**Chemical Reactions**

Chemical reactions can come in a variety of appearances and types, most occurring unseen by people; however, all chemical reactions share some common properties.

**Chemical** **Reaction**:

**Reactants**:

**Products**:

**Chemical** **Equation**:

A **word equation** is the way a chemical equation is read out loud. It follows the pattern above naturally:

A **skeleton** **equation** is a short way to write a chemical equation. It will quickly and easily tell the chemicals required in the reaction, but does not tell the amounts required or produced in a reaction

A word equation and skeleton equation give us some information, but do not account for an incredibly important scientific law.

**Law of Conservation of Mass**

This means we need an equation that will take this important law into account:

**Balanced Equations**

Balanced chemical equations use coefficients to state how many of the reactants and products are present in a chemical reaction.

A balanced chemical equation should have the same number of each type of element on both sides:

Examples:

CH4  + 2O2 🡪 CO2  + 2H2O

Balance the following equations:

 Practice Problems p.207, p.211