Equilibrium, Reversible Reactions

**& Flame tests.**

Equilibrium: is achieved in a reaction (chemical or physical) when the rate of the reactants being used is equal to the rate of the products being created.

**Example: boiling water in a sealed container.**

**Water vapor**

**Liquid water**

**The water is boiling and condensing at the same rate.**

**Reversible reactions: are reactions that can occur in both directions.**

**Example:**

**Photosynthesis:**

**6 CO2 + 6H2O 🡪 C6H12O6 + 6O2**

Respiration:

**C6H12O6 + 6O2 🡪 6 CO2 + 6H2O**

**Flame tests: are used to identify the metal that is in an ionic compound because all metals give off a color with a specific frequency that is unique to the metal.**

**What color did copper burn?**

**Green.**

**Most compounds that have copper in them also burn green due to the presence of copper.**

**\*\*Remember that whenever something is burned it is reacting with O2 gas.**