

Curriculum topics:

- Geometry
- Problem Solving
- Shape Recognition
- Vocabulary Development

**Subject: Math,
Language Arts**

Grade range: Pre K-2

Who we are:

Resource Area for Teaching (RAFT) helps educators transform the learning experience through affordable “hands-on” activities that engage students and inspire the joy and discovery of learning.

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In collaboration with:



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SHAPE FUN

Investigate different shapes!



Have you ever seen randomly shaped pieces of wood and wondered how they could be used? Well, young children find geometry an exciting topic. Even with random pieces, there are many ways to investigate and discover geometric shapes.

Materials required

- Assorted pieces of wood, with smooth cut edges, in a variety of regular and/or irregular shapes, 20-30 pieces
- Bag or container to hold wood
- List of open-ended questions (see page 2)

To do and notice

- 1** Each student draws six pieces of wood from the container
- 2** Students lay the pieces on a flat surface
- 3** Students begin the investigation, students can:
 - discuss, compare, describe, and explore the shapes
 - answer open-ended questions – see page 2
 - sort the shapes
 - examine the shapes from different angles, flipping and turning each one.
 - combine the shapes to build new shapes

Curriculum Standards:

Taking Turns and Cooperative play (Early Education: Desired Results Dev. Profile(DRDP-R), Self-Social Development, 5 & 8)

Classification, Shapes, and Patterning (Early Education: Desired Results Dev. Profile(DRDP-R), Mathematical Development, 34, 36, & 37)

Gross Motor Skills (Early Education: Desired Results Dev. Profile(DRDP-R), Physical Development, 38)

Problem solving, Memory and knowledge, Curiosity and initiative (Early Education: Desired Results Dev. Profile(DRDP-R), Cognitive Development 28, 29, & 30)

Geometric Shapes (Common Core Math Standards: Geometry, Grade K, 1-6; Grade 1, 1-2)

Conversation & Asking Questions (Common Core English Language Arts Standards: Grades K-2, Speaking & Listening, 1 & 3)

Open-ended questions for investigation and exploration:

- What do you see?
- What shape or shapes does this look like?
- What objects does this shape look like?
- Look at a shape from different angles – What do you see?
- Look at two shapes – What is similar? What is different?

The math behind the activity

Geometry is an exciting topic for young children. It is important for young children to understand the four geometry concepts of:

- **shape** – including 2-dimensional (circle, triangle, square, rectangle) and 3-dimensional shapes (sphere, cube, rectangular prism, cylinder)
- **space** – up, down, near, far
- **transformations** – flip, turn, move
- **visualization** – the same shape viewed from different angles

“Young children need to recognize shapes, build with them, illustrate them in their own way, describe shapes’ attributes, compare shapes, and sort them by their characteristics.”

(*The Creative Curriculum For Preschool*, volume 4 by Juanita V. Copley, Candy Jones, Judith Dighe, 2010)

Learn more

- Investigate shapes of different length, width, and weight.
- Investigate a larger number of pieces.
- Give groups of students a design challenge to complete with the blocks, (for example, building the biggest, longest, or strongest structure).
- Have students add stickers and/or color shapes for more creativity.

Related activities: See RAFT Idea Sheets:

I Can Find a Shape Like That – [http://www.raft.net/ideas/I can Find a Shape like That.pdf](http://www.raft.net/ideas/I%20can%20Find%20a%20Shape%20like%20That.pdf)

Shape Collage – [http://www.raft.net/ideas/Shape Collage.pdf](http://www.raft.net/ideas/Shape%20Collage.pdf)

Shapes Galore – [http://www.raft.net/ideas/Shapes Galore.pdf](http://www.raft.net/ideas/Shapes%20Galore.pdf)

Resources

Visit www.raft.net/raft-idea?isid=720 for “how-to” video demos & more ideas! See these resources for more information on the following topics:

- Resources on shapes - <http://www.makinglearningfun.com/themepages/shapes.htm>
- *Is it rough? Is it smooth? Is it shiny?* By Tana Hoban

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