

Glossary and Terms

Acid - An acid is a compound with a pH of less than 7 that forms hydrogen ions when dissolved in water. Acids react when coming into contact with bases and some metals to form salts.

Alkali metals - The alkali metals are the elements in the first column of the periodic table with the exception of hydrogen.

Alkaline earth metals - The alkaline earth metals are the elements in the second column of the periodic table.

Alloy - An alloy is a metallic mixture of two or more elements. Examples of alloys include brass, bronze, and steel.

Allotropes - Allotropes are different forms in which the same element can exist. For example, the element carbon can take the form of the allotrope graphite or the allotrope diamond.

Aqueous solution - Any solution where water is the solvent.

Atom - The atom is a basic unit of matter and the smallest unit of an element. It consists of a nucleus which is surrounded by a cloud of electrons.

Base - A base is a substance with a pH higher than seven. Bases are defined as donating a pair of valence electrons.

Biochemistry - The study of chemical processes as they relate to living organisms.

Bond - An attraction between atoms that forms chemical substances.

Bunsen burner - A piece of chemistry lab equipment that produces a flame used for lab experiments.

Carbon cycle - A method by which carbon is constantly moved throughout the biosphere.

Catalyst - A substance that speeds up the rate of a chemical reaction. The catalyst is not consumed in the reaction.

Chemical reaction - A process where a set of substances undergo a chemical change to form a different substance.

Compound - A chemical compound is a pure substance made up of two or more elements.

Conductor - A conductor is a material that allows the flow of energy such as heat or electricity.

Covalent bond - Covalent bonding occurs between atoms that share a pair of electrons in order to gain full outer shells.

Density - Density is the mass per unit volume of a substance.

Distillation - The process of separating mixtures by boiling a liquid and then recovering the cooled gas.

Ductile - The ability of a material to be stretched into a long wire.

Electrolysis - A process used to drive a chemical reaction by using an electrical current. It is often used to separate elements.

Electron - A particle of an atom that orbits the atom's nucleus and carries a negative charge.

Element - A pure chemical substance that is made up of one type of atom. Each atom in an element is defined by an atomic number which is the number of protons in the nucleus.

Ion - An atom or molecule which has a negative or positive charge because the number of electrons does not equal the number of protons.

Ionic bond - Ionic bonding is when an electron is traded between atoms in order to have full outer shells.

Isotopes - Isotopes are atoms from the same element that have different numbers of neutrons.

Malleable - A substance is said to be malleable if it can be pounded into a thin sheet.

Metal - A substance that is a good conductor of heat and electricity. They are generally malleable, ductile, and shiny.

Mixture - A combination of two or more substances that are not chemically combined.

Molecule - A molecule is formed when two or more atoms are joined together by a chemical bond.

Neutron - A particle in the nucleus of an atom that has no electric charge.

Noble gases - A family of elements that makes up column 18 of the periodic table. They are very stable due to their full outer electron shells.

Nucleus - The central core of an atom containing the protons and neutrons.

Oxidation - The name for the process when oxygen combines with another element to form a compound.

Periodic table - A table of the chemical elements arranged by atomic number.

pH scale - The pH measures the activity of the hydrogen ion in substances. If a substance has a pH less than 7 it is said to be acidic. If its pH is greater than 7 then it is said to be basic or alkaline.

Proton - A particle within the nucleus of an atom that holds a positive charge.

Reaction - The process that occurs when two or more chemical substances are combined to form another chemical substance.

Salts - Salts are chemical compounds that are formed by the reaction of an acid and a base.