**Vocabulary:** **Balancing Chemical Equations**



**Vocabulary**

* Coefficient – a number that indicates how many of each atom or molecule there are.
	+ For example, the coefficient “6” in 6H20 indicates there are six water molecules.
* Combustion – a chemical reaction in which a fuel burns in a gas, usually oxygen.
	+ Many combustion reactions involve a carbon-based fuel, such as methane (CH4), burning in oxygen gas (O2) to produce carbon dioxide (CO2) and water (H2O).
* Compound – a pure substance composed of two or more chemically bonded elements.
	+ A compound can be described by a *chemical formula* such as NaCl or H2O.
* Decomposition – a chemical reaction in which a single substance is broken down into two or more products.
	+ For example, salt (NaCl) is decomposed into sodium (Na) and chlorine gas (Cl2).

* Double replacement – a reaction in which two compounds exchange elements or molecules with one another.
	+ For example, sodium sulfide (Na2S) and hydrochloric acid (HCl) can react to form salt (NaCl) and hydrogen sulfide (H2S).
* Element – a pure substance that is made of one type of atom.
* Molecule – a stable particle made of two or more atoms.
	+ A water molecule (H2O) is made of two hydrogen atoms and one oxygen atom.
* Product – a substance that is formed in a chemical reaction.
* Reactant – a substance that takes part in a chemical reaction.
* Single replacement – a reaction in which an element reacts with a compound to form a new compound and a different element.
	+ For example, aluminum (Al) can react with hydrochloric acid (HCl) to form aluminum chloride (AlCl3) and hydrogen gas (H2).
* Subscript – a number in a chemical formula representing the number of atoms of a particular element in one molecule of the compound.
	+ For example, the “2” in H2O indicates that there are two H atoms in the molecule.
* Synthesis– a chemical reaction in which two or more reactants form a single product.
	+ Also called a *combination* reaction.
	+ For example, hydrogen (H2) combines with oxygen (O2) to form water (H2O).