

# This is Your Rock, This is My Rock

## UTAH CORE CURRICULUM

Grade 2 Standard III Objective 3a

Grade 4 Standard III Objective 1a; Standard V Objective 3a

## BACKGROUND

Correctly identifying rocks and minerals is an important skill for geologists. A geologist needs background information about rocks and minerals, good observation skills, and a lot of practice. See if you can identify different rocks and minerals in the following activity.

Rocks are made up of one or more minerals. The individual minerals that compose rocks have specific identifying properties such as luster, crystal habit, color, streak, hardness, cleavage & fracture. Some properties are more useful than others for identifying the mineral, depending on the mineral. For example, the mineral quartz can be found in several different colors (white, pink, purple, and gray). So, using an identifying property besides color would be helpful in identifying quartz.

Types and relative proportion of minerals that occur together in a rock tell scientists how a rock formed. Rocks are named based on how they formed, and by the types, amounts and sizes of minerals in the rocks. A geologist needs to use good observation skills to identify rocks as well.

## MATERIALS

- Rocks and minerals (at least one per student)
- Hand lenses
- Index cards and pencils

## PROCEDURE

1. Give each student or pair of students a rock or mineral sample. Give the students 10 or 15 minutes to look at the samples with hand lenses. Have students describe their sample, noting the colors, weight, size, and/or shape. Before beginning, the teacher could model the procedure by holding up one large sample, and writing student observations about the sample on the board.
2. Samples are then collected and put into a pile at the front of the room.
3. Students exchange their index card with another student or group for the detective phase. Using the rock or mineral descriptions, the students will then try to find the sample (5 minutes).

4. The teacher then checks to see if each detective group has the correct sample for their description sheet.
  5. Detective groups should then expand the original description sheets with their own observations of the sample. (5 - 10 minutes)
- (Optional) Have the students repeat steps 2 - 4, and see if the expanded descriptions and additional observations have made this process easier.
  - (Alternative) Instead of passing the samples around, the teacher may want to hold up the samples and have students offer descriptive terms that can be written on the blackboard. Students could then be handed samples to identify based on the written descriptions on the blackboard.

### **Additional Activities**

- The students can discuss the advantages of having more than one student add their observations to the rock descriptions.
- Students can create a booklet of the samples and their descriptions for display in the school library.
- Have students feel, smell, examine or even taste (if you have halite) their rock (use hand lenses).
- Ask students how rocks feel and discuss all the different qualities that were discovered by touching the rocks.
- Continue asking students about smell, taste, visible features, etc. and discuss answers.
- Pass rocks to another classmate and have them add observations to the first students'. Continue passing along until children are satisfied that they have observed all they can about the rock samples.
- Sort rocks into groups based on the observations students made.
- For example – “Who is holding a rock with wavy lines in it? Let’s put them on *this* table.” “Who has a rock that has specks of black in it?” etc.
- Discuss how the rocks were grouped and if there are any more ways to group or regroup them.