Science 9 **Chem 6 Notes** Name:

**Objectives**: By the end of the lesson you should be able to:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Warm Up: Counting Atoms Practice**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Formula** | **# of Atoms** |  | **Formula** | **# of Atoms** |
| 1) NaCl |  |  | 4) Mg(OH)2 |  |
| 2) HNO3 |  |  | 5) (NH4)2O |  |
| 3) H2SO4 |  |  | 6) NH4NO3 |  |

**Complex and Simple Ions:**

**Simple Ions**: \_\_\_\_\_ atom with a \_\_\_\_\_\_\_\_\_\_\_

H+ S-2 Cu+1 Cu+2

**Complex Ions:** \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_ atom with an \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_

* Called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ions
* Listed in Chem 5 notes

SO4-2 NO3-1 NH4+1

**Remember….**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (AKA: charge) tells you how many \_\_\_\_\_\_\_\_\_\_\_\_\_ have been lost/gained to get a \_\_\_\_\_\_\_\_\_\_\_ outer shell

**Names and Formulas:**

* **Naming compounds**: involves writing out the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ name for each element in the compound
  + *Compound and symbols given* 🡪 *make name!*
* **Formulas**: involve using \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of each element to make the compound
  + *Name given* 🡪 *make compound with symbols*

**Remember Ionic Compounds…**

* Always involve a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ charge (\_\_\_\_\_\_\_\_\_) and a \_\_\_\_\_\_\_\_\_\_\_\_\_ charge (non-metal)
* Electrons are always transferred from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Create \_\_\_\_\_\_\_\_\_\_\_\_\_\_ because losing and gaining \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (charges result)

**Naming Ionic Compounds:**

* Metal always \_\_\_\_\_\_\_\_\_\_; name \_\_\_\_\_\_\_\_\_ changes
* Non-metal \_\_\_\_\_\_\_\_\_\_\_\_; ending becomes “\_\_\_\_\_”

EX:

NaCl = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MgF2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Al2O3 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Creating Ionic Formulas (Same Charge)**

Ex 1: magnesium oxide

*🡪 find symbol and charge*

🡪 *the charges are the same…*combine!

**Creating Ionic Formulas (Different Charges)**

Ex 2: Aluminum sulphide

🡪*find symbol and charge*

*🡪 Charges are different so draw an arrow diagram (all arrows must be paired!)*

*🡪 Count how many you have of each (make sure the numbers are written below the symbol)*