

Identifying Minerals Worksheet

1. ACID TEST

Fizzing identifies calcite and other carbonate minerals



2. HARDNESS SCALE

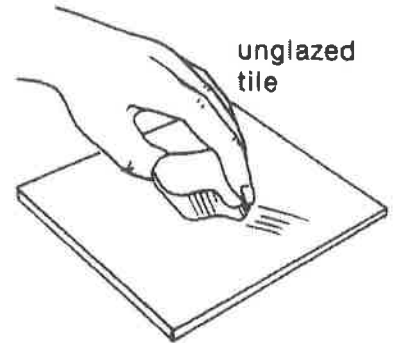
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|-------------|-------------|
| 1. talc | 6. feldspar |
| 2. gypsum | 7. quartz |
| 3. calcite | 8. topaz |
| 4. fluorite | 9. corundum |
| 5. apatite | 10. diamond |

FIELD SCALE of hardness

<u>object</u>	<u>hardness</u>
fingernail	2.5
copper penny	3
knife blade	5.5 - 6.0
glass	6.5

3. STREAK TEST

A streak on an unglazed tile



4. SPECIFIC GRAVITY

5. CRYSTAL SHAPE

6. COLOR

7. CLEAVAGE or FRACTURE (Mica cleaves in flat sheets.)

8. LUSTER

9. MAGNETIC PROPERTIES (Lodestone is magnetic.)

10. TASTE, FEEL, or SMELL (Halite tastes salty, talc and graphite feel greasy, wet kaolin smells earthy.)

streak color

- red-brown
- black-green
- white
- white
- dark grey

mineral

- hematite
- pyrite
- calcites
- halite
- galena

1. Use the above tables to tell how you could distinguish (tell apart) between the following pairs of minerals:

- a. Calcite & Quartz
- b. Talc & corundum
- c. Halite & quartz
- d. Galena & pyrite

2. Which two minerals on the hardness scale can be scratched by a fingernail?

3. Fluorite and quartz are frequently a beautiful purple color. However, only quartz is used as a gem stone. Give a reason why.

4. Which two minerals would be most useful as grains on sandpaper? Explain your answer.

*** We'll start this together in class tomorrow 😊 ***

Identifying Minerals by Properties

Seven mineral descriptions are listed below. Identify each mineral by using the physical properties listed in the mineral tables. Write the correct name of each mineral in the proper blank and answer the questions.

Mineral A _____	Two sugar-cube-sized, irregularly shaped pieces. Brassy-yellow in color with metallic luster. Flat surfaces look like little squares. Feels quite heavy. Has a blackish streak.
Mineral B _____	Fist-sized, irregularly shaped piece. Salmon-pink color with nonmetallic luster. Two cleavage planes at 90° to each other. Has a hardness of 6. Very abundant mineral
Mineral C _____	Nearly rectangular in shape and approximately 5 cm x 7 cm in size. Blackish in color with a shiny but nonmetallic luster. Peels off in very thin, flexible sheets and crumbles rather easily.
Mineral D _____	Egg-sized piece. Transparent pink color with glassy luster. Shows conchoidal fracture. Has a hardness of 7.
Mineral E _____	Reddish-brown color with metallic luster. No visible cleavage. It is quite heavy. Has a reddish-brown streak and a hardness of 6.
Mineral F _____	Irregularly-shaped, white piece with dull luster. Has a hardness of 3. Fizzes when placed in weak hydrochloric acid
Mineral G _____	Irregularly shaped, white with nonmetallic luster, hardness of 2.5, shows cubic cleavage, and dissolves easily in water

1. Which of the minerals was it easiest to identify? Why?

2. Which of the minerals was it hardest to identify? Why?

3. Look at the description of Mineral B. Which properties given were no helpful in identifying the mineral?

Why were these not helpful?

4. What properties were most helpful in distinguishing between minerals F and G?

5. Why do you think it is important to use many properties to identify a mineral sample rather than a single property?

