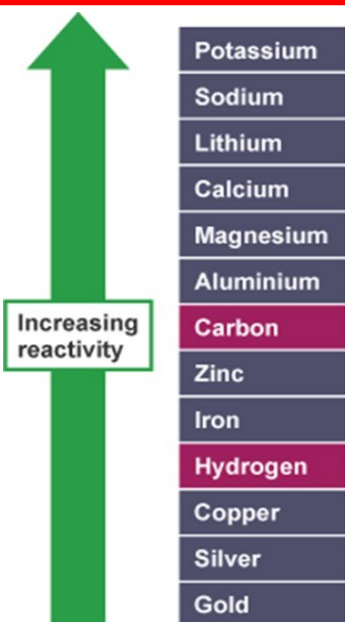




Acids, metals & Extraction

Topic outcome: Metals and Reactions



A good way to remember the order of a reactivity series of metals is to use the first letter of each one to make up a silly sentence.

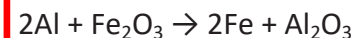
Observations of the way that these elements react with water, acids and steam enable us to put them into this series.

Element	Reaction with water
Potassium	Violently
Sodium	Very quickly
Lithium	Quickly
Calcium	More slowly

Displacement reactions of metal oxides

A more reactive metal will displace a less reactive metal from a compound. The thermite reaction is a good example of this. It is used to produce white hot molten (liquid) iron in remote locations for welding. A lot of heat is needed to start the reaction, but then it releases an incredible amount of heat, enough to melt the iron.

aluminium + iron(III) oxide \rightarrow iron + aluminium oxide



Use the reactivity series to predict displacement reactions and which metals can be displaced from their ores using carbon.

Q. Can I compare the reactions of different metals with dilute acids & explain the test for hydrogen gas. Compare the reactions of different metals with oxygen and water.

