Lab 5 **Ionic Compounds Naming and Formula Writing** Chemistry

Being able to read and write the names of compounds is important for any chemist. They need to know the name to determine the reactivity of the compounds they may be working with. Formula writing is an accepted shorthand version that scientists around the world use. This enables people who speak different languages to share scientific information easily. The process you are learning has been standardized by the IUPAC (The International Union of Pure and Applied Chemistry). This is a consortium of chemists who set down rigid guidelines for all chemists around the world to follow so that there is continuity from place to place.

In this lab, you will put these rules into practice. You will learn the rules set up so that you could communicate the makeup of a chemical compound to someone who does not speak your language. You will also take some time to identify different signs of chemical change in a reaction between two ionic compounds.

Purpose: To observe chemical change in a double replacement reaction between two ionic solutions. [To put into practice the name and formula writing rules established by ~~the~~ the IUPAC.]

Materials: well plates, Dropper bottles ~~Test tubes, droppers, test tube rack~~, solutions of :

Silver Nitrate	Magnesium Sulfate	Sodium Hydroxide
Lead (II) Nitrate	Copper (II) Sulfate	Iron (III) Chloride
Potassium Iodide	Sodium Carbonate	Sodium Phosphate

Procedure: Note: The above solutions are the SOURCE of the ions you will be using. Mix the appropriate ions together.

1. Mix the solutions as indicated by the chart on back. Mix solutions where they meet in the boxes.
2. Record evidence of chemical change taking place.
3. Write the formulas of all compounds created using formula writing rules.
4. Write the name of the compound created following all expected naming rules.

Data: Create a table to record all of the data you are expected to collect
Analysis: Write names and formulas of all compounds as directed

Conclusion: In complete sentences, explain if you accomplished the goal set in your purpose. Describe any difficulties or inconsistencies you encountered during this experiment. Is there any way you could have made an error during your experiment? How could have avoided this?

	$AgNO_3$ (Ag^+)	$Pb(NO_3)_2$ (Pb^{+2})			
$FeCl_3$ (Cl^-)	1.	6.			
KI (I^-)	2.	7.	$CuSO_4$ (Cu^{+2})	$MgSO_4$ (Mg^{+2})	$FeCl_3$ (Fe^{+3})
NaOH (OH^-)	3.	8.	11.	14.	17.
Na_2CO_3 (CO_3^{-2})	4.	9.	12.	15.	18.
Na_3PO_4 (PO_4^{-3})	5.	10.	13.	16.	19.