

LO: Students will be able to identify the type of bonds that will be formed from the combinations of elements and how to represent valence electrons with Lewis Dots.

DOL: Students will be able to correctly identify types of chemical compounds and bonds.

There are 3 major types of bonds.

- 1) ionic bond
- 2) covalent bond
- 3) metallic bond

## Ionic Bonds

- these form when a cation and an anion are attracted to one another

cat = +

an = -

-cations form when METALS lose electrons

-anions form when NONMETALS gain electrons

## Covalent Bonds

"co" means with, together, or jointly

What are some words that have the prefix "co"?

"valent" refers to valence electrons

Hence, covalent means joining together of electrons

### Covalent Bonds continued:

- form when NONMETALS share their valence electrons with other NONMETALS

### Metallic Bonds:

- form when METAL atoms bond with other METAL atoms.

- delocalized valence electrons form a "sea of electrons"

## Lewis Dot Structures:

- a visual way of representing valence electrons
- remember that the "A" groups are numbered in order to show you how many valence electrons they have
- electrons should be spread out with no more than 2 per side

## Lewis Dot Examples: