

## Tips for Helping at Home

- Look for patterns or designs made from different shapes. Can you find floor patterns, or wallpaper patterns made from squares, rectangles, triangles, or other shapes?
- Take walks with your child to look at the shapes of buildings in your neighborhood. • Look at boxes you have at home. What shapes are they? How many sides do they have?
- Find books on shapes in the children's section of the public library. Read them with your child.

### The Shape of Things by Dayle Ann Dodds



### Shapes, Shapes, Shapes by Tana Hoban

How to help when your student gets stuck. . .

- What do you need to find out?  
Student should be specific.
- What information do you have?
- What strategies are you going to use?
- Does that make sense?
- How do you know?
- How did you get answer?
- Does your answer seem reasonable?
- What else is there to do?

## Web Resources

<http://www.dreamsbeginhere.org/static/aboutdcps/departments/acadprog/mathematics/index.asp>

<http://mathforum.org/students>

<http://www.rainforestmaths.com/>

## Mathematical Emphasis

### Investigation 1

- \* Observing, describing, and comparing 2-D shapes
- \* Developing vocabulary to describe 2-D shapes
- \* Grouping shapes according to common characteristics
- \* Becoming familiar with the names of 2-D shapes
- \* Composing & Decomposing shapes \*
- Noticing relationships between shapes \*
- Using rotation & reflection to arrange shapes
- \* Visualizing & representing 2-D shapes \*
- Building a pattern by repeating a unit square

### Investigation 2

- \* Observing, describing, & comparing 3-D shapes
- \* Creating & using 2-D representations of 3-D shapes
- \* Constructing 3-D shapes from 2-D faces

### Investigation 3

- \* Observing & describing 3-D shapes
- \* Creating & using 2-D representations of 3-D shapes
- \* Building 3-D constructions from 3-D representations
- \* Visualizing, describing & comparing paths between two locations
- \* Visualizing & describing directions of turns

## Investigations in Number, Data, and Space



### Quilt Squares and Block Towns Grade 1

#### 2-D and 3-D Geometry

##### Unit Goals:

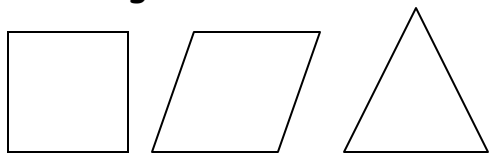
- Students observe, describe, compare, classify, represent, and build with 2-D and 3-D shapes.
- Students put together shapes to make patterns and designs
- Students learn about the characteristics of a variety of 2-D shapes and relationships among these shapes.
- Students sort and describe groups of shapes.

##### Proposed Time Frame:

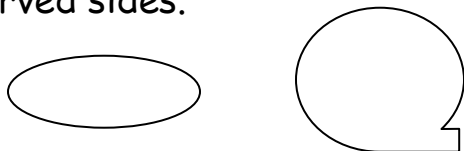
7 weeks

## Vocabulary

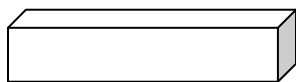
• polygons—simple closed shapes with straight sides.



• non-polygons—shapes with curved sides.



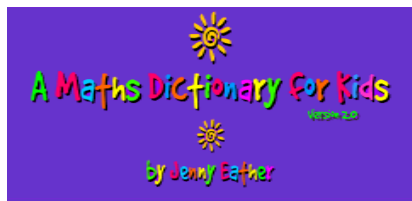
• prisms—3-D shapes that have two congruent faces



• pyramid—3-D shape with polygon as its base.

## Glossary

<http://www.amathsdictionaryforkids.com/>



## Naming and Describing Shapes

Your student will have their own informal ways of naming and describing the shapes they encounter. You can use the correct names so that your student hears the terms, but you don't need to insist that they use them. It is more important to focus on describing and comparing these shapes.

## Software Download

See your teacher for the password to download the software for this unit.

[http://investigations.scottforesman.com/qs\\_shapes.html](http://investigations.scottforesman.com/qs_shapes.html)



Russell, Susan Jo. Investigations in Number, Data, and Space: Quilt Squares and Block Towns. Dale Seymour, 1998.

## Game

### Mystery Footprints

You will need paper, pencil and several items from around the house to trace around

1. Use a new sheet of paper for each object to trace
2. Use a pencil, crayon, or marker.
3. Trace around each object.
4. Trace several objects from around the house.
5. Have your family members guess what the object is.