*** Name Origin:**

Latin: cyprium (island of Cyprus famed for its copper mines).

*** Sources:**

Pure copper occurs rarely in nature. Usually copper found in such minerals as azurite, malachite and bornite and in sulfides as in chalcopyrite ($CuFeS_2$), coveline (CuS), chalcosine (Cu_2S) or oxides like cuprite (Cu_2O). Copper is obtained by smelting, leaching and by electrolysis.

*** Uses:**

Most often used as an electrical conductor. Its alloys are used in jewelry, bronze sculptures and for coins. The skin of the Statue of Liberty is made of copper.

*** Additional Notes:**

The discovery of copper dates from prehistoric times. It is said to have been mined for more than 5000 years. It is one of man's most important metals. Copper is reddish colored, takes on a bright metallic luster, and is malleable, ductile, and a good conductor of heat and electricity (second only to silver in electrical conductivity). The electrical industry is one of the greatest users of copper. Copper occasionally occurs native, and is found in many minerals such as cuprite, malachite, azurite, chalcopyrite, and bornite. Large copper ore deposits are found in the U.S., Chile, Zambia, Zaire, Peru, and Canada. The most important copper ores are the sulfides, oxides, and carbonates. From these, copper is obtained by smelting, leaching, and by electrolysis. Its alloys, brass and bronze, long used, are still very important; all American coins are now copper alloys; monel and gun metals also contain copper. The most important compounds are the oxide and the sulfate, blue vitriol; the latter has wide use as an agricultural poison and as an algicide in water purification. Copper compounds such as Fehling's solution are widely used in analytical chemistry in tests for sugar. High-purity copper (99.999 + %) is available commercially. Natural copper contains two isotopes. Twenty five other radioactive isotopes and isomers are known. Copper is a very interesting element. It is one of the transition elements that actually uses electrons from one of the inner orbitals in chemical reactions. In addition, it has more than one oxidation state. Like many of the transition elements, copper has a colored ion. Copper typically forms a bluish green solution. Copper (Cu) has two valences Cu I (cuprous) has one valence electron and Cu II (cupric) has two valence electrons. Copper was one of the earliest known metals, having reportedly been mined for over 5000 years. In nature it has two isotopes, 63 (69.09%), which has 29 electrons and protons and 34 neutrons, and 65 (30.91%), which has 29 electrons and protons and 36 neutrons. Brass and bronze are alloys of copper.