Warm up 11.1.07

take out a blank sheet of paper and match the following terms…

- 1. Made of two nonmetals
- 2. Made of a metal and a nonmetal
- 3. Makes atoms stable or "happy"
- 4. Ions are formed
- 5. Molecules are formed
- 6. Forms compounds with different properties than individual elements
- 7. Electrons are lost or gained
- 8. Electrons are shared
- 9. Can form double and triple bonds
- 10. Can not form double or triple bonds

- Ionic
- Covalent
- Both

Chapter 19 Foldable

4 Flaps on the front

- Writing Formulas
- Naming Ionic Compounds (metal/nonmetal)
- Naming Covalent Compounds (2 nonmetals)
- Naming Polyatomic Ions (more than 2 elements)

Writing Formulas

- On flap
  - Determine the oxidation number for 2 elements
  - Write symbols with metal first
  - Write oxidation numbers as superscripts
  - Crisscross method: No signs (subscripts). Do not put one!
  - Reduce

- Inside (Examples)

Ba^{+2} Cl^{-1} Ba^{+2} F-1

$BaCl_2$ BaF_2

Fe^{+2} O^{-2}

Fe_2O_2

FeO

Naming Ionic (on Flap)

- Write name of the 1st atom (cation)
- Write root name of 2nd atom (anion)
- Add –ide to ending

- Transition elements have varied oxidation number (use chart)
- Use oxidation number of negative to figure out (crisscross backwards)
- Use Roman Numeral

Naming Ionic (inside)

- Examples
  - $CaCl_2$: Calcium Chloride
  - Li_2S: Lithium Sulfide
  - MgF_2: Magnesium Floride
  - NaCl: Sodium Chloride

- Copper (I): Cu^{+} Chromium (II): Cr^{+2}
- Copper (II): Cu^{+2} Chromium (III): Cr^{+3}
- Iron (II): Fe^{+2} Lead (II): Pb^{+2}
- Iron(III): Fe^{+3} Lead (IV): Pb^{+4}
- Zinc: Zn^{+2} Silver: Ag^{+1}

- $CuCl_2$: Copper (II) Chloride
- Cu^{+2} Cl^{-1}
- $CrCl_3$ Chromium (III) Chloride
- Cr^{+3} Cl^{-1}

Naming Covalent (on Flap)

- From chart look at element and subscript
- Add the correct prefixes to the elements name
  - 1: mono not needed on the first element
- Look at second element, add prefix to root word.
  - 1: mono need
- Change ending to -ide

Covalent Prefixes (put inside)

- 1: mono-
- 2: di-
- 3: tri-
- 4: tetra-
- 5: penta-
- 6: hexa-
- 7 hepta-
- 8 octa-

Covalent examples (inside)

- NO
  - Nitrogen Monoxide
- N_2O_5
  - Dinitrogen pentoxide
- CO_2
  - Carbon Dioxide
- H_2O
  - Dihydrogen monoxide

Naming Polyatomic (On flap)

- Write name of cation
- Use table to find the names of polyatomic

Polyatomic Inside

Table 4 Polyatomic Ions

Charge	Name	Formula
1+	ammonium	NH_4^+
1–	acetate	$C_2H_3O_2^-$
	chlorate	ClO_3^-
	hydroxide	OH^-
	nitrate	NO_3^-
2–	carbonate	CO_3^{2-}
	sulfate	SO_4^{2-}
3–	phosphate	PO_4^{3-}

- $Na^+ (NO_3)^+$
- $Na(NO_3)$
- Sodium Nitrate