**Activity Series**

**Activity Series: are lists of elements with the most reactive element on the top and the least reactive on the bottom.**

**Example: Li – most reactive**

 **K**

 **Ba**

 **Ca**

 **Na – least reactive**

Example:

LiCl + Na🡪 Can this happen??

No. Because Na is not more reactive than Li.

An Activity series can be made by looking at a series of Single Replacement reactions to determine how the reactivity of the Ions (negative or positive) compare to each other.

Example:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | HCl | CuSO4 | AgNO3  | K2O |
| Mg | R | R | R | NR |
| Cu | NR | X | R | NR |

Activity Series?

K

Mg

H

Cu

Ag

\*\*Mg was reactive enough to replace all of the + ions besides K and is therefore not reactive enough to replace it.

 In order for a single replacement reaction to occur the isolated element must be more reactive than the one that is bonded to a non metal.