

Name: _____

Ionic Bonding Basics

Use your periodic table as a guide to fill in the chart below.

Element	Atomic Symbol	Total number of Electrons	Number of Valence Electrons	Lewis Dot Structure	Number of electrons needed to gain or lose (to fill outer Energy Level)	Charge on Ion
Chlorine						
Potassium						
Magnesium						
Fluorine						
Aluminum						
Sodium						
Nitrogen						
Oxygen						
Hydrogen						
Carbon						
Iodine						

Name: _____

Answer these questions:

- An atom that gains one or more electrons will have a _____ charge.
- An atom that loses one or more electrons will have a _____ charge.
- An atom that gains or loses one or more electrons is called an _____.
- A positive ion is called a _____ and a negative ion is called an _____.

What is an ionic bond?

- Atoms will transfer one or more _____ to another to form the bond.
- Each atom is left with a ____ *complete* _____ outer energy level.
- An ionic bond forms between a *_metal_* _____ ion with a positive charge and a _____ *non-metal* _____ ion with a negative charge.

Directions: Using the Bonding Basics Element Cards and the colored chips, put the same number of chips as number of valence electrons around each element. Using the chips model what would happen to each element as they form ions and ionic bonds. Take a picture, or draw a model of what would happen to the lewis dot structures below. Write the chemical formula for each new compound below your model.

Example: Sodium + Chlorine

Example: Magnesium + Iodine

Compound formula: _____

Compound formula: _____

Name: _____

Potassium + Iodine

Sodium + Oxygen

Compound formula: _____

Compound formula: _____

Calcium + Chlorine

Aluminum + Chlorine

Compound formula: _____

Compound formula: _____

Challenge: What are some other ionic bonds that can be formed by the elements you see? Remember that you need a metal and a nonmetal to make an ionic bond. Write the formula for the compound and its name.