


Name _____

MINERAL IDENTIFICATION

Question: What methods can we use to identify minerals?

Purpose: To use the physical properties of minerals to identify 14 minerals.



Goggles need to be worn when doing the hardness test. Thin plate glass will be used.

Glass plates will break easily. Do NOT hold the glass plate while doing the experiment. Keep glass flat on lab table to prevent getting cut!

Materials:

mineral tray	streak plates	penny
steel nail	glass plate	goggles

Procedure:

1. Read the procedure **carefully**. What data are you going to collect? Make a chart to record this data.
2. Test each mineral for the following properties and then determine the mineral by using the identification chart given:
 - a. **Color** – Identify and record the color on the data chart.
 - b. **Luster** - Determine if the mineral is **metallic (M) or non-metallic (NM)**. If metallic, that means it looks like a metal. Write it like this: (**M-** shiny or dull). If it is non-metallic, then classify it as: **NM** - glassy, or resinous (like amber), or greasy, or pearly, or dull or earthy. Record the data.

- c. **Streak** - dark "rock"----- use white streak plate
light "rock" -----use black streak plate
Record the color of the streak on the data chart.

- d. **Hardness** - Use Moh's Hardness Scale in your textbook to determine the approximate hardness of the mineral.
Record the data.

- e. **Breakage** - Determine the break for each mineral either cleavage or fracture. When a mineral breaks along smooth, definite surfaces, **cleavage** occurs. When a mineral breaks unevenly, **fracture** occurs. Record the data.

Data:

Data Analysis:

1. Use the mineral charts that are supplied to help you identify the 14 minerals in the tray. Determine the color, luster, streak, hardness, and break.
2. After identifying each mineral with the mineral chart, write down the chemical formula and uses for each mineral.

Questions: Using the information from your lab, answer the following questions in **COMPLETE SENTENCES**.

1. Which mineral was the hardest to identify? Why?
2. Which mineral was the easiest to identify? Why?
3. Which physical property was the most useful in identifying your minerals? Why?
4. Which physical property was the least useful in identifying your minerals? Why?
5. Which mineral has the most commercial value (how much it's worth)? Where is it used most often?