

Y7 -Knowledge organiser – 7.6 - Metals and Non metals & Acids and Alkalis



Metals vs Non-metals 1

- **Metals:** shiny, good **conductors** of electricity and heat, **malleable** and **ductile**.
- Metals are usually solid at room temp
- **Non metals:** dull, poor conductors of electricity and heat, **brittle**.
- Iron, nickel and cobalt are **magnetic**.

Reactivity series 2

potassium **most reactive**
 sodium
 calcium
 magnesium
 aluminium
 carbon
 zinc
 iron
 tin
 lead
 hydrogen
 copper
 silver
 gold
 platinum **least reactive**

Metal Reactions 3

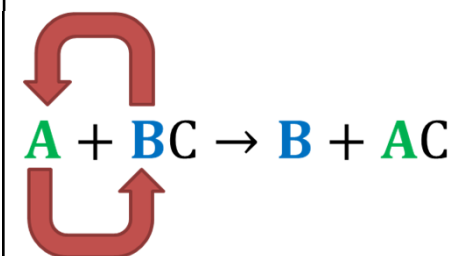
metal + oxygen → metal oxide

Oxidation: substance combines with oxygen.

Metal + acid → salt + hydrogen

Displacement reaction 4

Displacement reactions are where a more reactive metal takes the place of a less reactive metal.



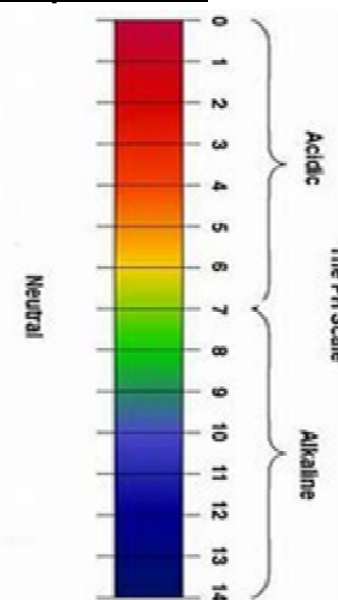
Acids and Alkalis 5

- Acids and alkalis can be **corrosive** or **irritant**.
- Examples of acid: **hydrochloric**, **sulfuric** and **nitric** acid are strong acids.
- **Acetic** and **citric** acid are weak acids.
- **Base:** a substance that neutralises an acid.
- **Alkali:** a base that can dissolve in water.

Indicators 6

- Substance used to identify if substances are acidic or alkaline.
- Most common indicator is Universal Indicator, UI.
- Turns red for strong acids
- Turns purple for strong alkalis.
- Turns green in neutral solutions.

The pH scale 7



Neutralisation 8

- Mixing acids and alkalis makes a neutral substance called a salt, and water.

