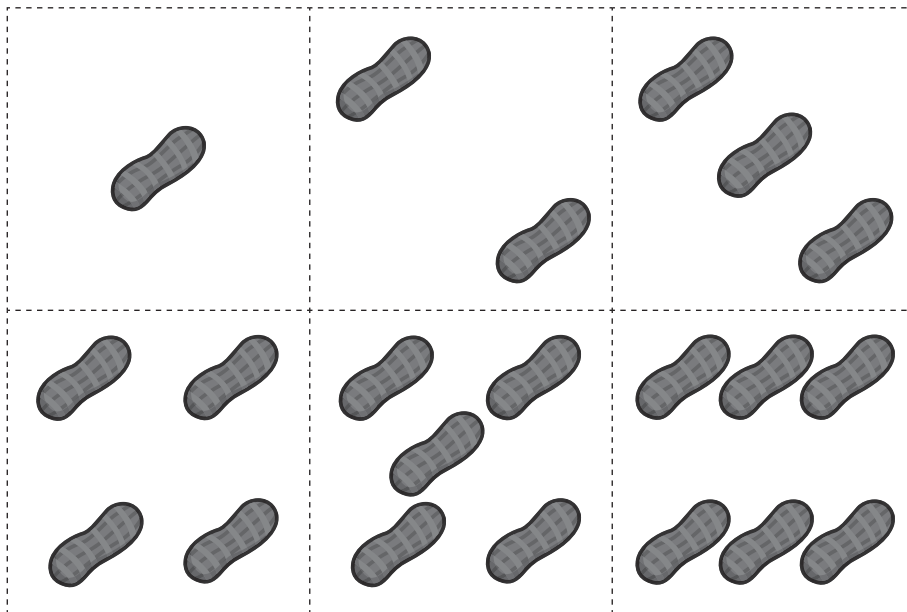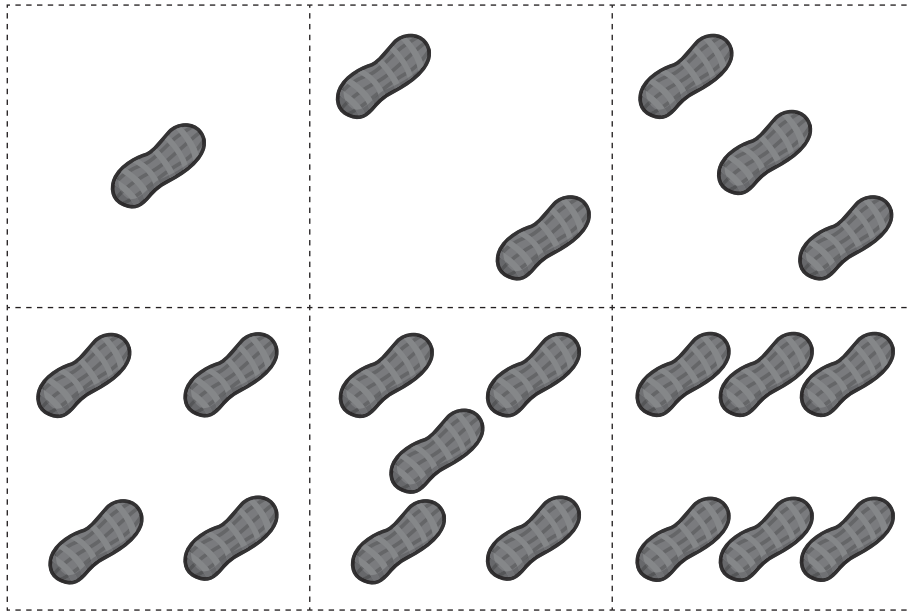

8. Writing related facts

Resources
- Two 10-sided dice for each group of students

Activity
Move the students into groups of three or four. Discuss how addition and subtraction are related. Point out that they both involve parts and a total – in addition the parts are known but not the total, and in subtraction the total and one of the parts is known but not the other part. Distribute the dice to each group and say, **Roll the two dice and add the numbers together. Each person in the group should write the two addition facts that are possible for each pair of numbers.** Show an example of rolling 2 and 5 and writing *2 + 5 = 7* and *5 + 2 = 7*. Once the students have completed the task, ask, **What subtraction facts can you write that involve the numbers you wrote for the addition sentences?** Review the idea that subtraction involves knowing the total and one of the parts. Elaborate on the example used previously and write *7 – 2 = 5* and *7 – 2 = 5*. Have the students roll the dice and write the matching sentences. Repeat as time allows.

Addition-Subtraction Strips

		7

		9

		11

		12

		13