**Naming Ionic Compounds**

***Ionic Compounds (Metal + Nonmetal)***

State the metal’s name and add the nonmetal to the end, dropping the end and adding “-ide”

Examples: NaCl- sodium chloride

Ag2S- silver sulfide

Magnesium (+2) and chloride (-1)- cross charges and it becomes MgCl2

***Transition Metals (charges or oxidation numbers are not definite)***

Use Roman numerals (these describe the charge we are using) ONLY WHEN WRITING THE NAME NOT TO WRITE THE FORMULAS!

Examples: Fe2O3, Iron (III) oxide

FeO, Iron (II) oxide

Exceptions: Zn (always +2) & Ag (always +1) & Al (always +3)

***Polyatomic Ions***

Example: Li2SO4 is lithium sulfate

**Parenthesis indicate the cross over charge goes to the whole ion** DON’T FORGET THEM

Example: calcium hydroxide Ca(OH)2 , this indicates 1 Ca, 2 O, & 2 H

**NOT** CaOH2 , this one indicates 1 Ca, 1 O, and 2 H

Example: copper (II) sulfate is CuSO4

Magnesium nitrate is Mg(NO3)2

**Naming Covalent Compounds**

\*Results from sharing valence electrons of 2 or more (Nonmetal + Nonmetal)

We use prefixes:

1- mono

2- di

3- tri

4- tetra

5- penta

6- hexa

7- hepta

8- octa

9- nona

Example: NF3 (nitrogen trifluoride) vs. N2F4 (dinitrogen tetrafluoride)

Rule: 1st element does NOT need mono

DON’T double the “o’s” and sometimes the “a” is dropped in “penta” like pentoxide

Example: CO is carbon monoxide NOT monocarbon monoxide

**Naming Acids**

Acids produce H+ when dissolved in H20, they are a molecule with one more H+ attached to an anion

**1st rule:**

Use prefix “hydro-“ if the anion does not contain Oxygen

Use suffix “–ic” attached to the root of the element

Example: H2S (dihydrogen sulfide) dissolved in H2O is; hydrosulfuric acid

**2nd rule:**

Anions with oxygen, acid name is central element of anion or the anion name with “-ic” or “ous”

-When anion ends in “-ate” suffix is “-ic”

Example: H2SO4 SO2-4 (sulfate) sulfuric acid

Example: HNO3 NO-3 (nitrate) nitric acid

-When anion ends in “-ite” suffix is “-ous”

Example: H2SO3 SO2-3 (sulfite) sulfurous acid

Example: HClO ClO- (hypochlorite) Hypochlorous Acid