

Characteristics of Rocks

Standard 2: Earth and Space Science. Students will gain an understanding of Earth and Space Science through the study of earth materials, celestial movement, and weather.

Objective 3: Describe the characteristics of different rocks.

1. Explain how smaller rocks come from the breakage and weathering of larger rocks.
2. Describe rocks in terms of their parts (e.g. crystals, grains, cement).
3. Sort rocks based upon color, hardness, texture, layering, particle size and type (i.3. igneous, metamorphic, sedimentary).

Cool Collectibles and Super Sort

Background Information

Rocks have many different properties. The properties of rocks will determine how rocks are used. Rocks can be sorted and classified according to their properties. Rock collecting is a popular hobby. Many people enjoy collecting rocks. People who collect rocks for fun are called “rock hounds.”

Materials:

- Egg carton for each student (Ask students in advance to bring these in)
- Rock cleaning station with water, an old toothbrush, and a permanent marker to label rocks with student initials
- A space to keep the egg cartons
- Sorting cards
- Venn Diagram sheets

Instructional Procedures

1. Explain to students that they will start a classroom rock collection. Explain the general rules:
 - a. Rocks should not be purchased at a store.
 - b. Rocks should fit in one of the egg carton compartments.
 - c. Ask permission before taking a rock from private property.
 - d. Try to get rocks from different locations.
2. At this point you may want to decorate your “rock” cartons and put them in an area where they will be safe. When students bring in rocks, allow them to clean them, label them, and put them in their cartons.
3. When everyone has several rocks, it is time to play the super sort.

4. Get in a giant circle. (You may want to do this in the gym.) Ask each student to take off one shoe and place it in the center of the circle. How many ways can the shoes be sorted?
5. Sort them by color, by size, by design, by material, by how they are fastened, etc.
6. Have the students move into groups depending on the shoe that they are wearing. (If you are doing this for a physical education activity, have them use different locomotor skills as they move from group to group, such as skipping, jumping, galloping, etc.)
7. Next, ask what would happen if you decided to sort using two attributes? Hopefully the students will decide to use two intersecting circles—a Venn Diagram.
8. Try a few of those examples such as, black shoes and Velcro®, or white laces and zigzag soles.
9. When the shoe sort is complete, go back to class and try the sort with rocks. Ask the students to brainstorm some attributes of the rocks. Write the attributes on the board or overhead (e.g., speckled, smooth, brown, rough, shiny, striped, black, white, etc.).
10. Have some attribute sorting cards already prepared. Pass them out to the students by table. As a group, ask the students to sort their rocks into the Venn Diagrams. When the groups are finished, have students walk around the room and observe the different sorts.
11. They may repeat this activity several times.