**Alkaline Earth Metal** - any of the elements beryllium, magnesium, calcium, strontium, barium, and radium, occupying Group II of the periodic table. They are reactive, electropositive, divalent metals, and form basic oxides that react with water to form comparatively insoluble hydroxides.

**Atomic Radius** - a measure of the size of its atoms, usually the mean or typical distance from the center of the nucleus to the boundary of the surrounding cloud of electrons.

**Brittle** - having hardness and rigidity but little tensile strength; breaking readily with a comparatively smooth fracture, as glass.

**Diatomic Molecule** - molecules composed of only two atoms, of either the same or different chemical elements.

**Ductile** - capable of being drawn out into wire or threads, as gold.

**Group** - a set of elements occupying a column in the periodic table and having broadly similar properties arising from their similar electronic structure. There are 18 groups on the periodic table.

**Halogen** - any of the elements fluorine, chlorine, bromine, iodine, and astatine, occupying group XVII(17) of the periodic table. They are reactive nonmetallic elements that form strongly acidic compounds with hydrogen, from which simple salts can be made.

**Ionic Bond** - the electrostatic bond between two ions formed through the transfer of one or more electrons.

**Ionic Radius** - the radius exhibited by an ion in an ionic crystal where the ions are packed together to a point where their outermost electronic orbitals are in contact with each other.

**Luster** - the state or quality of shining by reflecting light; glitter, sparkle, sheen, or glow.

**Malleable** - able to be hammered or pressed permanently out of shape without breaking or cracking.

**Monatomic Molecule** - an element having or consisting of single atoms.

**Noble Gas** - any of the gaseous elements helium, neon, argon, krypton, xenon, and radon, occupying Group 0 (18) of the periodic table. They were long believed to be totally unreactive but compounds of xenon, krypton, and radon are now known.

**Period** - a set of elements occupying an entire horizontal row in the periodic table. There are 7 periods on the periodic table.

**Transition Metal** - any element in any of the series of elements with atomic numbers 21–29, 39–47, 57–79, and 89–107, that in a given inner orbital has less than a full quota of electrons.

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**Matter and Energy**

**Classification of Matter**

- **Pure Substances**
- **Impure Substances (Mixtures)**