Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period\_\_\_\_\_\_\_\_\_

**Minerals & Planet Formation Review Sheet**

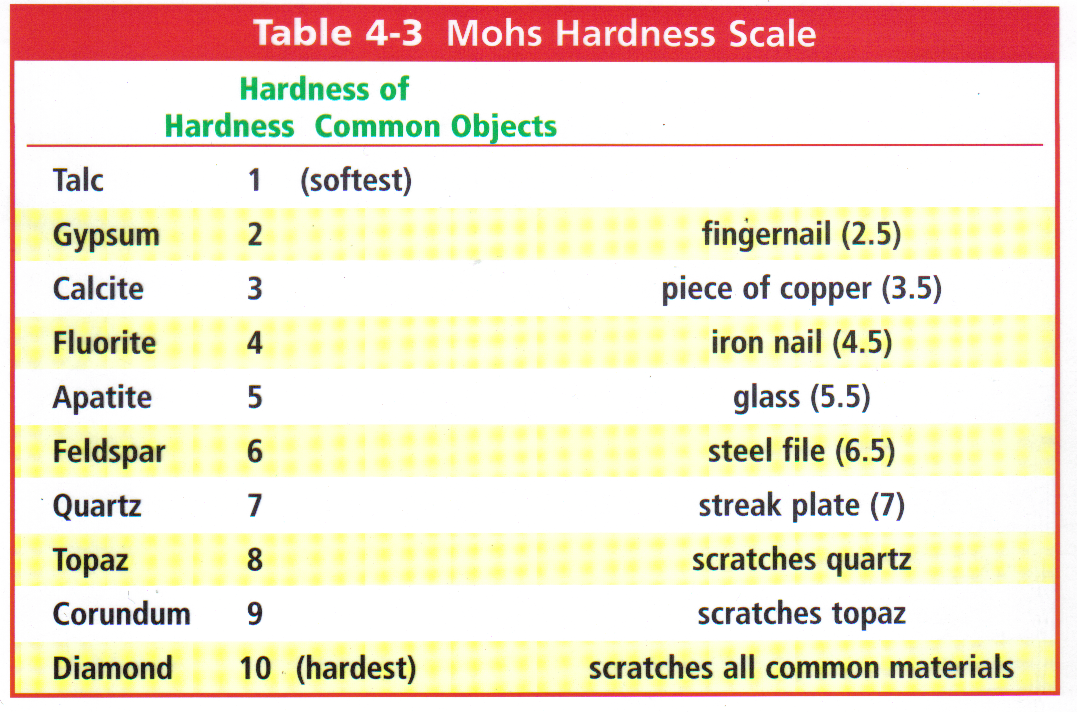
1. List the 5 characteristics that all minerals have. (NOTE – these are NOT tests like color, streak, etc.)
2. Not a mineral:
   1. Why isn’t sugar considered a mineral?
   2. List another substance found below earth’s surface that is not a mineral. Explain why it is not a mineral. (See your notes.)
3. Define each of the following tests.
   1. Color

* 1. Luster
  2. Texture
  3. Streak
  4. Hardness
  5. Cleavage
  6. Fracture

1. Which of the tests above is the LEAST reliable? Why?
2. What are the 2 main classifications of luster?
3. Explain how you determine hardness.
4. What are the 2 types of liquids that minerals can form from?
5. What is the name for molten material:
   1. Beneath earth’s surface?
   2. On earth’s surface?
6. What size of mineral crystals form if magma cools slowly?\_\_\_\_\_\_\_\_\_\_Cools quickly?\_\_\_\_\_\_\_\_\_\_
7. What are the 2 main conditions needed for the formation of large crystals?
8. What are the 2 most common elements in the crust of the earth?
9. Complete the following chart, listing the most common elements found in each of the following mineral categories.

|  |  |
| --- | --- |
| **Mineral Category** | **Elements Commonly Associated with the Category** |
| Light-colored Silicates |  |
| Dark-colored Silicates |  |
| Carbonates |  |

1. Many minerals come in a variety of colors.
   1. What causes the color variation in Quartz & other minerals?
   2. Does variation in color cause as difference in the geometric shape of a given mineral? (Hint- think of the Eggshell Geode Lab. What shape should both table salt, the clear Geode crystals and the colored geode minerals have been?)



**Use the Mohs Hardness Scale above to answer the next few questions:**

1. What does it tell you if a mineral scratches glass?
2. If Gypsum is rubbed against Talc:
   1. Is a scratch made, or no scratch?
   2. Is a streak left behind? Why or why not?
3. What happens if mineral with hardness of 3.4 is rubbed against the following. In other words, is a scratch made? Is there no scratch? A possibility of a streak?
   1. Feldspar?
   2. Calcite?
4. A mineral scratches gypsum, but not apatite:
   1. What is its possible hardness range?
   2. How could you further determine its hardness? Be specific.
5. **Use the attached flow chart to identify the minerals with the following characteristics: (1 pt each)**
   1. Dark red color, fracture, non-metallic, does not scratch glass, red streak

Name of mineral is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. Black, magnetic, metallic, black streak

Name of mineral is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. Glassy, shatters when it breaks, hardness 7, scratches glass, non-metallic, pale pink color

Name of mineral is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (If you’re not sure on this 1, is there something else you would look for?)

* 1. Breaks along a flat surface/plane, non-metallic, dark green, doesn’t scratch glass

Name of mineral is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

