## inside + x = ÷ mathematics

# **Inside Problem Solving**

### First Rate

#### **PreK**

#### **Materials:**

- A picture of the staircase with footprints,
- tape,
- measuring tape,
- paper, and
- pencil.

#### Discussion on the rug:

Teacher uses tape to make two marks on the floor about five yards apart. The teacher chooses two classmates to start at one mark and make one jump toward the other mark with both feet together.

The students jump, and the teacher asks, "Who jumped farther?"

One at a time, the students jump until they reach the second mark as the class counts.

The teacher asks, "Who took the most jumps?"

The teacher holds up the pictures of the staircase and the wet footprint and asks, "Who can tell me what they see in this picture?"

The students respond.

The teacher says "This is a picture of a jumping race up the stairs. Two boys, both with wet feet, race up the stairs. They jump, landing on two feet, as they race up the staircase. When the first boy jumps, he lands on each step. When the second boy jumps, he skips a step and lands on every other step."

**In small groups:** Each student has access to the picture of the staircase, paper, and a pencil. The teacher explains that they need to think about the jumping race up the stairs. The teacher asks the following questions:

"Who takes more jumps to reach the top of the staircase?

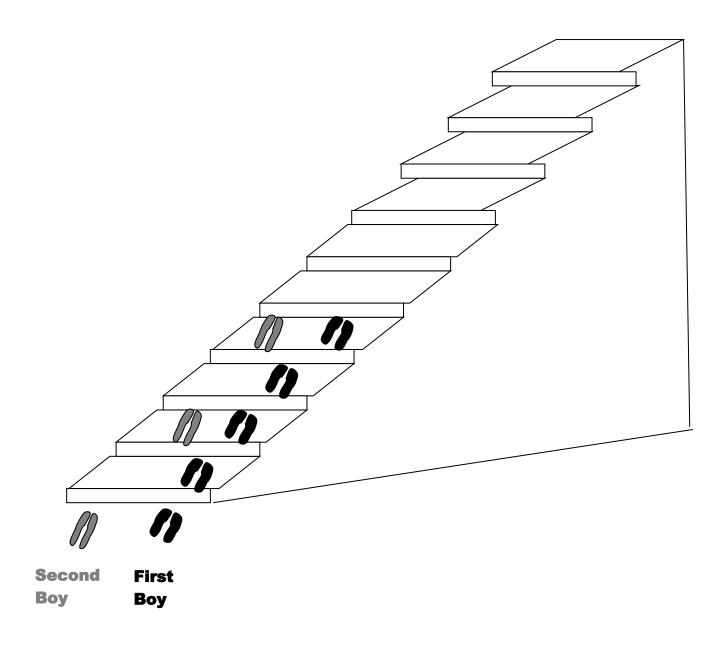
How many jumps does the first boy take?

Who do you think won the race?"

At the end of the investigation, have students either discuss or dictate a response to the prompt: "Tell me how you know who won the race."

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