

## IS IT A MINERAL?

**PURPOSE:** To help students identify the characteristics of a mineral.

**BACKGROUND:** A mineral is a naturally occurring, inorganic, solid with a definite chemical composition and crystalline structure. Using a classification key is important in all sciences and students need to become comfortable with trusting their prior knowledge to classify objects into certain categories. When learning about Rocks and Minerals in the Earth Science Class, being able to classify objects is extremely important. This activity is an introduction to this process and also allows students to remember the characteristics of a mineral.

As a warm up for this activity you could have students define inorganic, solid, and crystal on their own paper and then lead the class in a discussion where these terms are defined from student prior knowledge.

### VIRGINIA STANDARDS OF LEARNING

ES.4 The student will investigate and understand how to identify major rock-forming and ore minerals based on physical and chemical properties.

Developed by C.P. Anderson

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# SCIENCE IN THE PARK: GEOLOGY

*Time: 40 minutes*

All minerals have common characteristics that we use to identify them as minerals. Those characteristics are:

1. Naturally occurring (not manmade or containing an thing made by humans)
2. Inorganic (they are not alive and have never been alive)
3. Solid
4. Definite crystalline structure (Think of a diamond or salt. Sometimes the crystals are too small to see without a magnifying glass or microscope.)
5. A definite chemical composition (Any time you find this mineral it is composed of the same elements in the same amounts. It has only one type of substance in it.)

You will be given a container with ten items in it. Using the definition of a mineral from above, decide if each one is a mineral or not. If the item has the characteristic, put a check in the appropriate box on the data table. If an item has checks in **all** the columns, it is a mineral.

## Data Table:

|   | Name and describe the item | Naturally occurring? | Inorganic? | Solid? | Made of only 1 substance? | Mineral (yes or no) |
|---|----------------------------|----------------------|------------|--------|---------------------------|---------------------|
| 1 |                            |                      |            |        |                           |                     |
| 2 |                            |                      |            |        |                           |                     |
| 3 |                            |                      |            |        |                           |                     |
| 4 |                            |                      |            |        |                           |                     |
| 5 |                            |                      |            |        |                           |                     |

# SCIENCE IN THE PARK: GEOLOGY

|    | Name and describe the item | Naturally occurring? | Inorganic? | Solid? | Made of only 1 substance? | Mineral (yes or no) |
|----|----------------------------|----------------------|------------|--------|---------------------------|---------------------|
| 6  |                            |                      |            |        |                           |                     |
| 7  |                            |                      |            |        |                           |                     |
| 8  |                            |                      |            |        |                           |                     |
| 9  |                            |                      |            |        |                           |                     |
| 10 |                            |                      |            |        |                           |                     |