



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

Solids and Boxes

This unit is the 9th of 9 units in third grade. It builds on the work of the previous units in the K-5 Geometry and Measurement strand. Before teaching this unit, perhaps after working through this *Where to Start*, read *Mathematics in This Unit*, p. 10.

Investigation 1: Sorting, Describing, and Building Solids

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 17)
- Investigation 1 Planner (pp. 18 & 20)

The following activities and information support the key math ideas:

- Teacher Note: Geometric Solids: Types and Terminology (p. 95)
- Activity: Sorting Solids (p. 23) and Discussion: Talking About Sorting Schemes (p. 25)
- Dialogue Box: Playing What's My Shape (p. 108)
- Activity: Building Polyhedra (p. 33) and Discussion: Looking at What We Built (p. 34)
- Discussion: What Solid Did You Build? (p. 40)

Investigation 2: Making Boxes

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 47)
- Investigation 2 Planner (p. 48)

The following activities and information support the key math ideas:

- Activity: Open Boxes for a Cube (p. 51)
- Dialogue Box: Patterns for Cubes (p. 110)
- Activity: More Cube Patterns (p. 53) and Discussion:

Preparation

- Materials to Gather and Prepare (pp. 19, 21, 49, 67; also see the Teaching Notes on pp. 23, 26, 57 & 71)
- Review the logistics of making the Building Kits (p. 19)

Assessment

- Assessment in This Unit (p. 12)
- Assessment Activity (p. 39)
- Assessment Activity (p. 83) and Teacher Note (p. 99)
- End-of-Unit Assessment Activities (p. 92) and Teacher Note (p. 101)

Practice & Review

- Classroom Routine and Ten-Minute Math (p. 14)
- Practice and Review (p. 15)

Patterns for 1-Cube Boxes (p. 56)

- Activity: Patterns for 2-Cube Boxes (p. 57) and Discussion: What Do We Notice About Our Patterns? (p. 60)
- Dialogue Box: Making Patterns for a 2-Cube Solid (p. 112)

Investigation 3: How Many Cubes in a Box?

These pages provide an overview of this Investigation:

- Mathematical Emphases (p. 65)
- Investigation 3 Planner (p. 66)

The following activities and information support the key math ideas:

- Activity: Determining the Number of Cubes in a Box (p. 71)
- Teacher Note: Strategies for Finding the Number of Cubes in a Box (p. 96)
- Activity: Designing Boxes to Hold 12 Cubes (p. 75)
- Teacher Note: Strategies for Boxes that Hold 12 Cubes (p. 100)
- Activities: Introducing Patterns from the Bottom Up (p. 81) and Patterns from the Bottom Up (p. 92)

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.