



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

Multiple Towers and Division Stories

This unit is the 3rd of 9 units in fourth grade. It is part of the K-5 number and operations strand, and is the 2nd of 3 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: Breaking Apart Multiplication Problems

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: Mr. Jones and the Bagels (p. 29) and Discussion: Showing Your Solution (30)
- Activity: Two Arrays Make a Rectangle (p. 35) and Discussion: How Many Ways Can You Make 8×9 ? (p. 39)
- Teacher Note: Visualizing Arrays (p. 154)

Investigation 2: Division

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 55)
- Investigation 2 Planner (pp. 56 & 58)

The following activities and information support the key math ideas:

- Activity: Rows of Apples: $56 \div 4$ (p. 61) and Discussion: How Many Groups? (p. 66)
- Discussion: What Do You Do With the Extras? (p. 73)
- Teacher Note: What Do You Do With the Remainders?

Preparation

- Materials to Gather and Prepare (pp. 25, 27, 57, 59, 95, 123)

Assessment

- Assessment in This Unit (p. 14)
- Assessment Activity (p. 52) and Teacher Note (p. 178)
- Assessment Activity (p. 91) and Teacher Note (p. 164)
- Assessment Activity (p. 117) and Teacher Note (p. 151)
- End-of-Unit Assessment Activities (p. 149) and Teacher Note (p. 173)

Practice & Review

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

(p. 162)

- Activity: Introducing Related Multiplication and Division Problems (p. 85)
- Teacher Note: The Relationship Between Multiplication and Division (p. 163)

Investigation 3: Multiplying 10s

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 93)
- Investigation 3 Planner (p. 94)

The following activities and information support the key math ideas:

- Activities: Introducing Multiple Towers (p. 98) and Building Multiple Towers (p. 100)
- Activity: Problems About Oranges (p. 106) and Discussion: Using the 10th Multiple (p. 112)
- Teacher Note: Multiplying by Multiples of 10 (p. 167)
- Dialogue Box: What Does It Mean to “Add a Zero”? (p. 183)

Investigation 4: Strategies for Multiplication

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 121)
- Investigation 4 Planner (p. 122)

The following activities and information support the key math ideas:

- Activity: Mrs. Santos’ Apples (p. 125)
- Activity: Introducing Multiplication Cluster Problems (p. 130) and Discussion: Representing Cluster Problems with Arrays (p. 132)
- Math Workshop: Strategies for Multiplication (p. 140) and Discussion: Comparing Our Strategies (p. 146)
- Teacher Note: Multiplication Clusters and the Properties of Multiplication (p. 171)

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.