

Unit: 2. THE STRUCTURE OF MATTER

VOCABULARY

alloy	a solution between two solids
aqueous	any solution with water as the solvent
atom	the smallest whole unit of matter
atomic mass	the number of protons + neutrons in the nucleus of an atom
atomic number	the number of protons in the nucleus of an atom
atomic weight	the average relative mass of each element
binary compound	a compound made up of two elements
colloid	a heterogeneous mixture with small particles dispersed in another medium that are small enough to stay suspended but large enough to scatter light
compound	two or more elements that have chemically combined
dissolve	to break up into molecular or ionic parts and go into solution
distillation	separation of the components of a mixture based on boiling points
electron	negatively charged, subatomic particle
elements	substances with only one type of atom
family	a vertical column on the periodic table; also called group
filtration	process of collecting solid particles of a suspension on a filter
ground state	lowest energy position of an electron in an atom
group	a vertical column on the periodic table; also called family
halogens	a family within the nonmetals (family 17) on the periodic table

heterogeneous mixture	a mixture that does not have the same ratio of components throughout the combination
homogeneous mixture	a mixture with the same ratio of components throughout the combination
immiscible	a condition in which one liquid is not soluble in another liquid
isotope	one of two or more atoms of the same element with different masses due to different numbers of neutrons
law of definite proportions	the principle that a compound always contains exactly the same elements in exactly the same proportions by mass
metal	an element that is malleable, polishes to a luster, conducts heat and electricity well, and tends to lose electrons in a chemical reaction
metalloid	an element with properties of both metals and nonmetals
mixture	a combination of two or more components that are not chemically bonded and retain their own properties
molecule	the smallest unit into which a compound can be divided and still be that same compound
neutron	neutral subatomic particle found in the nucleus of the atom
noble gases	a family of non-reactive gases (family 18) on the periodic table
nonmetal	an element that is brittle, insulates heat and electricity well, and tends to gain electrons in a chemical reaction
orbital	the area around the nucleus of an atom where the probability of finding an electron is greatest

period	a horizontal row on the periodic table
periodic	something that repeats itself on a regular, predictable basis
photon	fixed amounts of energy in light
proton	positively charged, subatomic particle found in the nucleus of the atom
quantum	a fixed amount
quarks	particles that make up neutrons and protons, classified as colors and flavors
radioactive elements	elements that spontaneously decay into lesser atomic mass elements by the emission of particles or energy
screening	separation technique for dry heterogeneous mixtures based on particle size
soluble	capable of being dissolved by another substance
solute	the substance being dissolved
solution	a homogeneous mixture whose particles are too small to reflect or scatter light
solvent	the substance that does the dissolving
stair-step	a diagonal division on the periodic table that divides the metals from the nonmetals and along which lay the metalloids
subscript	a lowered number in a chemical formula which indicates how many atoms of the element preceding it are in the compound
suspension	a heterogeneous mixture containing relatively large particles that settle fairly quickly

valence electrons electrons in the outermost shell of the atom, capable of taking
part in chemical reactions

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