

# WHAT CAN YOU DO WITH SHOES, CEREAL, AND MONEY? (MODIFIED FOR ADEED)



## Science Concept:

Objects can be sorted.

## Objectives:

The student will:

- describe objects by color and shape;
- classify objects by color and shape; and
- create a poster sorting objects by color and shape.

## GLEs Addressed:

### *Science*

- [3] SB1.1 The student demonstrates an understanding of the structure and properties of matter by classifying matter according to physical properties (i.e., color, size, shape, weight, texture, flexibility).
- [3] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

### *Math*

- [K] F&R-2 The student demonstrates conceptual understanding of functions, patterns, or sequences by identifying, sorting, and classifying objects by attribute and identifying objects that do not belong to a particular group.

## Vocabulary:

- pile** – to put into a single group, heap, or mound
- same** – to be alike, or like another one
- shape** – the outline or form of an object or item
- sort** – to separate by group, kind, or type

## Materials:

- Students' shoes
- 12- x18-inch construction paper (one sheet per student)
- Glue (one bottle per pair)
- Shapes in various colors (cut from construction paper or use foam shapes – 15 shapes per student)
- Class list
- Paper and pencil (one per student)
- Lucky Charms™ cereal (1/2 cup per student)
- Poster paper (two or three sheets)
- Napkin or paper towel (one per student)
- Colored markers or crayons
- Scoop
- Play money coins (set of three pennies, three nickels, three dimes, and three quarters per student)

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## Activity Preparation:

Fold construction paper horizontally to crease, then open. Label one side "color" and the other "shape." Write vocabulary words on the board or poster paper. Have additional chart paper available for recording students' suggestions.

## Activity Procedure:

Please refer to the assessment task and scoring rubric located at the end of these instructions. Discuss the assessment descriptors with the class before teaching this lesson.

### Gear Up

#### *Process Skills: observing, communicating, and classifying*

1. Ask students to sit in a circle on the floor, take off one of their shoes and place it in front of them. Tell students they will be sorting their shoes into piles. Demonstrate, using the color red as a characteristic, asking students to put their shoe in one pile if it has red in it and another pile if it does not. Ask students to retrieve their shoe. Sort the shoes using other criteria (color, kind, size, etc.).
2. Discuss the vocabulary words (listed on the board or paper) as student sort. Observe as students sort and quietly document individual student success at sorting on a class list.

### Explore

#### *Process Skills: investigating, classifying, and communicating*

3. Divide students into pairs.
4. Tell students they will sort cereal into piles. Ask students to name the ways they sorted objects during the Gear Up (color, shape, size, etc.). Scoop about  $\frac{1}{2}$  cup of cereal onto a napkin or towel for each pair. Allow students time to sort in any way they decide.
5. While students sort, walk around the class, engaging students in dialogue, and monitoring and documenting student responses on a class list. Ask students questions, such as: Which pieces look the same? Which pieces are the same color? Can you find another way to sort the cereal?
6. Ask students to draw a picture of how they sorted their cereal.

### Generalize

#### *Process Skills: describing and communicating*

7. Discuss the following questions as a class:
  - a. What colors did you find in the cereal?
  - b. What shapes are there in the cereal?
  - c. Did you have some of the cereal in both the color and shape pile?
  - d. What other things could we sort by color in our classroom?
  - e. What other things could we sort by shape in our classroom?
  - f. What are some other ways can you sort objects?

### Apply

#### *Process Skills: observing and classifying*

8. Sort students into two groups: boys and girls. Ask the class what other ways they could sort students. Record student suggestions, and then sort the class in the ways suggested.
9. Ask students to return to their seats and draw a picture of one way the class was sorted.
10. Distribute a set of play money coins to each student (three pennies, three nickels, three dimes, and three quarters per student). Ask students: How can these be sorted? How do you know which belongs in each pile?
11. As students make suggestions, pause to allow time for them to sort according to that property (color, size, faces, value). Move around the room and document student knowledge of sorting.



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## RUBRIC

### Assessment Task

1. Distribute one piece of pre-folded construction paper and fifteen assorted shapes to each student. Instruct students to sort the shapes by color and shape. On the side of the paper labeled color, students should glue three or more shapes of one color. On the side labeled shape students should glue three or more of the same shape. Students who complete the task early may glue three, or more, pieces of the same size or shape on the back of the paper.
2. Ask students to dictate to an adult, who will write the answer on the paper. Students should describe why they sorted the shapes by color and shape. They may also describe how they sorted the objects by another shape or size.

### Rubric

Objective	GLE	Below Proficient	Proficient	Above Proficient
The student describes objects by color and shape.	[3] SB1.1	The student makes no attempt to describe a set of shapes, or describes only color or shape.	The student describes a set of shapes by color and shape.	The student describes a set of shapes by color, shape and another property.
The student classifies objects by color and shape.	[3] SA1.1	The student does not classify objects by color or shape.	The student classifies objects into a set of one color and a set of one shape.	The student classifies three sets: one color, one shape, and a third set of a different shape or size.
The student creates a poster sorting objects by color and shape.	[K] F&R-2	The student creates a poster with fewer than three shapes of the same color on half the page labeled "color," and fewer than three of the same shape on half of the page labeled "shape."	The student creates a poster with three shapes of the same color on the half of the page labeled "color," and three of the same shape on the half of the page labeled "shape."	The student creates a poster with three shapes of the same color on the half of the page labeled "color," and three of the same shape on the half of the page labeled "shape," and adds a third group of shape or size on the back.