

NAME:

Pd:      DATE:

## **MINERAL IDENTIFICATION SHEET**

### **Lab activity #3**

**PERFORMANCE OBJECTIVES:**                      The student will...

- Determine the physical characteristics of several samples and identify them

**MATERIALS:**

- Field kit (fingernail, copper penny, iron nail, glass plate, and streak plate)
- Hardness of Kit: 2.5, 3.5, 4.5, 5.5, 7.0
- Test Sample Kit:
  - a. Sulfur, Pyrite, Fluorite, Bauxite, Quartz (milky), Galena, Talc, Feldspar (microcline), Hematite, Mica (Biotite), Gypsum (Satan Spar), & Feldspar (Plagioclase),
  - b. Magnetite, Mica (Muscovite), Apatite, Copper, Olivine, Quartz (smoky), Calcite, Gypsum (Alabaster), Gypsum (Selenite), Quartz (rose), Halite & Hornblende

**BACKGROUND:**

- When determining the hardness of an item, always remember that harder objects will scratch softer objects.
- For example, if a mineral scratches calcite (hardness of 3) and is scratched by fluorite (hardness of 4), the mineral's hardness is approximately 3.5.
- Color is not the BEST physical characteristic to go by
- Luster refers to metallic or non metallic
- Streak is the mineral powdered form on the streak plate
- Hardness is the mineral's resistance to being scratched
- Breakage refers to Cleavage or Fracture
  - a. Cleavage: is a smooth break
  - b. Fracture is a jagged or rough break
- Any other information is something special about the mineral.
  - a. Example Halite is unique due to its taste; halite is called table salt
  - b. Example Talc is unique due to its softness; used in baby powder and cosmetics.
- Sheet color is which sheet you use to look up the mineral
- Mineral Name is what the sample is called.

**ACTIVITY:**

- Listed to the instructor and complete the following data.

**PROCEDURE:**

- Using the samples, try to determine the physical characteristic of each of the following samples

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**Mineral Data Table LAB ACTIVITY**

#	Which sheet do you look at?	Luster (circle one) <i>If you say NON describe it then</i>	Color	Texture Waxy, Earthy, Dull, Glassy, Silky, Pearly, Resinous	Streak	Hardness 10 (hard) to 1 (soft)	Acid Test		Breakage (circle one)	MINERAL name	Any Other special hints
							Magnetic Test				
1		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture			
							Magnetic YES / NO				
2		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture			
							Magnetic YES / NO				
3		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture			
							Magnetic YES / NO				
4		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture			
							Magnetic YES / NO				
5		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture			
							Magnetic YES / NO				
6		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture			
							Magnetic YES / NO				
7		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture			
							Magnetic YES / NO				
8		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture			
							Magnetic YES / NO				
9		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture			
							Magnetic YES / NO				
10		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture			
							Magnetic YES / NO				
11		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture			
							Magnetic YES / NO				
12		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture			
							Magnetic YES / NO				

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13		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
14		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
15		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
16		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
17		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
18		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture		
							Magnetic YES / NO			
19		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
20		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture		
							Magnetic YES / NO			
21		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
22		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
23		Metallic Non metallic					NO Reaction w/HCl	Cleavage Fracture		
							Magnetic YES / NO			
24		Metallic Non metallic					React w/HCl YES / NO	Cleavage Fracture		
							Magnetic YES / NO			