

Name: _____ Period: _____ E.N. _____

Mineral Identification Activities

A. Crystal Shapes

Use a hand lens to look at **halite** and **magnesium sulfate** crystals. Draw one crystal of each sample. What is the crystal name for each shape?

	Drawing	Crystal Name
Halite		
Magnesium Sulfate		

Compare the two crystals. How are they alike? Different? _____

B. What is the True Color of a Mineral?

Examine samples of **magnetite** and **hematite**. Both minerals contain iron. Describe the color and appearance of the two minerals. How are they similar and different?

Rub the hematite across an unglazed ceramic tile. Observe the color of the streak on the tile. Rub the magnetite across the tile. Observe the color of the streak on the tile.

Mineral	Streak Color and Appearance
Hematite	
Magnetite	

Does the *color* of each minerals steak match the *color* of the mineral?

How could this steak test be helpful in identifying these as two different minerals?

C. Special Physical Properties

There are some minerals that are more easily identified due to special properties. To test for these properties use **Magnetite**, **Calcite** and **Fluorite**.

1. To test for magnetism use a compass and pass the minerals over a compass. A mineral with high amounts of iron will cause the compass needle to move and is a magnetic mineral.

2. To test for fluorescence use an ultra-violet (UV) light and hold the three minerals in the light. A mineral that has the property of fluorescence will glow.

3. To test for a reaction to acid place a drop of the acid solution on each of the minerals. The reaction will be a fizzing of the mineral and gases being released into the air.

Which mineral has these properties:

Magnetism	
Fluorescence	
Reacts to acid	

Moh's Hardness Scale

Pick up the baggie of 9 unknown mineral samples. Using the testing methods on the chart, place the minerals in order of hardness. When correct have your lab sheet signed.

Talc	1	Flakes easily when scratched by a fingernail.
Gypsum	2	Will scratch with a fingernail.
Calcite	3	Not scratched by a fingernail. Copper penny will scratch.
Fluorite	4	Easily scratched by an iron nail.
Apatite	5	Scratched by an iron nail.
Felspar	6	Cannot be scratched by an iron nail. It can scratch window glass.
Quartz	7	Can scratch hard glass easily. Can scratch Feldspar.
Topaz	8	Can scratch Quartz.
Corundum	9	Can scratch Topaz

