

Attribute Blocks

INTRODUCTION

Learning About...® Attribute Blocks is a resource providing hands-on activities and ideas that allow you, the teacher, to lead students in an active exploration of the world of mathematics. The activities presented involve students in the process of exploring abstract concepts through the use of manipulatives. Students are encouraged to think critically, plan strategy, and share conclusions.

This *Learning About...® Attribute Blocks* activity guide emphasizes:

- communication
- exploration
- problem solving
- analysis

Each set of Attribute Blocks consists of 60 blocks in three colors (red, yellow, blue), five shapes (circle, square, rectangle, triangle, hexagon), two sizes (large, small), and two thicknesses (thick, thin). The Attribute Blocks are contained in a compartmentalized plastic storage box. The storage box lid can be used as a template or shape sorter.

Attribute Blocks can be used to:

- identify shapes, colors, and sizes
- sort and classify by size, color, shape, and thickness
- create and identify sets
- create and identify patterns
- develop logical thinking

Exploring with Attribute Blocks

Students at all grade levels should be allowed time to freely explore and experiment with the Attribute Blocks before guided activities begin.

INTRODUCING AND EXAMINING SHAPES, COLORS, AND SIZES

Group Size: Pairs or Small Groups

Procedure: Provide a set of Attribute Blocks for each group of students. Encourage students to examine their blocks. Ask students to describe the blocks. Discuss how the blocks are alike and how they are different.

Hold up a square Attribute Block. Ask:

- How many sides does this block have? [4]
- Are all the sides the same length? [yes]
- What do we call the shape of this block? [square]

Hold up a triangle Attribute Block. Ask:

- How many sides does this block have? [3]
- What do we call the shape of this block? [triangle]

Hold up a rectangle Attribute Block. Ask:

- How many sides does this block have? [4]
- Are all the sides the same length? [No. Two sides are long, and two sides short.]
- What do we call the shape of this block? [rectangle]

Hold up a hexagon Attribute Block. Ask:

- How many sides does this block have? [6]
- Are all the sides the same length? [yes]
- What do we call the shape of this block? [hexagon]

Hold up a circle Attribute Block. Ask:

- How many sides does this block have? [None. It is round.]
- What do we call the shape of this block? [circle]

If the following chart is developmentally appropriate for your students, you may wish to create it on the board.

Block Shape	Number of Sides
Triangle	3
Square	4
Rectangle	4
Hexagon	6
Circle	0

Hold up a blue Attribute Block.

Have students find another block that is the same color. The block matched in color need not be the same shape or size.

- What color is the block I am holding? [blue]
- What color is the block you have matched? [blue]

Continue this matching for the red and yellow blocks. As students provide matching color blocks, you may wish to review the names of the block shapes.

Hold up a large square Attribute Block.

Have students find a block that is the same shape, only small in size. The small square block need not be the same color as the large square block.

Continue this activity for the other blocks—circle, rectangle, triangle, and hexagon. As your students become more proficient at matching sizes, large to small and vice versa, you may wish to become more specific in providing directions.

For example, ask:

- I am holding a large red triangle. Show me the same block, only smaller in size. [small red triangle]

Encourage students to be specific about shape, color, and size in describing the Attribute Blocks. Students should make use of correct, appropriate vocabulary.

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