

**Manufacture of Ionic Compounds**

Ionic compounds are composed of ions. An ion is an atom or molecule with an electrical charge. Chemical bonds are formed from single atoms that have gained or lost electrons. Polyatomic ions are formed from molecules groups of atoms bonded together that have gained or lost electrons.

Negative ions are called anions, and are formed when an atom or molecule gains electrons. All non-metals form negatively charged ions. Positive ions are called cations, and are formed when an atom or molecule loses electrons. All metals form positively charged cations. Some non-metals form charged particles called radicals, which form as the result of the loss of electrons from the outer shell of an atom.

**Electron Shells**

This model will form anions and only one positive cation charge. The following electron table shows the charges for various ions commonly found in ionic compounds.

Li	Na																			

**Work Book**

- The magnitude of the negative charge on fluorine ions is equal to 8 minus their Group Number.
- The number of these electrons found on the chlorine cation has the opposite net cell charge of -10e.

**Worksheet**     *Student to complete this worksheet outside the lab or as a challenge*

**Worksheet**     *The 11<sup>th</sup> electron shell the strongly ion*