## 2 Develop the Concept: Interactive

10–15 min

# Interactive Learning

**Overview** Students draw a picture to help write a number sentence and solve a problem.

**Essential Question** How can a picture help you write a number sentence?

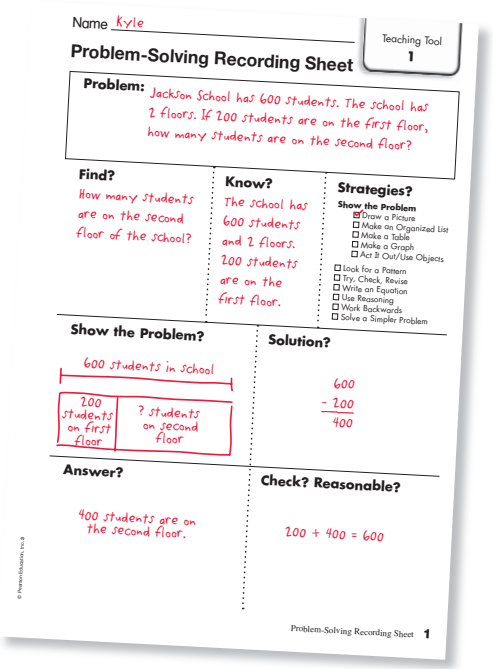
**Materials** Problem-Solving Recording Sheet (Teaching Tool 1) (1 per student)

**Engage**

**Set the Purpose** *You have used different operations to solve problems. Today you will draw a picture to help you write a number sentence.*

**Connect** *What kinds of pictures have you used in math?* [Possible responses: pictures that show groups of objects or how to put two groups together, pictures of shapes]

**Pose the Problem** *The Jackson School has 2 floors and 600 students. If 200 students are on the first floor, how many students are on the second floor? Draw a picture to help you solve this problem. Use your Problem-Solving Recording Sheet.* Give students time to work in pairs. Then have them share their work with the class.


Name Kyle

Teaching Tool 1

Problem-Solving Recording Sheet

Problem: Jackson School has 600 students. The school has 2 floors. If 200 students are on the first floor, how many students are on the second floor?

Find? How many students are on the second floor of the school?

Know? The school has 600 students and 2 floors. 200 students are on the first floor.

Strategies? Show the Problem: ☑ Draw a Picture; ☐ Make an Organized List; ☐ Make a Table; ☐ Make a Graph; ☐ Act It Out/Use Objects; ☐ Look for a Pattern; ☐ Try, Check, Revise; ☐ Write an Equation; ☐ Use Reasoning; ☐ Work Backwards; ☐ Solve a Simpler Problem

Show the Problem? 600 students in school; 200 students on first floor; ? students on second floor

Solution? 600 − 200 = 400

Answer? 400 students are on the second floor.

Check? Reasonable? 200 + 400 = 600

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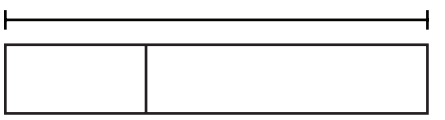
Problem-Solving Recording Sheet 1

**Use Drawings** *To solve a problem, it sometimes helps to draw a picture to show the information and what you need to find.* Draw a blank subtraction model on the board. *What do you know?* [There are 600 students in the school.] *What part of this diagram represents 600 students? Why?* [The line across the top; 600 is the total number of students.] Label the line. Continue questioning to label the parts.



*Do you need to find a whole amount or part of the whole? How does the diagram show this?* [Part; there is a question mark in one part of the diagram.] *What operation can you use to find the part? Why?* [Subtraction; when you know the whole and a part, you can subtract to find the other part.] Have a volunteer subtract to solve the problem. Write the number sentence 600 − 200 = 400 on the board.

**Extend**

*In another school, there are 200 students on the first floor and 600 students on the second floor. How many students are in the school? What operation would you use to solve this problem? Why? What is the answer?* [Addition; add the two parts to find the whole; 800 students.]

**Link to *Investigations*, Second Edition**
*Joint-Usage Master Plan*
Blended Instruction (Plan 1):
Topic 4 and Units 1, 3, and 8



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