

The Lester and Sue Smith Gem Vault

Gemology Terms

Alluvial deposit—a buildup of gravel, sand or clay in the bed or former bed of a river, which sometimes contains valuable ore and gemstones.

Cabochon Cutting—the most common form of gem cutting, in which the mineral is cut with a flat bottom and a rounded top.

Carat—a unit of measure for the weight of a mineral. One carat is roughly equal to 200 milligrams.

Carving—the most challenging method of gem cutting, in which designs or sculptures are cut from gems.

Crystal structure—the orderly geometric spatial arrangement of atoms in the internal organization of a mineral.

Faceting—the process of cutting a gemstone to have multiple polished, angled flat surfaces. This process is designed to bring out the brilliance of a gem.

Fire—the characteristic of certain gemstones that disperses white light into a rainbow of colors. It is a primary characteristic of gem diamonds.

Gem—a mineral crystal or natural gemstone that has been cut and polished. In general, any attractive, relatively flawless mineral crystal can be cut into a gem.

Gemologist—a person who has successfully completed recognized courses in gemology and has proven skills in identifying and evaluating gem materials.

Gemology—the science, art and profession of identifying and evaluating gemstones. It is a branch of mineralogy.

Inclusion—any material trapped inside a mineral during its formation. Inclusions are generally other minerals or rocks, but can also be water, gas or petroleum.

Karat—a unit of measure for the purity of gold. Pure gold is 24 karat; 12 karat gold is 50 percent pure.

Lapidary—a cutter, polisher or engraver of precious stones.

Millimeter—a unit of measure of pearls, referring to their diameter.

Mineral—natural, inorganic, solid compounds having a specific chemical composition and formed through geological processes.

Mineralogist—a person who studies the formation, occurrence, properties, composition and classification of minerals.

Mineraloid—a mineral-like substance that does not have a crystal structure and possesses a chemical composition that varies beyond the accepted ranges for a specific mineral.

Mineralogy—an earth science focused on the chemistry, crystal structure and physical properties of minerals, including their distribution and identification.

Natural gemstone—a mineral, stone or organic material that can be cut and polished or otherwise treated for use as jewelry or other ornament. A “precious” gemstone has beauty, durability and rarity, whereas a “semiprecious” gemstone has only one or two of these qualities.

Pavé—a type of setting of precious stones, in which they are placed together so closely that none of the metal in the setting shows.

Tumbling—the simplest form of gem cutting, in which the rough mineral is put into a revolving barrel with progressively finer abrasives, until a polish is obtained. This process closely resembles what happens to rocks in a stream, except that it results in a higher level of polish.