

I. Mineral Identification – In this activity, students will identify 9 minerals based on their characteristics.

1. Separate the nine minerals by color into three piles.
 - a. light-colored or see through (5 of them)
 - b. golden (1)
 - c. dark-colored (3)

2. The golden mineral is **pyrite** or 'fools gold'. Pyrite contains iron and sulfur.

3. Test the dark-colored minerals with the magnet and identify the magnetic one. This mineral is called magnetite. We obtain iron from **magnetite**.

4. Test the remaining two dark-colored minerals and find the denser one. This is **galena**. We obtain lead from galena. The lighter one is **graphite**. Graphite is found in pencils. Try and write with graphite. Graphite is also very slick and is used as a lubricant.

5. Look at the light colored minerals. The one that is rhombic shaped is **calcite**. Hold calcite over a line or words. See that it doubles all the objects when you look through it. Calcite is used in concrete and in the production of lime. The mineral that is flat and consists of thin plates is called **muscovite** or mica. Mica is used as an insulator because it is resistant to melting.

6. Test the last three light-colored minerals to see which can streak glass. The mineral that is harder than glass, and scratches it, is **quartz**. Quartz is found in glass and sand.

7. For the final two minerals, take a finger, lick it and touch it to the mineral and then lick it again. The mineral that is salty is **halite**. We obtain salt for cooking from halite. The final mineral is **talc**. Scrape off some powder with a spatula or your fingernails. Rub the powder between your fingers and feel how slick it is. We use talc in powder.