Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Identifying Physical Properties of a Mineral

Physical properties help us \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ one mineral from another.

Color

Color is the least reliable property for identification purposes. Exposure to air can change the color of the exposed surfaces of a mineral. Several minerals can be the same color. Some minerals may come in a variety of colors.

Identify the color of minerals

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Streak

Streak is a more reliable property than color. The streak is the color of the powered form of the mineral. Rub each mineral on the streak plate (tile) and record its streak color. Note how the streak compares to the color of the mineral.

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Luster

Luster is the way a mineral reflects light. Metallic luster is found on minerals that shine like metal. Non-metallic luster includes: vitreous: glassy, pearly: like a pearl, and dull: clay-like in appearance. Identify the luster of the following minerals.

8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Fracture

When minerals break with uneven, rough or jagged surfaces. List 2 types of fracture. Describe your observations.

1. Mineral: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Type of fracture: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Mineral: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ type of fracture: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cleavage

Cleavage is the tendency of a mineral to break along smooth flat surfaces. List 2 types of cleavage. Identify the mineral. Describe your observations.

1. Mineral: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ type of cleavage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Mineral: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ type of cleavage: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observations: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hardness

The hardness of a mineral is determined by a scratch test. Read about Moh’s Hardness Scale on the handout. The softest mineral is talc (1 on Moh’s scale). Scratch the talc sample with your fingernail. Every mineral above talc on the scale is harder than talc and can therefore scratch talc. The higher the number the harder the mineral. What minerals on Moh’s scale can you find in the collection? Put them in order from softest to hardest. Do a scratch test. Describe the results.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ could scratch \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (reverse it)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ could not scratch \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Specific Gravity

A mineral’s specific gravity is a ratio of a mineral’s weight compared to an equal volume of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (use your book p. 70) The more dense a mineral is, the higher its specific gravity.