Mineral Webquest Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date: \_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_

1. <http://academic.brooklyn.cuny.edu/geology/grocha/mineral/mineral.html>

**Read the information at the top of the page and answer the following questions.**

1. Give an example of two minerals that have the same chemical composition, but different atomic arrangement.

**Click on color.**

1. List 4 of the potential colors for quartz.
2. Name three minerals (and their colors) that have defining/constant colors.
3. Give two reasons why color is not the best way to identify a mineral.

**Go back to the main page and click on streak.**

1. What is streak? Is it always the same as the color of the mineral?
2. Which of the examples on the page has a streak that is very different than its color? Give the name of the mineral, its color and its streak color.

**Go back to the main page and click on hardness.**

1. What is the name of the scale used to determine the hardness of minerals?
2. If I have a mineral that can be scratched by a diamond, but cannot be scratched by topaz, what is its hardness?
3. Name and give the hardness of an example of a soft, intermediate and hard mineral.

**Go back to the main page and click on cleavage/fracture.**

1. What is cleavage? What is fracture?
2. Complete the following chart.

|  |  |
| --- | --- |
| Mineral | Type of Breakage |
| Halite |  |
| Calcite |  |
| Gypsum |  |
| Muscovite |  |
| Feldspar |  |
| Quartz |  |

1. Which of the two minerals above have cleavage in one direction?

**Go back to the main page and click on Reaction to HCl**

1. What class of minerals generally fizz when they come in contact with HCl?
2. Is it possible to distinguish chalk from kaolin without using acid? Explain.
3. Can you distinguish white calcite from white feldspar without using acid? Explain.

**Go back and click on density**

1. How do you calculate specific gravity (how we describe the density of mineral samples)?

**Go back and click on Magnetism**.

1. What is the most common magnetic mineral?
2. **Special Properties of Minerals** <http://www.galleries.com/Mineral_Properties>

Define and give an example of a mineral that exhibits each of the following special properties:

1. fluorescence
2. Phosphorescence
3. Chatoyancy
4. Asterism
5. **Properties of 2 Minerals** <http://geology.com/minerals/>

**Choose two minerals listed on the site. Compare and contrast their physical properties in the chart below.**

|  |  |  |
| --- | --- | --- |
| **Name** |  |  |
| **Color** |  |  |
| **Streak** |  |  |
| **Hardness** |  |  |
| **Luster (metallic or non metallic)** |  |  |
| **Breakage (fracture or cleavage)** |  |  |
| **Chemical Composition (formula)** |  |  |
| **Mineral Group** |  |  |
| **Distinguishing Characteristics** |  |  |
| **Uses** |  |  |