

## Science Concept:

Objects can be classified by physical properties.

## Objectives:

The student will:

- describe properties of objects;
- classify objects; and
- write a sentence and draw an illustration about matter.

## 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 develops an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring and communicating.

### *Writing*

- [3] 1.2.2 The student writes for a variety of purposes and audiences by using expressive language when responding to literature or producing text (e.g., journals, pictures supported by text or poetry).

## Vocabulary:

**attribute** – relating to or descriptive of character

**classification** – the action of classifying or arranging in classes, according to common characteristics

**flexible** - capable of being bent or flexed; pliable

**matter** – that which has mass and occupies space

**physical properties** – an attribute, characteristic, or quality

**quality** – an attribute, property; a special feature or characteristic

**texture** - the appearance and feel of a surface: smooth, sandy

**weight** - a measure of the heaviness of an object

## Materials:

- Science journal (one per student)
- Pencil (one per student)
- Nature items like leaves, twigs, flowers, etc., to be collected by students (eight per student)
- Plastic grocery bags (one per student)
- Brown paper lunch bags (one per group)
- Roll of tape
- Scissors
- Common classroom items such as pencils, rulers, crayons, string, yarn, rubber bands, feathers, etc. (eight items per group)
- Dry erase/chalkboard
- Dry erase markers/chalk
- Classroom scale
- STUDENT WORKSHEET: "Crazy Classification"

**Resources:**

Goldish, M., *101 science poems & songs for young learners: with hands-on activities*. New York: Scholastic Professional Books.

**Activity Preparation:**

1. As a class, ask each student to collect eight items from outside (twigs, flowers, etc.) for Gear Up.
2. Predetermine student groups of three.
3. Write vocabulary words and definitions on the board.
4. Write directions for the Explore on the board and cover them until needed.
5. Put common classroom items in brown paper bags, so there is one bag of eight items, per group.

**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 and communicating***

1. Ask students if they have ever put things into groups by physical properties. What groups did they make? Why did they make those groups? Have them write responses in their science journal. Discuss responses as a group.
2. Show students a pile of nature items picked up from outside. Place them into groups, by color, where students can see. Ask students what was done and why it was done in that way.
3. Place items into groups by size. Ask students to describe what was done. Ask students how else could these items be organized by physical properties.
4. Introduce the vocabulary words.

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

5. Divide students into prearranged groups of three (see Activity Preparation). Explain groups will classify the teacher-selected items in the brown bag. Ask students to classify by color and size, then by other properties. Distribute STUDENT WORKSHEET: "Crazy Classification" and ask students to complete the worksheet. While students work within their groups, circle the room to observe, monitor, and document student understanding.

**Generalize*****Process Skills: describing, making generalizations, and communicating***

6. Ask students the following questions:
  - a. What discoveries did you make?
  - b. Were you able to classify the items by physical properties other than size and color?
  - c. In what other ways could you classify these items?
  - d. How is classifying objects into groups helpful?
  - e. Could you classify any group of objects given to you by physical properties? Why or why not?
  - f. What is classification?
  - g. Why do we classify objects by physical properties in our everyday life?
  - h. Why do we use classification in science?

**Apply*****Process Skills: describing, classifying, and communicating***

7. Ask students to describe something people classify by physical properties in their community and why. Instruct students to write the answer in their science journal. Students may share their ideas with the class.

## WILD BUNCHES

INSTRUCTIONS



### Extension Idea:

Ask students to classify money. Take them to a local store and discuss classifications by physical properties of anything found there and why.

### Answers:

**STUDENT WORKSHEET: "Crazy Classification"**

Answers will vary.

### Sources:

*Oxford English Dictionary.* (2009)

*American Heritage Dictionary.* (2000)

## Assessment Task:

Pass out plastic grocery bags then take students outside to collect eight different nature items (twigs, leaves, flowers, etc.). Once students return to the classroom, ask them to classify the eight items by physical properties. Using their science journals, students write a sentence to describe how they classified the nature items using at least three physical properties. Journal entry should include a title and an illustration that shows how students classified items by color and size using at least two examples. Students should use correct spelling.

## Rubric

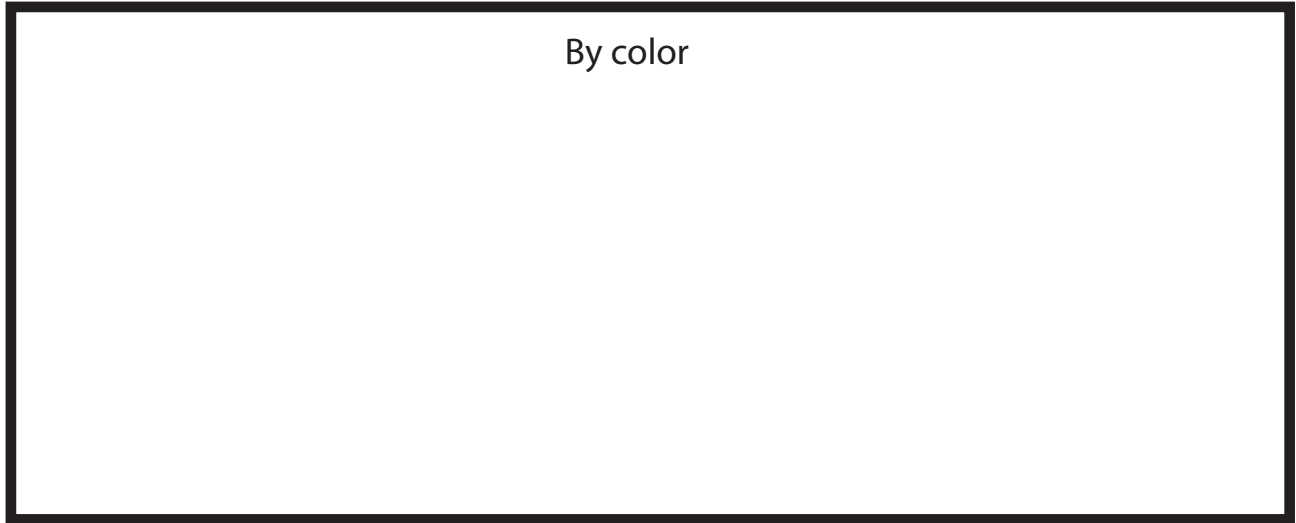
Objective	GLE	Below Proficient	Proficient	Above Proficient
The student describes properties of objects.	[3] SB1.1	The student doesn't attempt to describe or describes how objects can be classified by two or fewer physical properties.	The student describes how objects can be classified by three physical properties.	The student describes how objects can be classified by four or more physical properties.
The student classifies objects.	[3] SA1.1	The student doesn't classify or gives less than two examples.	The student classifies objects by color and size and gives two examples.	The student classifies objects by color and size and gives three or more examples.
The student writes a sentence and draws an illustration about matter.	[3] W1.2.2	The student doesn't attempt to illustrate or writes about matter in a science journal.	The student writes a sentence and draws an illustration about matter classified by physical properties.	The student writes a sentence and draws an illustration about matter classified by physical properties and includes a title and correct spelling.

NAME: \_\_\_\_\_

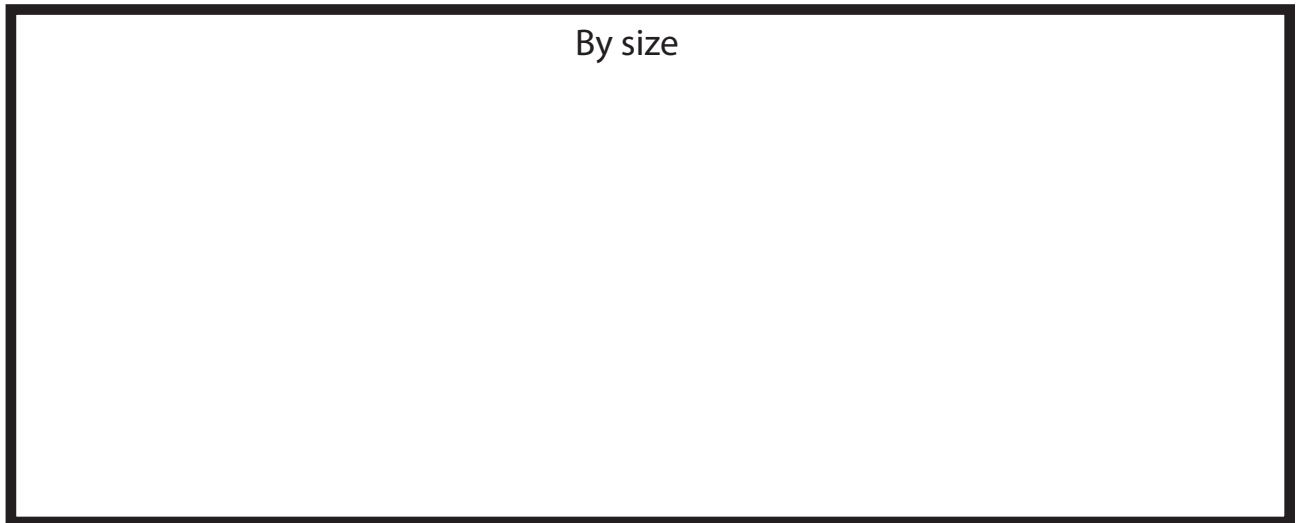
## CRAZY CLASSIFICATION

Illustrate how you classified your group items:

By color



By size



By \_\_\_\_\_

