

Rock Game

Grade:3-5

Time:1-2 class periods

Lesson #1A:

What are Minerals?

Overview:

Students describe rocks in detail using new and common terminology, in a game where teams try to identify the rock being described.

Essential Questions:

- What are properties of rocks and minerals?
- How and why do scientists describe things?

Contents:

- Standards addressed
- Vocabulary
- Assessment
- Teacher Information and Procedure
 - o Prior knowledge for students
 - o Materials needed
 - o What to do in advance
 - o Teaching the lesson
 - Gear up
 - Explore
 - Generalize
 - Assess
- Extensions, Adaptations and more resources
- Rock Game Handout (Cut in half pages)

Source: Adapted from previous AMEREF Curriculum

Teacher Information and Procedure

Prior knowledge for students: none

Materials needed:

- Alaska Rock and Mineral Collection (40 specimen)
- chart paper
- markers

What to do in advance:

- Set up enough stations to allow 2-4 students per station. Place 5-10 rocks, chart paper and markers at each station.

What to do during the lesson:

Gear up:

Show samples from the rock and mineral set to demonstrate vocabulary for describing rock properties:

- **Luster:** The way in which the surface of a mineral reflects light. Show samples of obsidian (glassy), talc (dull), pyrite or galena (metallic), graphite (waxy). Students may also use words such as "shiny" or "sparkly" to describe luster
- **Texture:** General appearance of the rock surface in terms of its minerals or crystals. Show samples of gabbro, granite (coarse) halite, shale (fine), obsidian (smooth) Pyrolusite might show "fibrous" texture.
- **Stratification:** The accumulation of material as layers in rocks. "Stratified" is another term for "layered". Samples of sandstone or shale in your mineral set may or may not show stratification. If not, try to find a layered rock elsewhere as an example.
- **Composition:** Describes "ingredients" of the rock. Students will describe this in terms of what they see in the rock: Big white grains, small black shiny grains, little holes, white "veins" or lines, etc. Use conglomerate, granite, and other rocks that you find to practice describing composition.

Encourage students to use other, more familiar terms for describing the rock samples as well. They can describe the color, the way it feels (soapy, rough), whether it is heavy or light for its size. In terms of preparing for future identification and classification of rocks and minerals, it's helpful if students don't use "size" as a descriptor. Discuss the idea that smaller rocks come from the breaking and weathering of larger rocks as part of the rock cycle.

Choose **ONE** rock out of the group to describe how it LOOKS and how it FEELS. Try to come up with good describing words that won't give your rock away! Look at similar characteristics that all of your rocks have in common...

Group #

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

.....

Everyone pick up a rock. One member of your group will read the clues. If the clue does not match your rock, put it down. Continue until you have all agreed upon which rock the group chose.

Write the number of the rock next to THEIR group number

Group 1-

Group 2-

Group 3-

Group 4-

Group 5-

Group 6-

How many did your team get correct? _____