**Predicting Decomposition, Synthesis and Single replacement reactions**

**Synthesis and Decomposition: no way of knowing unless you see the reactions happen so, if you are looking at these types of equations you need to assume that there is enough energy present to make or break the bond.**

**Single replacement: Use an activity series, if the isolated ion is more reactive than the one in a compound, then the reaction should occur.**

Activity Series for metals Activity Series for non – metals

Li F2

K Cl2

Ba Br2

Ca I2

Na

Mg

Al

Zn

Fe

Ni

Sn

Pb

H2 (acts like a metal)

Cu

Hg

Ag

Au