6U2 - 6(C) test the physical properties of minerals, including hardness, color, luster, and streak

Types of Luster

		
smoky quartz	stilbite	geode
		
obsidian	milky quartz	clear quartz

mineral — A natural solid that can form by inorganic things and that has a crystal structure

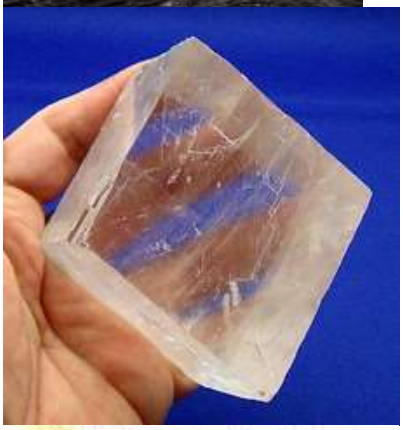
To be a mineral a substance must be
- naturally occurring
- solid
- inorganic
- crystal structure

Naturally Occuring — formed by natural processes.

How are minerals identified?
- Color
- Luster
- Streak
- Hardness
- Density
- Crystal Structure
- Cleavage and Fracture

BRITTLE

A term to describe how easily a substance breaks.



cleavage

The atoms are arranged so perfectly that crystals break along clean lines

conductivity

How well it allows electricity to move through it.

DUCTILE

Can be drawn into thin wire.

hardness measure of how easily a mineral can be scratched.

luster property of metals and alloys that describes having a shiny appearance or reflecting light.

MAGNETISM When an object is attracted to metal.

MALLEABLE A term used to describe material that can be hammered or rolled into sheets. (Think mallet)

metallic

a usually shiny solid that is malleable and conducts heat or electricity

streak

color of a mineral when it is in powdered form.

azurite

Color is a deep blue. Forms crusts of small crystals. Brittle. Effervesces in dilute HCl., blue pigment,

bauxite

An ore of aluminium, more common than cryolite but cannot be used in the electrolysis cell due to its high melting point.

biotite

Dark-colored mica; one perfect cleavage into flexible sheets, Hardness 2.5-3. 1 cleavage plane. Black to dk green. Vitreous luster. Splits in sheets. (Mica)

Chemical Sedimentary Rock

Sedimentary rock that forms when minerals precipitate from a solution or settle from a suspension. Example: gypsum

coal

Interesting rock composed of the remains of plants that lived in tropical swamps millions of years ago. Can be lower quality (sedimentary) or be acted upon by heat and pressure (metamorphic).

crystal

solid in which the atoms are arranged in an orderly, repeating pattern.

Extrusive Igneous Rock

Igneous rock that cools on the surface of the earth so it cools very quickly and has little time for crystals to form (small crystals); may have vesicles (air pockets). Example: Scoria

feldspar

Contains many different colors,., A group of silicate minerals. They are over 50% of Earth's crust. if you find a full crystal they will be in a coffin shape

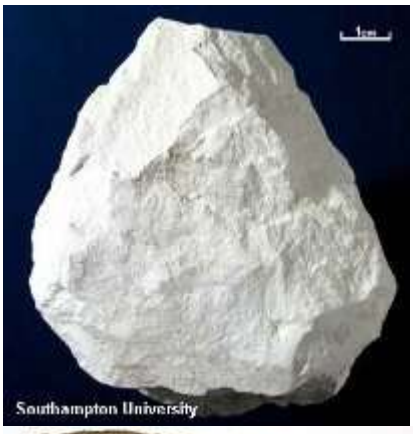
galena Composition: Lead sulfide. May contain impurities, such as silver, arsenic, antimony, and copper

geologist A scientist who studies the earth

graphite ..., a greasy, natural carbon material that is used in making pencils

halite ..., Clear in color, hardness of 2.5, smells and tastes salty, Colorless to white; Cubic (cleavage in 3 directions @ 90 degrees); halide; salty taste; use: salt

hematite ..., Black and shiny, dark gray and dull, or rusty red, almost always cool to the touch. Streak- red.



limestone A sedimentary rock consisting mainly of calcium that was deposited by the remains of marine animals; may or may not contain shells

magnetite A mineral with magnetic properties also back in the past sailors used them as a compass instead of using the north star.

malachite Always green, with a green streak., Usually in crusts, Effervesces in dilute HCl.

marble metamorphic rock that was once limestone

muscovite Light color, or Colorless; perfect cleavage in one direction, transparent in thin sheets;

pyrite

Fool's gold, often found in cubic or hexagonal crystals, blackish green streak., Brass yellow metallic luster, Dark Gray streak; 6+; Fracture; Gold, white, gray;

quartz

A mineral found in sand, it is used for making glass as well as electronic equipment and watches., -Glassy looking-transparent or translucent mineral which varies in color from white and grey to smoky

shale

A sedimentary rock formed by the deposition of successive layers of clay.

slate

A type of Metamorphic rock that was once shale rock formed by heat and pressure.

sulfur

(S) found mostly in soft tissues as a component of organic compounds, is distributed widely throughout the body and in every cell and makes up about .15% of body weight

talc

Grayish/Greenish, Dull or greasy luster, medium weight, white streak, 1 hardness, cleavage, feels soapy.