**Nomenclature Overview**

First we ask ourselves, how many elements are in the compound?

If there are two elements, we can classify the compound into one of three categories:

**Metal and a Nonmetal**

An ***ionic*** compound

*To name this formula:*

* Write the name of the metal, followed by the name of the nonmetal with –ide ending.

*To write a formula from a name:*

* Write the symbol for each element.
* “Criss-cross” the charges to determine the subscripts.
* Never write the subscript one (1) and make sure subscripts are in the simplest ration

**Transition Metal and a Nonmetal**

An ***ionic*** compound

*To name this formula:*

* Write the name of the metal, followed by the name of the nonmetal with –ide ending.
* Between the two names, write the charge of the Transition metal (in Roman Numerals)

*To write a formula from a name:*

* Write the symbol for each element
* “Criss-cross” the charges to determine the subscripts.
* Never write the subscript one (1) and make sure subscripts are in the simplest ration

**Two Nonmetals**

A ***Covalent*** *or* ***Molecular*** compound

*To name this formula:*

* Write the name of the first element, followed by the name of the second element with an

–ide ending.

* Use prefixes before each name to show the number of atoms in the compound.
* Do **not** use the prefix mono— for the first element.

*To write a formula from a name:*

* Write the symbol for each element.
* Use the prefixes in the name to determine the subscripts.

Prefixes for **molecular/ covalent** compounds

mono-1 hexa-6

di-2 hepta-7

tri-3 octa-8

tetra-4 nona-9 penta-5 deca-10

If there are **three or more elements**, there are *polyatomic ions* involved. The compound is ***ionic***.

*To name a formula:*

* Identify the polyatomic ions involved.
* Write the name of the first element/polyatomic ion.
* Write the name of the second element/polyatomic ion. If the second species is a single element, use the –ide ending. Polyatomic ions do NOT receive –ide endings. They keep their original name.

*To write a formula from a name:*

* Write the symbol for all elements and/or polyatomic ions.
* “Criss-cross” the charges to determine the subscripts.
* If more than one polyatomic ion is needed to balance the formula, put parenthesis around the polyatomic ion and place the subscript for the polyatomic ion on the outside of the parenthesis.

***NOTE: Subscripts that are part of the polyatom remain INSIDE the parenthesis, subscripts that come from criss-crossing the charges go on the OUTSIDE of the parenthesis.***