|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  ATOM: smallest unit into which an element can be divided and still have the properties of that element | ATOMIC MASS:Average mass of ONE atom of an element | ATOMIC NUMBER: number of protons in the nucleus of one atom | BALANCED chemical equation: an equation that shows the same number of each type of atom on both sides | Chemical BOND: the force of attraction between atoms when they transfer or share electrons |
| Chemical CHANGE: when a substance is changed into a new substance with different properties; the change cannot be undone by physical means | Chemical EQUATION: a short way to show a chemical reaction using symbols instead of words | Chemical FORMULA: a way of describing the number of atoms that make up a molecule or compound | CHEMICAL PROPERTY:A substance’s tendency or ability to change into a new kind of matter with different properties | CHEMICAL REACTION: when two or more substances combine to form new substances (products) |
| CHEMICAL SYMBOL: the one or two-letter code for an element (Example: C for Carbon) | CHEMISTRY: the study of the structure, properties, and interactions of matter | COEFFICIENT: a number in front of a chemical formula that tells how many atoms or molecules there are | COMPOUND: matter made of two or more elements that are chemically bonded | ELECTRONS: negatively-charged particle outside the nucleus of an atom |
| ELECTRON CLOUD:the area around the atom’s nucleus where electrons can be found | ELEMENT: a substance that is the building block of matter; an element is made up of one kind of atom | LAW OF CONSERVATION OF MASS: matter cannot be created nor destroyed, it can only change form | MASS: amount of matter in something, measured in grams | MATTER: the material that all objects and substances are made of; anything that has mass and takes up space |
| MIXTURE: combination of substances that haven’t combined chemically and can be separated by physical means | MOLECULE: when two or more atoms combine | NEUTRON: particle with a neutral charge (neither + or --)  | NUCLEUS: the center of the atom, made up of protons and neutrons | ORGANIC COMPOUND: compound that includes **carbon** along with the element(s): H, O, N, P or S |
| PARTICLE: a tiny portion, piece, or fragment of something | PERIODIC TABLE OF ELEMENTS: chart where all elements are organized into periods and groups by their properties | PHOTOSYNTHESIS: process that captures light energy to transform carbon dioxide and water into glucose and oxygen | PHYSICAL CHANGE: when a physical property of a substance is changed; the change can sometimes be undone by physical means | PHYSICAL PROPERTY:Property that can be seen without changing the composition or identity of the matter |
| PRODUCT: a substance *made* as a result of a chemical reaction (right side) | PROPERTY: characteristic of a material that helps to identify or classify matter | PROTON: Positively-charged particle located in the nucleus | REACTANT: a substance that *enters* into a chemical reaction and gets changed (left side) | SUBSCRIPT: small number in a formula that tells how many atoms in a molecule or the ratio of elements in a compound |
| SUBSTANCE: physical matter or material | YIELD: the quantity of product obtained from a chemical reaction | VALENCE ELECTRONS: electrons in the outermost energy level of an atom |  |  |