**Chemistry 11 Study Guide for Chemical Reactions - Unit 5**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_ Block: \_\_\_**

**My “Chemical Reactions Test” will take place on: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!**

*Note: some concepts will be more heavily weighted than others!*

*Before you write your Chemical Reactions Test, be able to:*

* **Come up with balanced equations for the 6 types of chemical reactions**
  + classify reactions into 1 of the 6 types (synthesis, decomposition, single replacement, double replacement, neutralization, and combustion)
  + predict products for the 6 types of reactions when given the reactants, and then balance the equations
* **Apply the Law of Conservation of Mass to balance chemical equations**
  + explain the *Law of Conservation of Mass*
  + balance chemical equations
  + use the abbreviations (s), (l), (g), and (aq) to represent solids, liquids, gases, and aqueous solutions, respectively
* **Explain that chemical reactions are the result of old bonds breaking and new bonds forming as atoms rearrange**
  + define *reactants* and *products*
  + describe changes you might observe during the course of a chemical reaction
* **Perform Stoichiometric calculations involving chemical reactions**
  + State Avogadro’s hypothesis
  + Understand that the chemicals’ coefficients in a balanced chemical equation represents the relative amounts of moles (or molecules) of each reactant and product in that reaction
  + Perform stoichiometric calculations involving reactions converting among any of the following units:
    - molecules/atoms
    - moles
    - grams
    - litres of gas at STP
    - molarity (concentration)
    - litres of solution
* **Perform Stoichiometric calculations involving chemical reactions (*Covered AFTER UNIT TEST*)**
  + Identify a limiting/excess reagent
  + Calculate the amount of excess (moles/grams/litres) of the excess reagent
  + Perform calculations involving percent yield and percent purity of compounds