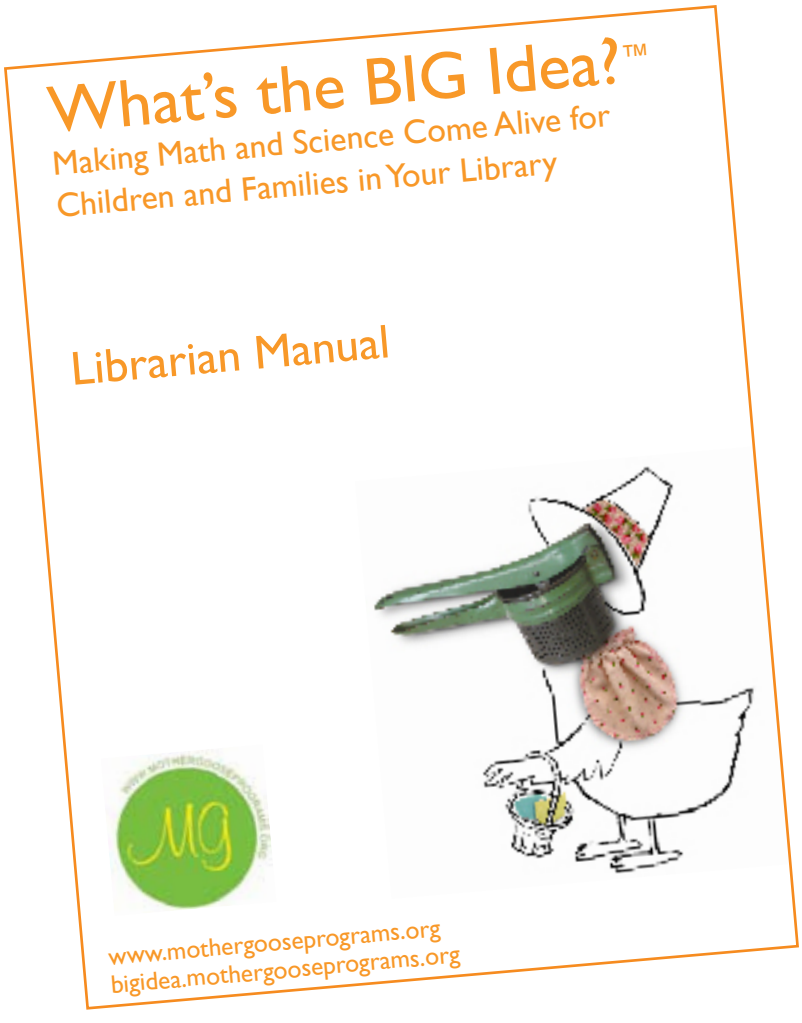
What's the BIG Idea?™

- **Get children excited about math and science**
- **Contribute to children's school readiness**
- **Use hands-on activities to make books come alive**
- **Increase the number of children attending your programs**
- **Meet national and local education standards**
- **Help children make sense of the world around them**
- **Have fun!**



Activities and Book Suggestions from this webinar are included in the

What's the BIG Idea? Librarian Manual

available at

www.bernan.com

What's the BIG Idea? Modules

include materials to be used in the hands-on activities.

20% off all *What's the BIG Idea?* products

Webinar Archive
at www.mothergooseprograms.org

What's the BIG Idea?
An Overview

Same and Different:
Sorting Together

Make a Splash with
What's the BIG Idea?
at your Library

Finding Patterns Everywhere

Shapes

Geometry for Young Children

Geometry is the area of mathematics that involves **shape, size, position, direction** and **movement.** The National Council of Teachers of Mathematics says, “As [children] become familiar with shape, structure, location and transformations and as they develop spatial reasoning, they lay the foundation for understanding not only their spatial world but also other topics in mathematics and in art, science and social studies.”

Exploring Shapes

Understanding geometric shapes is more complex than just knowing the names of common shapes such as circle, square and triangle. When children explore shapes, they:

- **Find the right shape for the right space** in a puzzle.

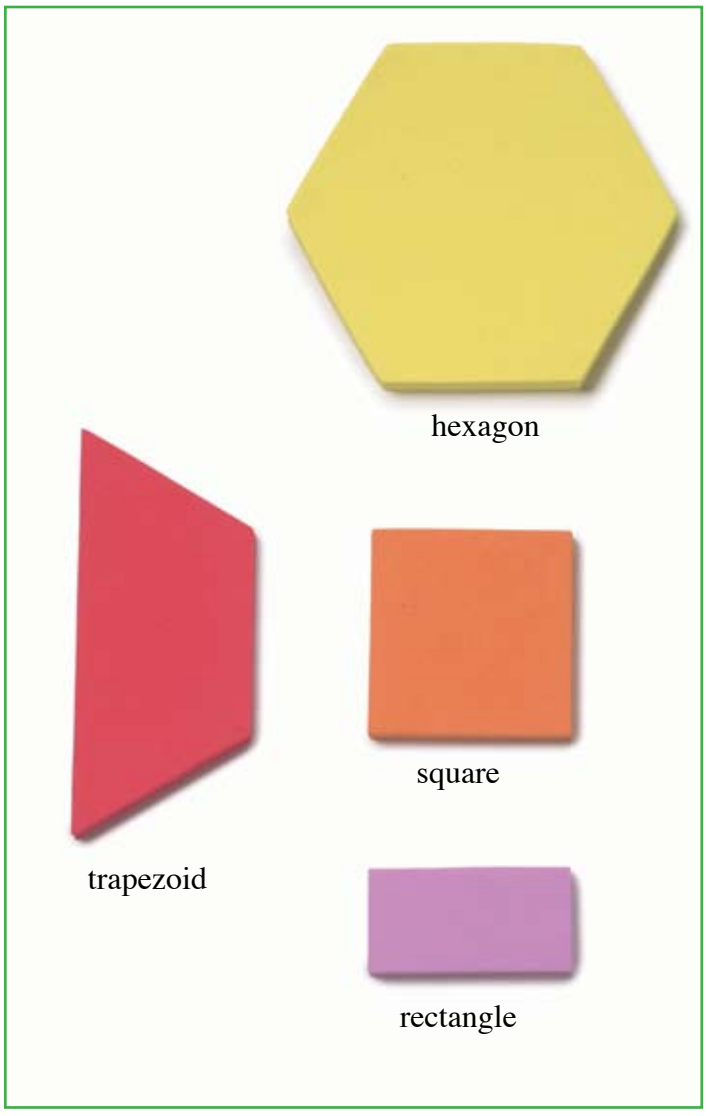
- **Create designs:** Put shapes together to make new forms.

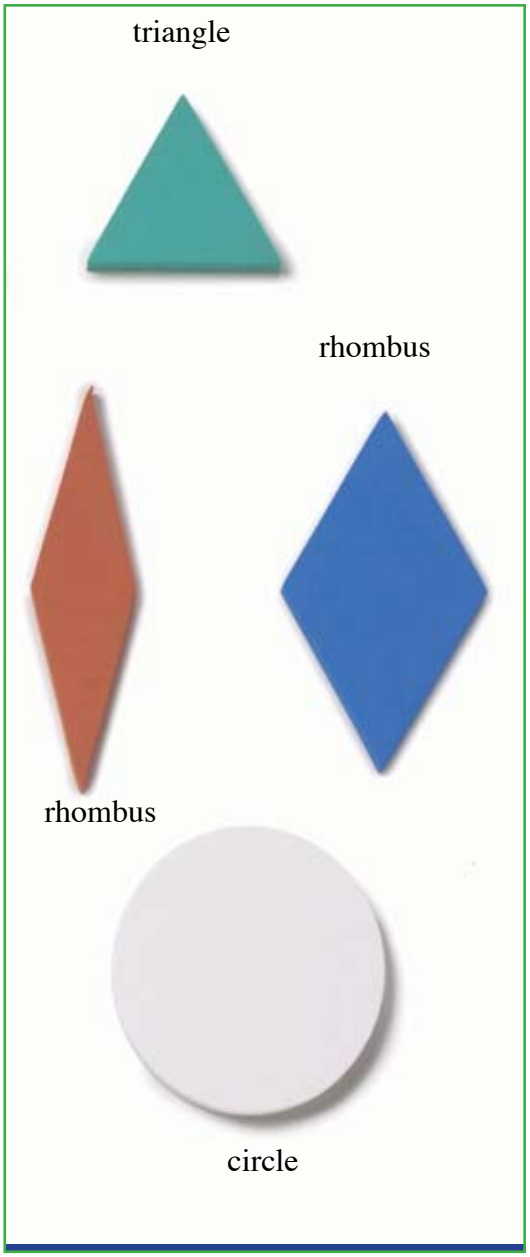
- **Recognize shapes and spaces:** Locate circles in the supermarket or observe that this room is larger than that one.

- **Create different shapes and sizes** by folding a single sheet of paper or using string or other objects.

- **Describe shapes:** Identify a shape's attributes such as number of sides, corners or faces.

- **Compare and match** shapes of different sizes.


hexagon
trapezoid
square
rectangle


triangle
rhombus
rhombus
circle

Math and Science Skills and Concepts

When children explore shapes and use spatial thinking, they:

• Learn to name, build, draw, compare and sort shapes.

• Describe the attributes and parts of shapes.

• Predict and test the ways shapes can be combined or taken apart in order to make other shapes and patterns.

• Compare changes in shape that take place when objects are slid, flipped or turned.

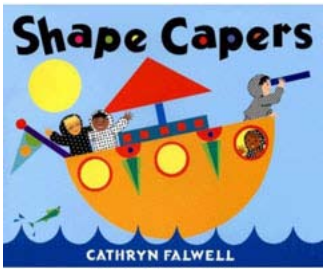
• Discover symmetry when arranging shapes into designs.

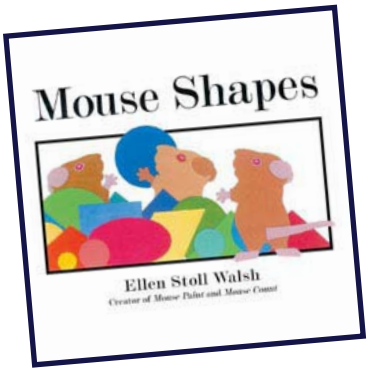
• Build spatial memory and visualization by forming mental images of geometric shapes.

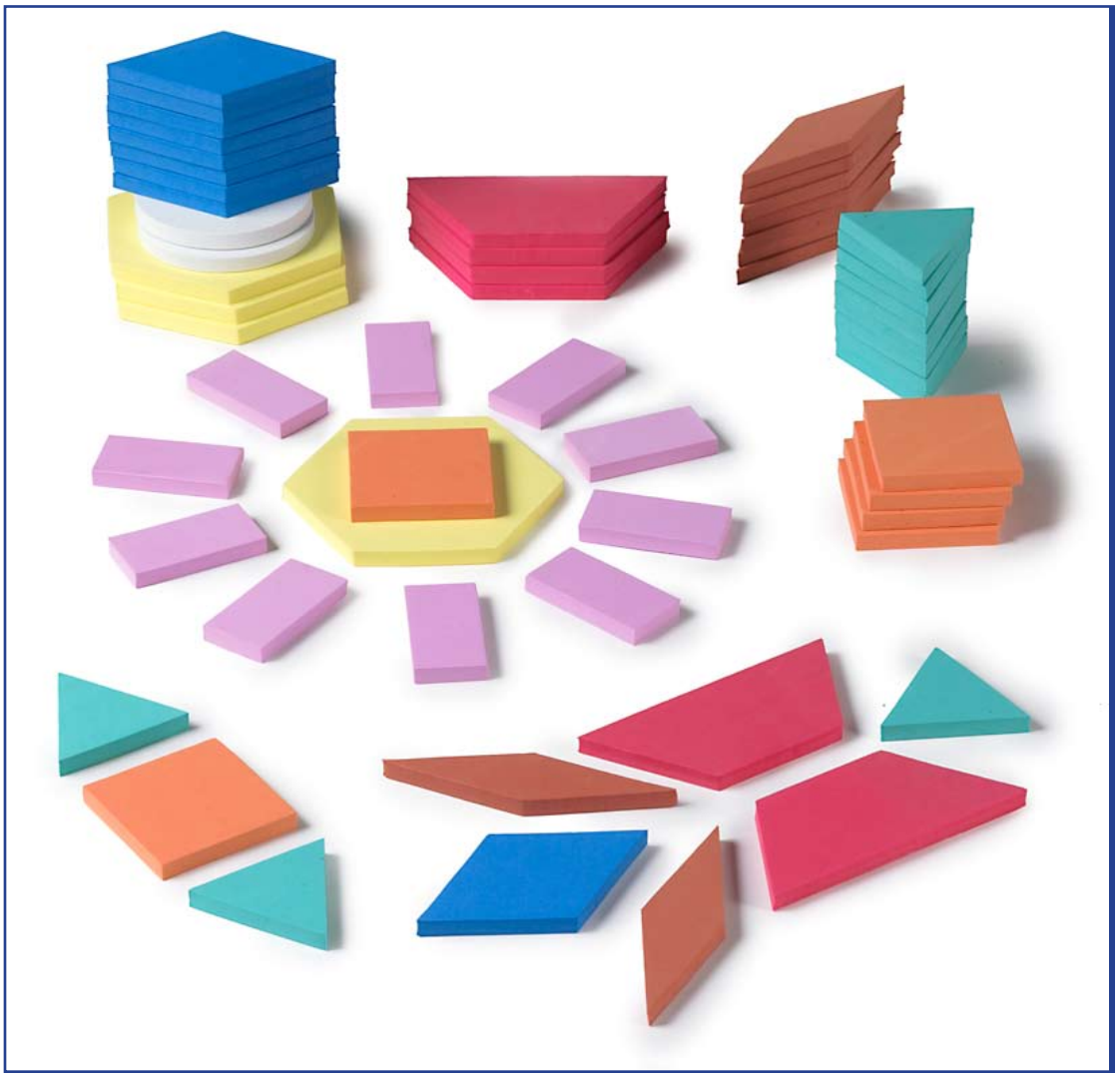
• Recognize and represent shapes from different perspectives.

• Locate shapes in the environment and describe their location by using positional words.

Books About Shapes







What do you notice about this shape?
What does it look like?
How many sides does it have?
What's it called?

Can you draw this shape in the air?
Can you make the shape larger in the air?
Can you make the shape with your body?

From one librarian:

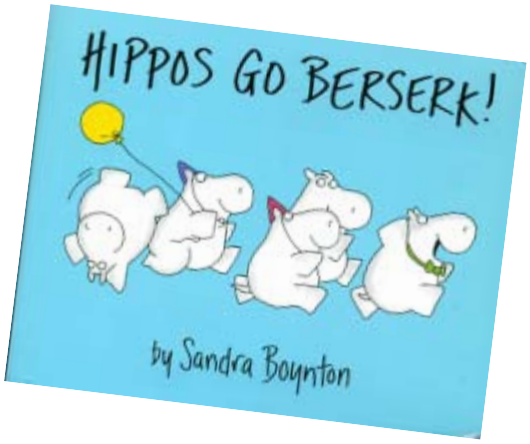
I did a **Shape Search** with older children. I gave each child a sheet of paper and asked them to make a tally chart—a list of the shapes they'd be searching for: rectangle, triangle, circle and square. Each child collected data by putting a mark next to the shape name as they found it.

We then put all the information on a "master" tally chart for display (see below). We never knew there were so many rectangles in the library!

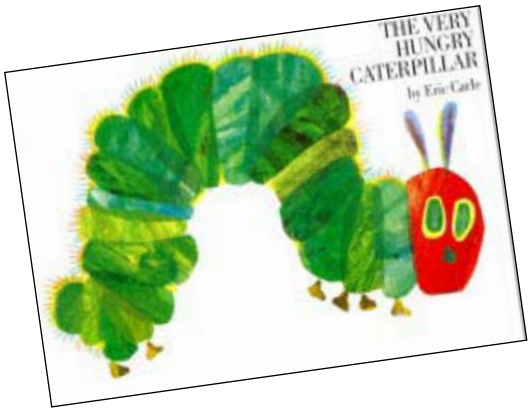
Master Tally Chart

SHAPE	TALLY OF	# OF
▲	𝍸 I	6
●	III	3
■	𝍸	5
▬	𝍸 𝍸 IIII	14


KNUFFLE BUNNY
A CAUTIONARY TALE BY Mo Willems


HIPPOS GO BERSERK!
by Sandra Boynton

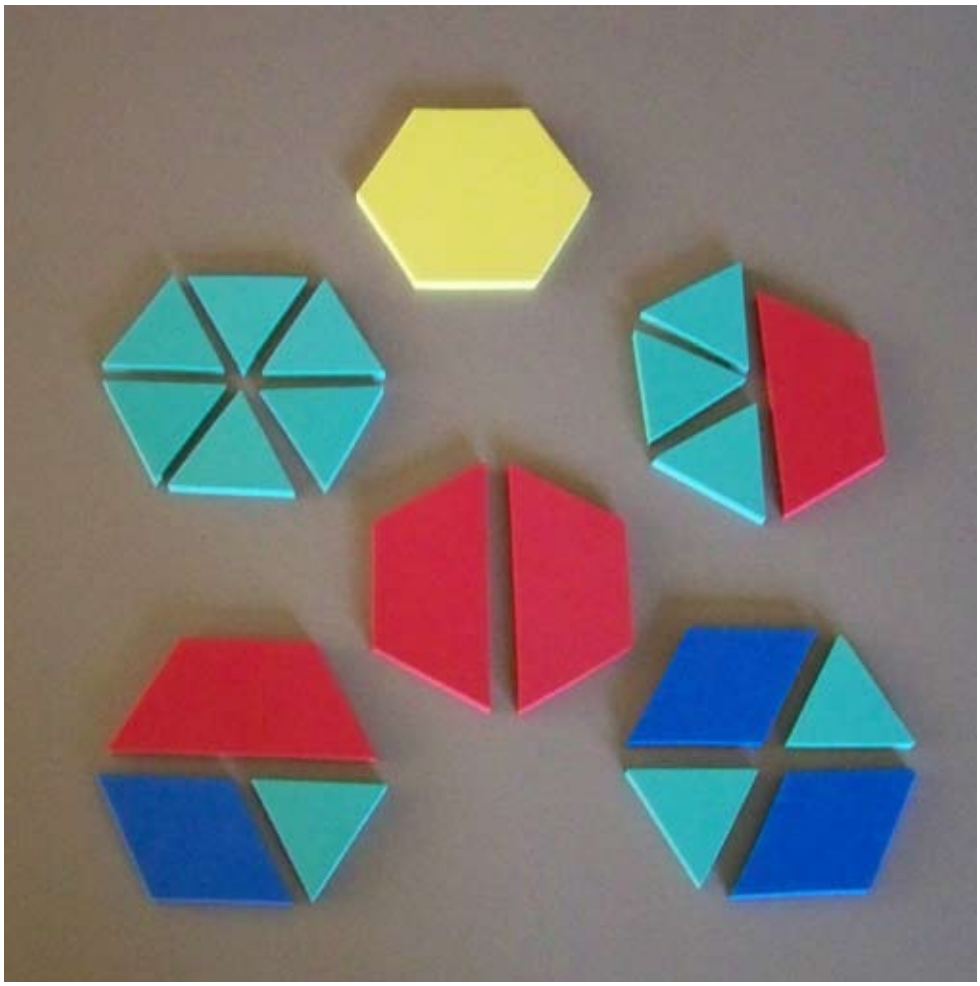

JANET STEVENS and SUSAN STEVENS CRUMMEL
THE GREAT FUZZ FRENZY


THE VERY HUNGRY CATERPILLAR
by Eric Carle

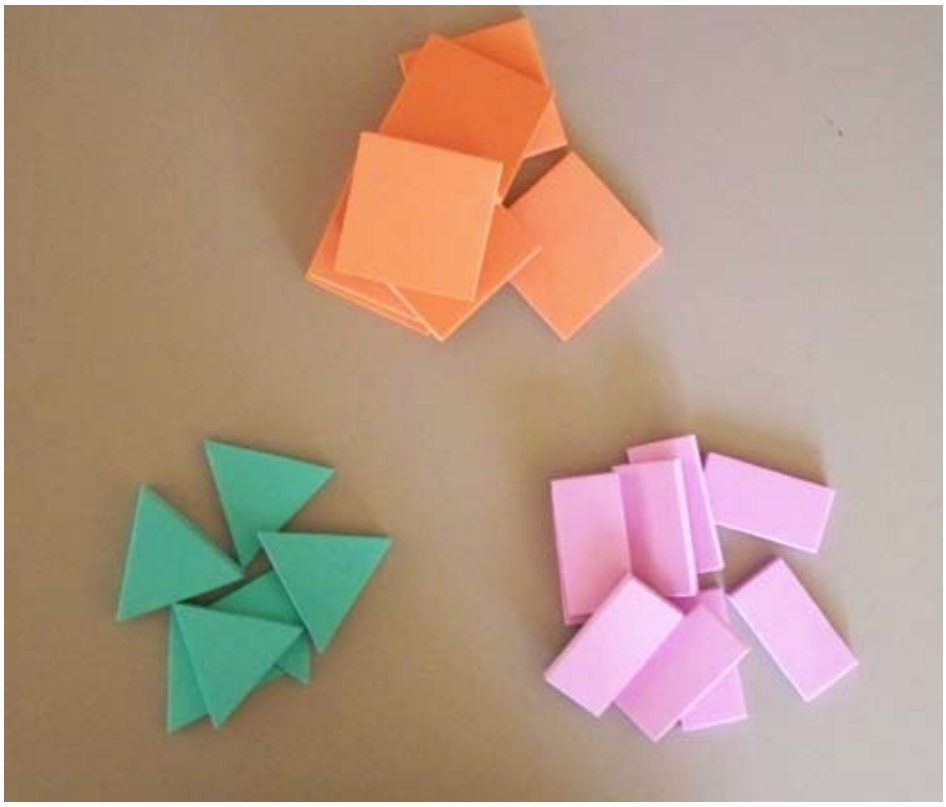

MEM FOX
The MAGIC HAT
Illustrated by TRICIA TUSA

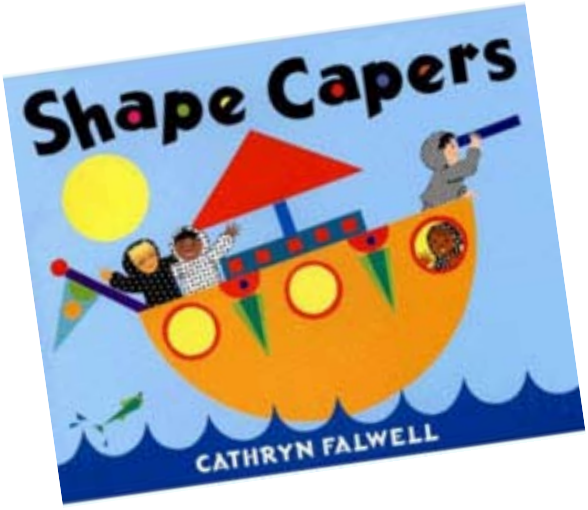

EVERY FRIDAY
DAN YACCARINO

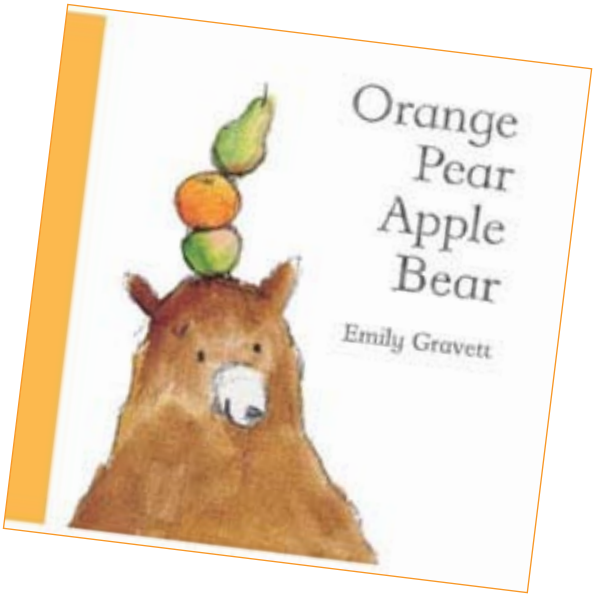
Combining Shapes



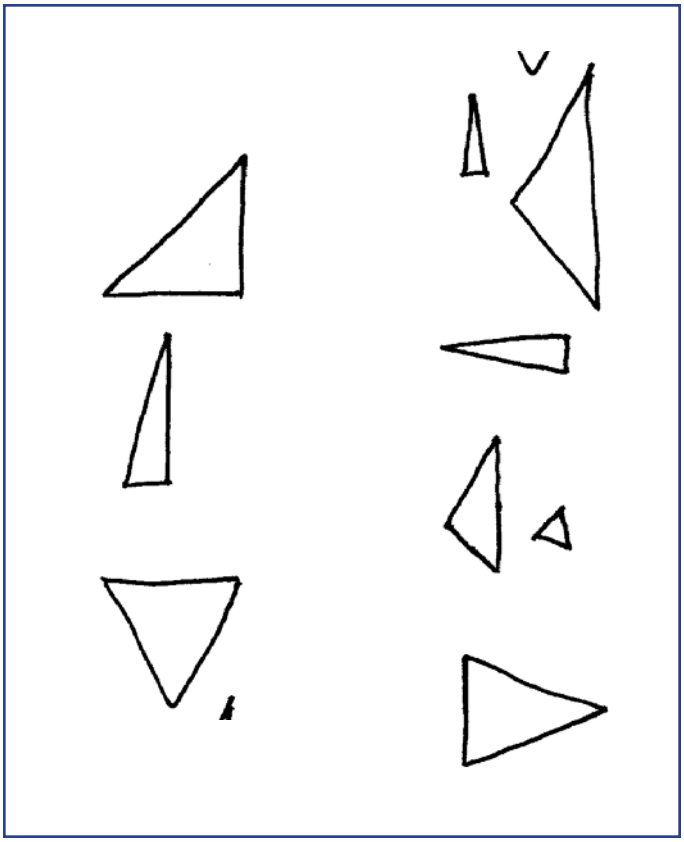
Sorting and Matching Shapes

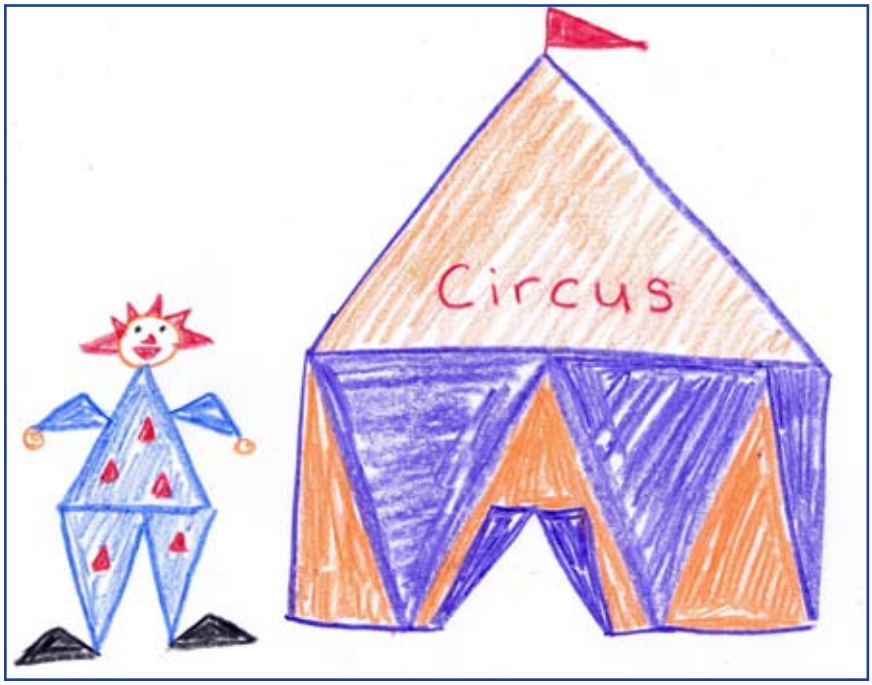






Just One Shape

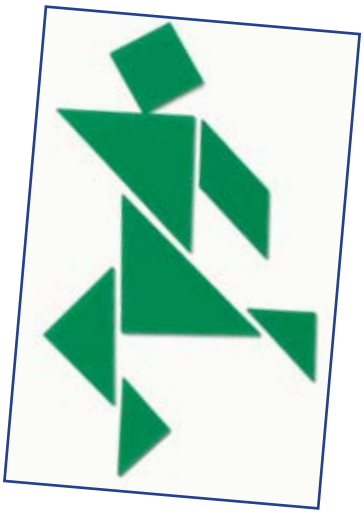


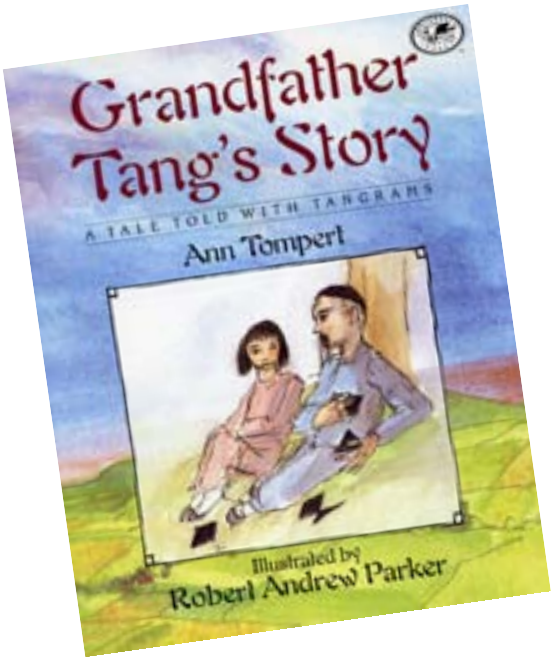


Shape Pictures and Designs

Shape Collages

Tangrams




Grandfather Tang's Story
A TALE TOLD WITH TANGRAMS
Ann Tompert
Illustrated by
Robert Andrew Parker

Discovery Center

Take the Tangram Challenge!

What's needed: Sets of tangrams

This is a very challenging activity for all ages.

Make a square, using…

- one tangram piece
- two tangram pieces
- three tangram pieces
- four tangram pieces
- five tangram pieces
- all seven tangram pieces

Discovery Center

Tangram Shapes Challenge

for older children and adults

What's needed:
Sets of tangrams

Use all 7 tangram pieces to:

Build...a triangle

- a rectangle
- a trapezoid
- a parallelogram

Process Skills of Science

Collecting and Using Data

Communicating Information and Ideas

Finding Patterns

Observing

Recognizing Relationships

Sorting and Classifying

. . . and Mathematics

Problem Solving

Reasoning and Proof

Communicating

Making Connections

Representing

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