**Minerals Overview**

1. What is an element?

2. What is an atom?

3. To be classified as a mineral, it must meet the following 4 criteria.



**Mineral Classification**

4. A minerals luster is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Luster is broken into three main categories. Minerals that reflect the most light are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The other two categories of luster are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (from more reflective to less reflective). The color of a mineral in powdered form is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. What does hardness test?

5. What is the name of the hardness Scale?

6. Give the hardness of the common objects used to test hardness.

7. List the 7 tests mineralogists use to identify minerals.

7. What is cleavage?
8. What is fracture?
9. What is hardness?

11. Some of the special properties of minerals are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Minerals in the Crust**

8. The two most common elements in the Earth’s crust are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ minerals made up of these elements are in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ percent of the Earth’s crust. The other class of minerals that don’t contain the most abundant mineral is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

9. Sand and glass are both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Explain how this process occurs?

**Minerals and Mining**

10. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a vein of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_between layers of rock.

11. Sifting through sand and gravel deposits for minerals is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Where is it done today?

12. Mining that digs ore and leaves a large hole in the ground is called\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Rock that contains no valuable minerals is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. After minerals have been leached from the ore, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are put in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

13. What is the difference between ore and mineral?

14. What is hard rock mining?

15. Explain how Acid Mine Drainage happens.

16. What is reclamation?

17. Explain how recycling can reduce the effects of mining.

18. What is density and what is specific gravity? How are they different