



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

Factors, Multiples and Arrays

This unit is the 1st of 9 units in fourth grade. It is part of the K-5 number and operations strand, and is the 1st 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: Representing Multiplication with Arrays

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 21)
- Investigation 1 Planner (pp. 22 & 24)

The following activities and information support the key math ideas:

- Activities: Introducing Making Arrays (p. 33) and Making Arrays (p. 34)
- Discussion: What Do You Notice About Arrays? (p. 40)
- Math Workshop: Using Arrays to Multiply (p. 48)
- Teacher Note: Representing Multiplication With Arrays (p. 117)
- Dialogue Box: How Many in This Array? (p. 128)

Investigation 2: Multiplication Combinations

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 53)
- Investigation 2 Planner (pp. 54 & 56)

The following activities and information support the key math ideas:

- Activity: Introducing Quick Images (p. 59)
- Discussion: Multiplication Strategies (p. 62)

Preparation

- Materials to Gather and Prepare (pp. 23, 25, 55, 57, 87)

Assessment

- Assessment in This Unit (p. 14)
- Assessment Activity (p. 82) and Teacher Note (p. 120)
- End-of-Unit Assessment Activities (p. 113) and Teacher Note (p. 123)

Practice & Review

- Ten-Minute Math (p. 18)
- Practice and Review (p. 19)

- Activities: Finding Factors and Multiples (p. 69) and Introducing Multiple Turn Over (p. 72)
- Teacher Note: Learning and Assessing Multiplication Combinations (p. 120)

Investigation 3: Finding Factors

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 85)
- Investigation 3 Planner (p. 86)

The following activities and information support the key math ideas:

- Activity: Finding Factors of 100 (p. 90) and Discussion: Identifying all the Factors (p. 92)
- Discussion: Strategies for Finding Factors of 200 and 300 (p. 97)
- Activity: Factors of 16 and 18 (p. 106)

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.