**Compounds**

**Compound**:

When elements are combined they form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_. Chemical \_\_\_\_\_\_\_\_\_\_ connect elements together through interactions between their \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ interact in two ways:

* Electrons are \_\_\_\_\_\_\_\_\_\_ between the elements, being passed back and forth.
* Electrons are \_\_\_\_\_\_\_\_\_ away by one element and \_\_\_\_\_\_\_\_ by another element

**Sharing Electrons**

When atoms share electrons the bond they form is called a \_\_\_\_\_\_\_\_\_\_\_\_ bond.

* Examples of covalent bonds:

Covalent bonds are formed between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that share their electrons.

**Giving/Taking Electrons**

\_\_\_\_\_\_\_\_ are formed when an atom gives or takes electrons so they have a full or empty valence shell.

Examples:

What happens to positively charged things that get close to negatively charged things?

When atoms come together because of their \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_, it is called an \_\_\_\_\_\_\_\_\_\_ bond.

Examples:

Ionic bonds are formed by having a ­­\_\_\_\_\_\_\_\_\_ give its electrons to a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

When they form together, the ions line up in a particular way that makes an \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_.

**Making Ionic Compound Formulae**

An ionic compound is made of ions, which have electric charges, but the compound itself has \_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_.

What happens when the ion charges do not match?

Having more than one of an element is shown by a small number at the bottom of the element.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ metals are metals that have more than one possible ion charge. We determine which charge it has by using **roman numerals** after the name.

Examples: