Minerals

What is a mineral?

A mineral is inorganic, solid and has a definite chemical composition and definite crystal system; must occur naturally in the Earth. It cannot be a manufactured or man-made item.

Physical Properties:

1. **Color** - Describe the color of your mineral. Such as yellow, brown, whit or yellowish green etc.

2. **Streak** - The streak is representative of the color of the mineral when it is ground into a fine powder and may not be the same as the color of the mineral. The streak may be described as colorless, white, black, gray, red, etc.

3. **Transparency** – The amount of light passed through a mineral determines its transparency.

   Transparent: minerals more light passes through,

   Translucent: minerals partially let light pass through

   Opaque: minerals do not let any light through.

4. **Luster**- refers to the general appearance of a mineral surface to reflect light. Two general types of luster are designated as follows:

   a. ***Metallic*** - looks shiny like a metal. Usually opaque and gives black or dark colored streak.

   b. ***Nonmetallic*** - Nonmetallic lusters are referred to as

      1. ***Vitreous*** - looks glassy - examples: **clear quartz, tourmaline**

      2. ***Resinous*** - like resin or amber from a tree - examples: **sulfur.**

      3. **Pearly** – iridescent pearl-like - example: **Apophyllite**

      4. ***Greasy*** - appears to be covered with a thin layer of oil - example: **Talc.**

      5. ***Silky*** - looks fibrous. - Example - some **Gypsum**, **Asbestos**, **Malachite**.

      6. ***Adamantine*** - brilliant luster like **Diamond**.

5. **Hardness** - Mohs Scale of Hardness is commonly used to determine the hardness of a mineral ranging from 1 for the softest mineral to 10 for the hardest mineral.

6. **Cleavage**- The ability of a mineral to break or come apart in a consistent way--breakage is along Atomic planes. Cleavage quality is described **present and not present.**

7. **Fracture** occurs when a mineral breaks into odd shapes or an irregular pattern. It may be described as

   Conchoidal, Fibrous, Hackly, Uneven and Even.

8. **Specific Gravity**- This property is the weight of the mineral.

The Work Table:

Name	Color	Streak	Transparency	Luster	Hardness	Cleavage	Fracture	Specific. Gravity.
Quartz	Colorless	White	Transparent	Nonmetallic Vitreous	7	None	Conchoidal	Medium