CAPSTONE 2017: Petrology Fact Sheet

A MINERAL…

-is a naturally occurring, inorganic substance.

- is made up of either a single chemical element or a combination of chemical elements which have been formed from atoms (the smallest unit of a chemical element). There are about 4000 different minerals in the world.

-is composed of the same substance throughout. If you were to cut a mineral sample, it would look the same throughout.

-can be classified and identified based on a number of different unique properties including color, streak (color of mineral's powder), crystal form (or shape), hardness, luster (or shine), density, cleavage or fracture (how the mineral breaks), diaphaneity (transparency), specific gravity, magnetism, solubility, and many more.

ROCKS…

-are formed from either 2 or more minerals.

-make up much of the land around us, including the mountains, canyons & riverbeds.

- can be classified into 1 of 3 groups: igneous rock, sedimentary rock, and metamorphic rock.

QUARTZ…

- is the most common mineral in the crust of the earth.

- is the state mineral of Arkansas.

- is made up of the two most abundant elements found in the earth's crust: oxygen and silicon.

- comes in many varieties. Some quartz is colorless, while other varieties are colored due to impurities in the formation process. Some of these impurities lead to dazzling, rare gemstone varieties of quartz such as Amethyst, Citrine, Rose Quartz, and Cat's Eye- to name a few.

CRYSTALS…

- are chemical compounds (such as a mineral) that have had the chance to grow naturally in to the shape they were meant to be.

- have a definite shape with easy to see flat sides. A mineral that has formed this way is called a "mineral crystal." However, when there is just a big hunk of a mineral that has not formed naturally due to space and time restrictions, it is called a "massive mineral."

- can be found in common forms such as table salt, snowflakes and pencil lead (graphite).

GEMSTONES…

-are minerals that are not in their natural state but have been cut and polished.

-are often, but not always, transparent.

-are treasured for their beauty and often used in jewelry.