**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