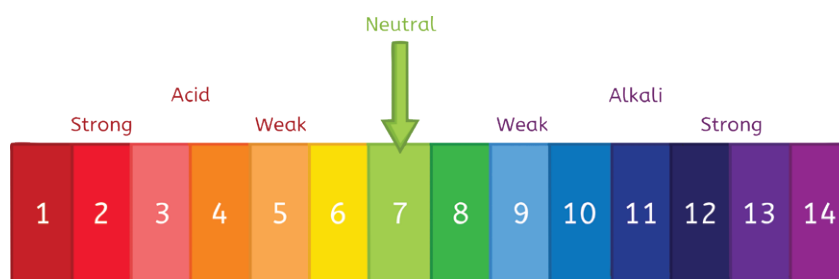


Acids and Alkalis Key Revision Facts

- A concentrated acid will have more acid particles per litre than a dilute acid.
- Common lab acids are:
Sulfuric acid H_2SO_4 , hydrochloric acid HCl , nitric acid HNO_3 .
- An indicator is a solution that changes colour to determine the pH of a solution.
- Common indicators are:
Universal indicator, it turns red in acidic solutions and blue in alkaline solutions,
Blue litmus paper turns red in acids,
Red litmus paper turns blue in alkali solutions.
- The pH scale is shown below:
- Sodium hydroxide, $NaOH$, is a well-known alkali.
- Neutralisation involves adding an alkali to an acid to produce a neutral solution.



Household Solution	Acid	Alkali	Neutral
water			✓
lemon juice	✓		
vinegar	✓		
toothpaste		✓	
milk		✓	
oven cleaner		✓	

- Hydrochloric acid makes chloride salts.
- Sulfuric acid makes sulfate salts.
- Nitric acid makes nitrate salts.
- Making copper sulfate crystals:
 1. Add powdered copper oxide to sulfuric acid;
 2. Filter the mixture to collect the un-reacted copper oxide and collect the copper sulfate solution;
 3. Place the copper sulphate solution into an evaporating dish and heat gently;
 4. The water will evaporate and copper sulfate crystals will form in the evaporating dish.
- Neutralisation reactions are useful because they can be used to neutralise soil or lakes.