**Formulas and Nomenclature of Compounds**

**Part A. Ionic Compounds**

You will receive the formula of an ion. Find a classmate with an ion of the opposite charge. Introduce yourself, and then answer the follow questions.

1. Anion formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Anion name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cation formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cation name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Based on the charges of the ions, write the empirical formula for the ionic compound that would form between these ions.
2. Name the ionic compound.

When you have completed this part, switch ions with a nearby group and repeat the process with the new ions.

1. Anion formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Anion name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cation formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cation name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Based on the charges of the ions, write the empirical formula for the ionic compound that would form between these ions.
2. Name the ionic compound.

Now, keep your ion, and find a new partner with an ion of the opposite charge.

1. Anion formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Anion name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cation formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cation name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Based on the charges of the ions, write the empirical formula for the ionic compound that would form between these ions.
2. Name the ionic compound.

**Part B. Molecular Compounds**

Work with your current partner to finish answering a few questions about molecular compounds

Name the following binary molecular compounds:

7. SF6

8. S4N4

9. NO­2

10. SiO2

Write the formulas for the following binary molecular compounds:

11. arsenic pentafluoride

12. dichlorine heptaoxide

13. tetraphosphorus decoxide

14. iodine pentafluoride