Patterns in Minerals

Name_____

Observe the phenomenon. Write down the questions that come to mind while observing the phenomenon.

1.

2.

3.

Explain the patterns you will test and how they will help you identify the mineral

Record your observations from your investigation on the following table.
You will need to conduct multiple tests to identify each mineral.

Mineral #	test	test	test	test
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

14				
15				

Give students these pages after they complete their initial tests to check the identification.

Mineral Identification Key

Number of Mineral	Name of Mineral	Color	Streak	Hardness	Magnetic
	Gypsum: Selenite	Colorless	White	2	No
	Gypsum: Satin Spar	White, gray	White	2	No
	Gypsum: Alabaster	White, gray, yellow	White	2	No
	Talc	White, green, gray	White	1	No
	Quartz: Milky	Colorless, white	None	7	No
	Pyrite	Pale brass-yellow	Brown	6-6.5	No
	Fluorite	Green, yellow, purple	White	4	No
	Feldspar: Microline	White, red, green	White	6	No
	Mica: Muscovite	Colorless, yellow, brown	Colorless	2-2.5	No
	Pyrolusite	Black, steel gray	Black	2-6.5	No
	Mica: Biotite	Green, brown, black	Colorless	2.5-3	No
	Graphite	Black	Black	1-2	No

	Magnetite	Iron-black	Black	6	Yes
	Hematite	Red, Brown, black	Dark Red	5.5-6.5	Yes, when heated
	Calcite	White, yellow, brown, blue	White	4	No

Ways to Test Minerals

Type of Test	Procedure
Color	● Examine the mineral with all of the lights on in the room. ● Many minerals have multiple colors. ● Record the color.
Streak	● Rub the mineral across a ceramic plate. ● The mineral may leave a colored streak of powder. ● Record the color of the powder. *If the mineral does not leave a streak, it has a hardness greater than 6.5.
Hardness	● Hold the mineral firmly and drag the nail across it. ● Use your magnifying glass to look for a scratch. ● The nail has a hardness of 5. ● If the nail leaves a scratch on the mineral, it has a hardness of less than 5. ● Other materials you can use to test hardness: ○ Copper penny - hardness level 3 ○ Fingernail - hardness level 2.5 ○ Steel file - hardness level 6
Magnetism	● Hold a magnet to the mineral. ● If the mineral is attracted to the magnet, it has magnetic properties

Other properties and identifiable patterns of minerals: Geologists categorize minerals based on certain properties: chemical composition, luster, density, crystal form, cleavage/fracture, tenacity, and transparency. This link has more information.