



# SCOTT FORESMAN Investigations

IN NUMBER, DATA, AND SPACE®

As a way to become familiar with this unit:

- Read the selections
- Try/think through the Activities
- Review the Assessment opportunities
- Do the end-of-unit assessment tasks

## Number Puzzles and Multiple Towers

This unit is the 1<sup>st</sup> of 9 units in fifth grade. It is part of the K-5 number and operations strand, and is the 1<sup>st</sup> of 2 multiplication and division units at this grade. This unit builds on the work of the previous units in this strand. Before teaching this unit, perhaps after working through this *Where to Start*, read *Mathematics in This Unit*, p. 10.

### Investigation 1: Finding Factors and Prime Factors

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 23)
- Investigation 1 Planner (pp. 24 & 26)

The following activities and information support the key math ideas:

- Activity: Building Arrays (p. 31) and Discussion: Primes and Squares (p. 37)
- Activity: Introducing Number Puzzles: 4 Clues (p. 42)
- Dialogue Box: Solving a Number Puzzle (p. 178)
- Activity: Finding Multiplication Combinations for 18 and 180 (p. 49)
- Teacher Note: Finding Prime Factors (p. 154)

### Investigation 2: Division Strategies

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 65)
- Investigation 2 Planner (pp. 66 & 68)

The following activities and information support the key math ideas:

- Activity: Solving  $35 \times 28$  (p. 71) and Discussion: Naming Multiplication Strategies (p. 75)

### Preparation

- Materials to Gather and Prepare (pp. 25, 27, 67, 69, 111, 113)

### Assessment

- Assessment in This Unit (p. 14)
- Assessment Activities (p. 54)
- Assessment Activity (p. 107) and Teacher Note (p. 166)
- End-of-Unit Assessment Activities (p. 152) and Teacher Note (p. 174)

### Practice & Review

- Ten-Minute Math (p. 20)
- Practice and Review (p. 21)

- Discussion: Multiplying by 10 (p. 86)
- Activity: Introducing Multiplication Cluster Problems (p. 92)
- Teacher Note: About Cluster Problems (p. 165)
- Activity: Starter Problems (p. 101)

### Investigation 3: Division Strategies

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 109)
- Investigation 3 Planner (pp. 110 & 112)

The following activities and information support the key math ideas:

- Activity: Solving a Division Problem (p. 115) and Discussion: Naming Strategies (p. 117)
- Teacher Note: Division Strategies (p. 170)
- Activity: Introducing Multiple Towers (p. 122)
- Teacher Note: The Relationship Between Multiplication and Division (p. 169)
- Activity: Division Cluster Problems (p. 137)
- Dialogue Box: How Many 21s Are in 1,344? (p. 188)

**Teacher Notes** and **Dialogue Boxes** are important sources of information about mathematics content and about students' thinking about mathematical ideas. Each time you teach this unit, you can read more of this information.