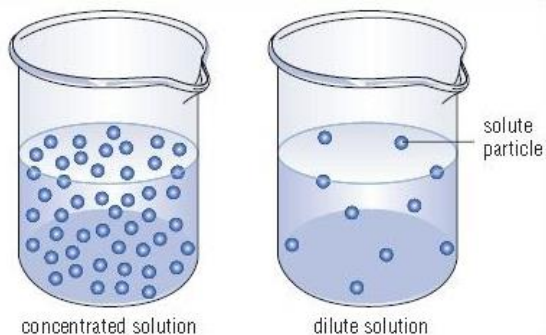


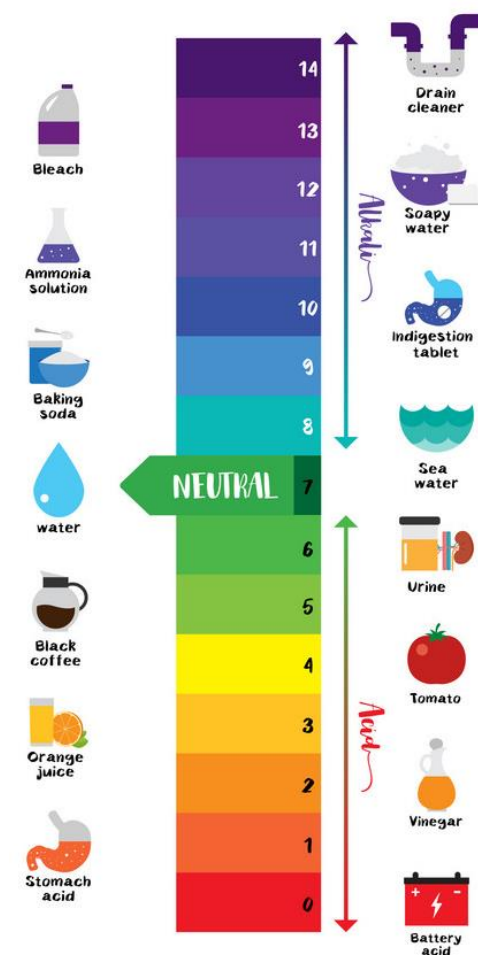
# Chemistry: Acids and Alkalis

Key word	Definition
Ion	An atom or molecule with a charge due to the loss or gain of an electron
Concentrated	A large number of particles in a given volume
Dilute	A small number of particles in a given volume
Indicator	A substance that changes colour to show whether a solution is acid or alkali
pH scale	A scale to show whether a substance is acid, alkaline or neutral
Neutral	A solution that is neither alkaline or acidic
Neutralisation	When an acid and a base react together to create a neutral solution
Base	An alkali which doesn't dissolve in water



**Universal indicator** is a mixture of dyes which changes colour depending on how acidic or alkaline a solution is:

Acids have a pH less than 7  
 Alkalis have a pH greater than 7  
 Neutral substances have a pH of exactly 7



**harmful**



**corrosive**



**toxic**

	Examples
Acid	<ul style="list-style-type: none"> <li>Hydrochloric acid</li> <li>Sulfuric acid</li> <li>Nitric acid</li> </ul>
Alkalis	<ul style="list-style-type: none"> <li>Metal Oxides</li> <li>Metal Hydroxides</li> <li>Metal Carbonates</li> </ul>

Acids have excess  $H^+$  ions

Bases have excess  $OH^-$  ions

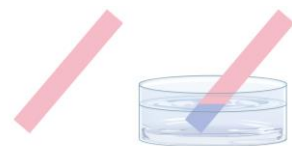
Neutral water has equal amounts of  $H^+$  and  $OH^-$  ions

## Neutralisation equations

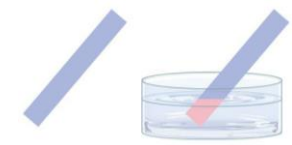
metal oxide + acid  $\rightarrow$  a salt + water

metal hydroxide + acid  $\rightarrow$  a salt + water

metal carbonate + acid  $\rightarrow$  a salt + water + carbon dioxide



Red litmus paper turns blue in alkali



Blue litmus paper turns red in acid

