

Rules for Naming Chemical Compounds

Step 1- Naming the **cation** (first part of the compound)

- a. If... **alkali metal (column 1)**
alkaline earth metal (col 2)
boron family metal (col 13) then... name the ion as written on the ion sheet (elemental name)
- b. If... **C, N, P, Si, or S** then... use prefixes for **both** elements in the compound. (exception- do NOT use "mono" for the first element) The second element end with the suffix **"-ide"**

Prefixes-	1- mono (2nd element only)
	2- di
	3- tri
	4- tetra
	5- penta
	6- hexa
	7- hepta
	8- octa
	9- nona
	10- deca

- c. If... **transition metal** then... use a roman numeral following the name of the metal to signify the charge of the ion. (reverse subscripts to determine the charge of the metal ion)

Step 2- Naming the **anion** (second part of the compound)

- a. If... **monatomic ion (single ion)** then... use the suffix **"-ide"** at the end of the element name
- b. If... **polyatomic ion (group)** then... locate ion on right side of ion sheet and name ion ending in **"-ate"** or **"-ite"**

Step 3- Naming Acids (compounds beginning with H: Hydrogen)

- a. If... **binary compound** → **H"X"**
(only 2 different elements) then... acid name begins with "**hydro**" and "**-ide**"
suffix becomes "**-ic**"
ex. HCl → **hydrochloric acid**
H₂S → **hydrosulfic acid**
- b. If... **polyatomic anion (group)**
ending with "**-ate**" suffix then... acid name begins with ion name
followed by "**-ic**" suffix
ex. H₂SO₄ → **Sulfuric Acid**
→ **Sulfate** ion becomes **Sulfuric** Acid
- c. If... **polyatomic anion (group)**
ending with "**-ite**" suffix then... acid name begins with ion name
followed by "**-ous**" suffix
ex. HNO₂ → **Nitrous Acid**
→ **Nitrite** ion becomes **Nitrous** Acid

****Remember **ate** → **ic**, **ite** → **ous******