Family of Minerals



- 1. crystalline structure
- 2. natural
- 3. inorganic

So, what is the difference among a gem, crystal, and mineral?

Slide No. 2

Properties of Minerals

- 1. crystal form
- 2. fracture and cleavage
- 3. hardness
- 4. specific gravity
- 5. color
- 6. streak
- 7. luster
- 8. reaction to acid
- 9. magnetism
- 10. taste
- 11. tenacity (resistance to breakage)
- 12. transmission of light



talc





Minerals are formed in specific conditions.

Some minerals are related to sedimentary, igneous, and metamorphic rock formation.



Native Minerals

Gold

appearance and physical properties are same as the element





Copper

Slide No. 6

Silicates

no generalization of properties divided on the chemical structure

> Nesosilicates -isolated Sorosilicates - group Cyclosilicates - ring Inosilicates - chain Phyllosilicates - sheet Tectosilicates - framework



Quartz









Carbonates

minerals are usually soft, bright in color, and effervescence with acid



Calcite



Malachite Azurite

Page: 8

Halides





Fluorite





structures are usually simple, low specific gravity, light in color, high solubility, soft

Sulfides

Minerals usually soft, high specific gravity, with a metallic luster





Bornite



Sulfates

Gypsum



soft, light in color, high specific gravity, soluble in water

Celestite

Slide No. 11

Borates

light in color, optical properties



Coleminite



Borax



Okenite

Oxides

Hematite

hard, heavy,

opaque, bright in luster





Corundum

Phosphates



Brazilianite



Apatite

variable characteristics, medium weight and dark color, rare