matter	anything that occupies space and has mass
element	a pure substance that cannot be broken down into other substances by chemical reactions
compound	substance containing two or more elements chemically combined in a fixed ratio
atom	the smallest particle of an element that retains the properties of the element
proton	subatomic particle having a positive charge; found in nucleus

electron	subatomic particle having a negative charge; not in nucleus but surrounds it
neutron	subatomic particle without a charge; found in nucleus
nucleus	protons and neutrons together; make up the center of an atom
atomic number	identifies a specific element; equals the number of protons in an atom of each element
radioactive isotope	an unstable atom in which the nucleus decays (breaks down) releasing particles and energy

isotope	atoms having the same numbers of protons but different numbers of neutrons
ionic bond	occurs when atoms transfer electrons to other atoms
ion	atoms that have lost or gained electrons
covalent bond	occurs when atoms share electrons
molecule	atoms that are held together by covalent bonds

chemical reaction	interaction of substances that lead to the formation of new substances
reactant	the starting materials for a reaction; found on left side of chemical equation
product	ending materials of a reaction; found on right side of chemical equation
organic compound	substance made of two or more elements, one being carbon
inorganic compound	substance made of two or more elements, none of which is carbon

valence electrons	electrons in the outermost energy level; they are involved in bond formation
single bond	a covalent bond in which one pair of electrons is shared
double bond	a covalent bond in which four valence electrons are shared between two atoms
chemical formula	indicates the number and types of atoms in a molecule
structural formula	shows the number and types of atoms in a molecule and how they are arranged

| chemical reaction | indicates the formation of new substances from previous substances |