Naming Compounds

Compounds

- Compounds fall into 2 categories molecular and ionic
- Ionic Compounds contain one metal and one non metal
- In an ionic compound, the electron is transferred from the metal to the non metal and creates 2 ions



- A molecular compound contains two non metals
- These elements share the electron
- Ex. Water, carbon dioxide, gasoline



Naming Molecular

- Each element is given a prefix based on how many atoms are present of each element
- Prefixes go BEFORE the name of the element
- Ex. Dihydrogen monoxide = $H_2 0$
- If there is only 1 of the first element, no prefix is used
- Monocarbon monoxide is the wrong way of writing CO
- Carbon monoxide is correct

- After adding a prefix to both elements, change the ending of the last element to -ide
- Ex. oxygen becomes oxide
- Ex. Sulfur becomes sulfide



List of Prefixes - Memorize this

| Number | Greek Prefix | Number | Greek Prefix |
|--------|--------------|--------|--------------|
| 1 | mono | 6 | hexa |
| 2 | di | 7 | hepta |
| 3 | tri | 8 | octa |
| 4 | tetra | 9 | nona |
| 5 | penta | 10 | deca |



Example Questions

- Ex. Write the name for CO $_2$
- Ex. Write the name for C_2H_4
- Ex. Write the formula for trinitrogen pentaoxide
- Ex. Write the formula for nonacarbon heptachloride



Ionic Compounds

- Ionic compounds give up an electron
- These compounds contain a metal and a non metal
- We can predict the ratios which ionic compounds will form compounds, therefore prefixes are not needed
- The metal is always listed first in an ionic compound



Naming Ionic Compounds

- Only the non metal (the second element) has a change to its name
- Leave the metal the same, change the ending of the non metal to -ide

Ex. Na + Cl = Sodium Chloride

Ex. Be + F = Beryllium Fluor**ide**

