



Objective 7: Grid, Sorting and Classifying

Estimated Time: 1 week


What Are the Children Learning?

This objective introduces children to common attributes, as well as sorting and classifying tasks involving only one attribute. Children will:

- Identify shape and color
- Sort and classify objects by color
- Sort and classify objects by shape

Looking Ahead

The Attribute Grid game format exposes children to information presented in a grid, as a precursor to future concepts and skills such as interpreting and creating graphs and orthogonality.

School to Home Connections*	Language Integration Activities	Teacher-Directed Activities	Computer Games
Cereal Sort	Show and Tell Chant	Classify the Mystery Shape	Attribute Grid 

* Activity pages are to be copied and sent home with children to complete with their parents.

Key Vocabulary: Red, blue, yellow, black, green, circle, square, triangle, color, shape, sort, classify, same, different

Show and Tell Chant

Objective: Grid, Sorting and Classifying

Objectives:

- ✓ Children will strengthen their ability to distinguish different colors and sizes of shapes.
- ✓ Children will acquire important vocabulary pertaining to color and size attributes.

Vocabulary: Red, blue, yellow, green, purple, orange, little, big, large, small, color, size

Instructions:

- Allow children to take turns coming up to the poster and pointing to the items that match the attributes described in the chant.
- To engage all children, cut out various shapes in different colors and sizes as mentioned in the chant. Provide each of the children with a shape cutout and ask them to hold up the shape if it matches the description they hear from the chant.



Opportunities for Exploring

Objective: Grid, Sorting and Classifying



Exploration/Work Time:

During this time, children should be encouraged to verbalize the attribute they use to classify to ensure that they connect vocabulary and the concept.

Art Center: Have children sort collage materials such as buttons and beads into different sizes or ask each child to string beads according to different attributes (e.g., one child strings only one-colored beads, another strings only large beads, and so on). Also, once children are done using the art supplies such as crayons and playdough, have them clean up the center by sorting those materials into the right color containers.



Meal Time:

Have students group food items according to likes and dislikes, healthy and not healthy, fruit and vegetables, or hot and cold items. This can be done as discussions during meal time.

Have students sort between empty and non-empty (or full) milk cartons, juice boxes, or cups to help you clean up.



Transitions:

Have children play “rock, paper, scissors” by asking every child to choose one of the items and show it after a countdown (“3, 2, 1, Show me your hand!”). Guide the children into 3 different groups depending on what they chose (rock, paper or scissors). Decide the first group to line up, and which group to line up next.

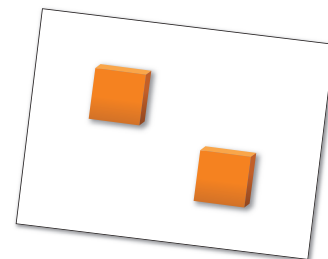
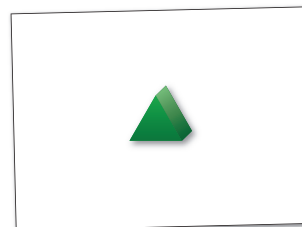


Outside Time:

Have children sort objects they find in the play yard (e.g., by placing the objects in hula hoops accordingly). Some sorting rules include natural (leaves, rocks, etc.) versus man-made (shovel, rubber ball, etc.), long versus short, little versus big, soft versus hard and rough versus smooth textures.

ACTIVITY **Classify the Mystery Shape**

Objective: Grid, Sorting and Classifying



Objective:

- ✓ Children will use their sense of touch and visualization to classify and name shapes/objects.

Content Areas:

- ✓ Algebra and Functions
- ✓ Geometry
- ✓ Mathematical Reasoning

Vocabulary: Sides, edges, corners, vertices, big, large, little, small, square, triangle, hexagon, trapezoid, rhombus

Learning Setting: Large or small group time

Materials Provided:

- None

Materials Needed:

- Pattern blocks
- Mystery box (e.g., tissue box)
- 8.5" x 11" paper

Preparation:

Find a box that can be used to hide pattern blocks inside, and has a hole big enough for children to reach in, e.g., a tissue box.

Open-ended questions:

- Do you feel the sides (edges) and the corners (vertices) of the shape?
- How many sides does the shape have?
- How many corners does the shape have?
- What is different about these two shapes?

Directions:

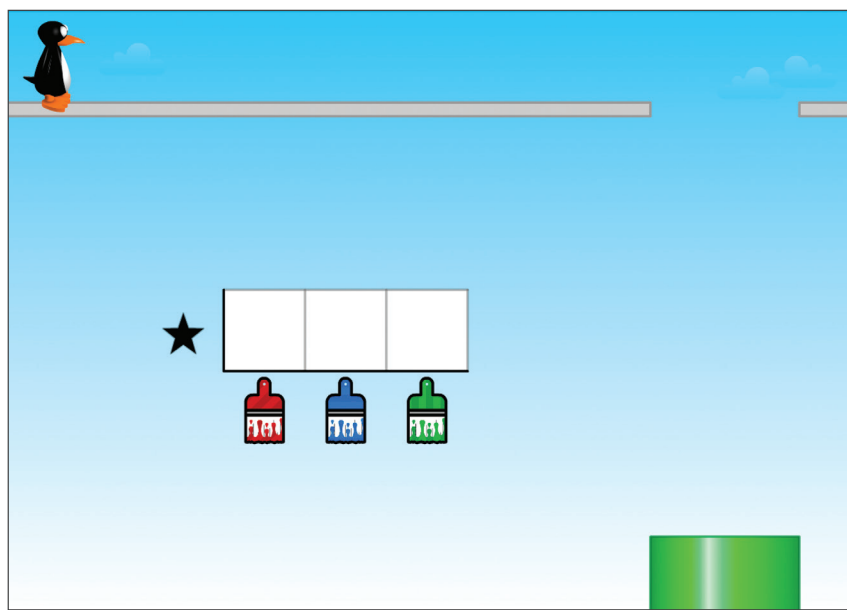
1. Show children a triangle block and explain the characteristics of the block such as its sides (edges) and corners (vertices). Count the sides.
2. Show children a square block next. Talk about the characteristics of the square. Count the sides.
3. Ask children how the triangle and the square are alike and how they are different.
4. After introducing both shapes to the children, place multiple square and triangle blocks inside of the mystery box. Remind them that there are two different types of shapes in the box – triangle and square.
5. Place two pieces of 8.5" x 11" paper on the table and on top of each sheet place a square or a triangle block.
6. Explain to the children that all triangles that they can find in the mystery box will go on the piece of paper marked by the triangle block and all the squares will go on the piece of paper marked by the square block.
7. Ask a child to reach into the mystery box, and without looking, determine in which category the shape belongs, triangle or square.
8. Remind the child to feel the shape and think about the shape. Ask open-ended questions.
9. Once sure, have the child pull the shape out to examine its defining attributes and confirm whether the shape was sorted into the correct category.

Extension:

Add more shape types (e.g., rhombus, trapezoid) to allow children to sort into more than 2 categories. In addition, other items can be placed inside the mystery box so that children can sort by other attributes (e.g., children can sort cotton balls and wooden blocks into two categories, soft and hard).

Attribute Grid

Objective: Grid, Sorting and Classifying



Game Objective:

Children will sort and classify objects according to different attributes (shape and color), one attribute at a time.

Game Description:

Children are asked to click on the grid cell that matches the attribute of a given object. If the right answer is provided, the green moveable platform will ascend to make a complete passage for JiJi to get across. The game difficulty increases as the size of the grid expands to indicate an increase in the selection options for a certain attribute. Children are first introduced to classification by shape, followed by color.

Number of Levels: 3

NCTM Curriculum Focal Point:

Geometry: Identifying shapes and describing spatial relationships, Data Analysis (Connections to the Focal Points)

NCTM Key Concepts:

- Children find shapes in their environments and describe them in their own words.
- Children learn the foundation of data analysis by using object's attributes that they have identified in relation to geometry and measurement (e.g., size, quantity, orientation, number of sides or vertices, color) for various purposes, such as describing, sorting, or comparing.