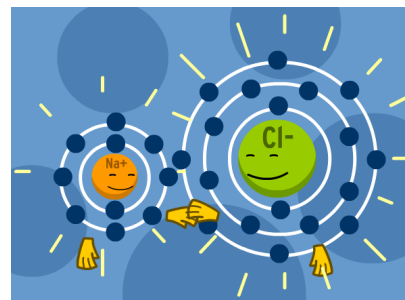


Name \_\_\_\_\_ Date \_\_\_\_\_



## Warm Up

Element	# of Valence Electrons	Lewis Dot Diagram ATOM	Lewis Dot Diagram ION
Mg			
O			
Cl			

## Bonding Basics

- i. What makes an atom a “Happy Atom?”
  - i. What rule have we been using to help us figure out how to make an atom “happy?”
- ii. What are the two main types of chemical bonds?
  - i. \_\_\_\_\_ Bond where electrons are \_\_\_\_\_.
  - ii. \_\_\_\_\_ Bond where electrons are \_\_\_\_\_.
- iii. The last example talks about Sodium and Fluorine working together to form a bond. Describe in **terms of electrons**, why these two work so well together.
- iv. Draw the Lewis dot diagram for each ion created when Sodium and Fluorine create a bond. What is the overall charge when they are combined?
- v. A Chemical Bond between atoms involves \_\_\_\_\_ and the interaction of \_\_\_\_\_ with atomic nuclei.

## Types of Chemical Bonds

### 1. Ionic Bonds

- i. Involved the \_\_\_\_\_ of electrons
- ii. Occur between One \_\_\_\_\_ and One \_\_\_\_\_
  - i. Also includes any bonds involving Polyatomic Ions (we'll get to this soon)
- iii. Examples Include:

Name	Chemical Formula	Diagram
Sodium Chloride "Table Salt"		
Magnesium Oxide		

### 2. Covalent Bonds:

- iv. Involve the \_\_\_\_\_ of electrons
- v. Occur between 2 or more \_\_\_\_\_
- vi. Also called \_\_\_\_\_ Bonds
- vii. Examples include:

Name	Chemical Formula	Diagram
Water		
Carbon Dioxide		

### iii. Metallic Bonds

- i. Bonding occurs due to a \_\_\_\_\_ of Electrons, where electrons are constantly moving around from atom to atom
- ii. This type of bonding is responsible for Metallic Characteristics including:  
Malleability \_\_\_\_\_  
Ductility \_\_\_\_\_  
Conductivity \_\_\_\_\_

