NAMING COMPOUNDS

IONIC (metal and nonmetal)			
Binary (2 elements)		Contains Polyatomic ions	
A Group Metal	B Group Metal	A Group Metal	B Group Metal
1. Write the cation	1. Write the cation use roman numerals*	1. Write the cation (only one polyatomic cation NH_4^+)	1. Write the cation. Use roman numerals*
2. Write the anion, change ending to -ide	2. Write the anion, change ending to -ide	2. Write the name of the polyatomic ion. See Table 1.	2. Write the name of the polyatomic ion. See Table 1.
Ex. NaCl sodium chloride	Ex. $FeCl_2$ iron(II) chloride	Ex. Li_2CO_3 lithium carbonate	Ex. $PbSO_4$ lead(II) sulfate

*Ag^+, Cd^{2+}, Zn^{2+} only have one cation don't need roman numeral

MOLECULAR (two nonmetals)
1. Use prefixes in name 2. Less electronegative element is given first. (C, P, N, H, S, I, Br, Cl, O, F) 3. Drop extra vowels.
1 mono (don't use with first element) 2 di 3 tri 4 tetra 5 penta 6 hexa 7 hepta 8 octa 9 nona 10 deca
Ex. CO_2 carbon dioxide
Ex. CO carbon monoxide

Acid (formula begins with H)			
Anion ending	Example	Acid name	Example
-ide	Cl^- chloride	Hydro-(stem) –ic acid	hydrochloric acid
-ite	SO_3^{-2} sulfite	(stem) –ous acid	sulfurous acid
-ate	NO_3^- nitrate	(stem) –ic acid	nitric acid

Table 1
Polyatomic Ions

1+	2+
ammonium NH_4^+	dimercury Hg_2^{2+}

1-	2-	3-
acetate CH_3COO^- or $C_2H_3O_2^-$	carbonate CO_3^{2-}	phosphate PO_4^{3-}
bromate BrO_3^-	chromate CrO_4^{2-}	arsenate AsO_4^{3-}
chlorate ClO_3^-	dichromate $Cr_2O_7^{2-}$	phosphite PO_3^{3-}
chlorite ClO_2^-	hydrogen phosphate HPO_4^{2-}	
cyanide CN^-	oxalate $C_2O_4^{2-}$	
dihydrogen phosphate $H_2PO_4^-$	peroxide O_2^{2-}	
hydrogen carbonate (bicarbonate) HCO_3^-	sulfate SO_4^{2-}	
hydrogen sulfate HSO_4^-	sulfite SO_3^{2-}	
hydroxide OH^-	silicate SiO_3^{2-}	
hypochlorite ClO^-		
nitrate NO_3^-		
nitrite NO_2^-		
perchlorate ClO_4^-		
permanganate MnO_4^-		

Remember diatomic molecules
H_2, N_2, O_2, F_2, Cl_2, Br_2, I_2

Compounds to remember
CH_4 methane, C_2H_6 ethane, C_3H_8 propane, C_4H_{10} butane, $C_6H_{12}O_6$ glucose, NH_3 ammonia,