

GLE 0107.9.1 Classify objects according to their physical properties.

- ✓ **0107.9.1** Classify solids according to their size, shape, color, texture, hardness, ability to change shape, magnetic attraction, whether they sink or float, and use.
- ✓ **0107.9.2** Compare liquids according to their color, ability to flow, solubility in water, and use.

Sorting Objects

Overview: Teacher and students will discuss how things can be sorted by their physical properties. Students will sort objects into groups of size, shape, color, texture, hardness, ability to change shape, magnetic attraction, whether they sink or float, and use. Students will be assessed on sorting objects into correct group or groups.

Focus/Essential Question(s):

What is an attribute?

How can we sort these objects by their physical properties or attributes?

What is the size, shape, color, texture, hardness, ability to change shape, magnetic attraction, whether they sink or float, and use?

Can an object fit into more than one of these attributes?

Resources/Material: A variety of objects that fit into at least one of the categories. (Make sure that some fit into more than one category!) For example, rocks, shells, marbles, cotton balls, yarn pieces, erasers, feathers, pencils, crayons, small balls, keys, iron filings, silly putty, etc. You will need enough objects so that students can work with a partner and have six (6) objects for each pair of students.

Paper bags, enough for objects for each pair of students.

Paper and pencil for each student.

Assessment: Given a group of objects, the students will sort them into the correct category or categories. Teacher will assess student's individual papers. Teacher will also assess participation in the activity. (Feel free to utilize whatever system is already in place for your classroom.)



Students correctly sorts 5 - 6 of the objects into correct category or categories and participate appropriately.



Students correctly sorts 3 - 4 of the 6 objects into correct category or categories and mostly participate.



Students correctly sorts 1- 2 of the 6 objects into correct category or categories and mostly do not participate.

Instructional Activity:

1. Teacher will begin lesson by telling students that today we are going to sort different objects by their physical properties one or more attributes. Teacher will have all boys stand on one side of the class and the girls stand on the other side of the class. Teacher will ask how did she use a single attribute to sort the class. Students will respond with teacher's guidance that one group is boys and one group is girls. Teacher will sort the students by multiple attributes, such as hair color and gender. Students will respond again with the teacher's guidance to determine the sorting rule. Teacher will ask students for other ways to sort students, for example short pants/long pants, color of shirts, types of shoes, hair color and length. Encourage using multiple attributes to sort.
2. Teacher will tell students they are going to sort objects into groups based on one or more physical attributes. Teacher will have students suggests items in classroom that would go into each group. For example a chalkboard/whiteboard is magnetic, blow up ball can change shape. Continue with examples until student seem to have a grasp on this concept.
3. Teacher will pair students with a partner and give each partner a bag containing 6 objects, and each a piece of paper. Then teacher will distribute handouts that are divided into sections and label each section using: size, shape, color, texture, hardness, ability to change shape, magnetic attraction, whether they sink or float, and use. Students will read words with teacher. Teacher will ask the students to list the objects on the top of the paper and mark the category or categories that describe the object with an X or appropriate word. Students will also be asked to give at least one use for each object. The teacher and students will work together as a class to help students read, write, and classify objects. Teacher will monitor students for understanding and comprehension and assist them if they need help.
4. Teacher will review with students about how to sort objects and to use their hands to help them decide how the objects feel. Then teacher will instruct students to sort items in bag and record on their paper by drawing a picture or writing the name of object under the correct category. Teacher will instruct students that objects may fit into more than one category. Teacher will walk around room and monitor and assist students as needed.
5. If a group finishes early they may trade with another group that is finished their bag of objects and sort them. They may also see if they can find other items in the class that would go into each group.

6. When all students are finished, the groups will take turns sharing their findings. Teacher will lead students in a discussion about the objects to see if anyone will suggest that some objects could possibly go into more than one group.

7. Teacher will take up student's papers to be assessed and the bags of objects.

Names: _____

PHYSICAL ATTRIBUTE SORT

ATTRIBUTE	#1	#2	#3	#4	#5	#6
Size (small, medium, or large)						
Shape (round, square, oval, etc.)						
Color						
Texture (smooth, hard, bumpy, etc.)						
Hardness (yes or no)						
Ability to change shape (yes or no)						
Magnetic attraction (yes or no)						
Sink or float?						
Use						