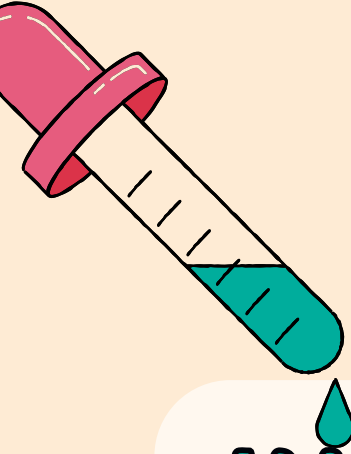
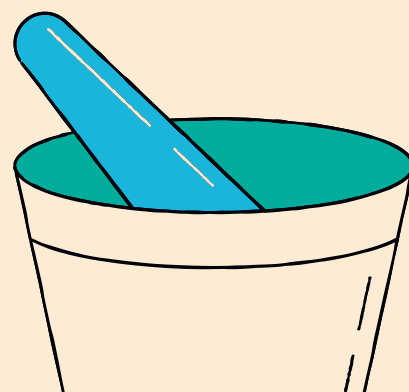
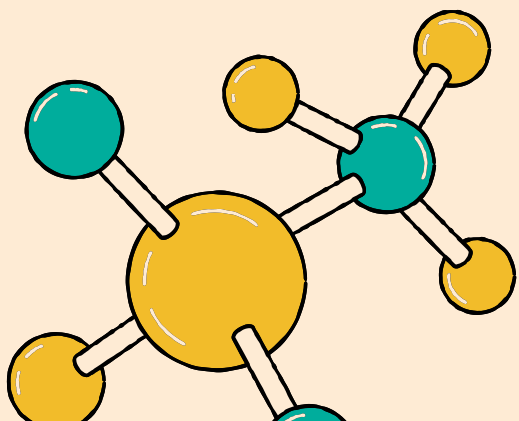
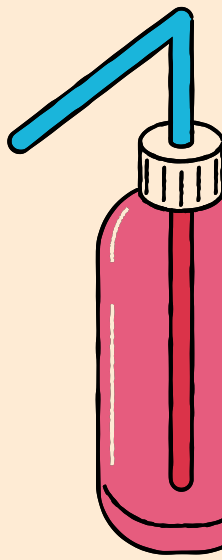
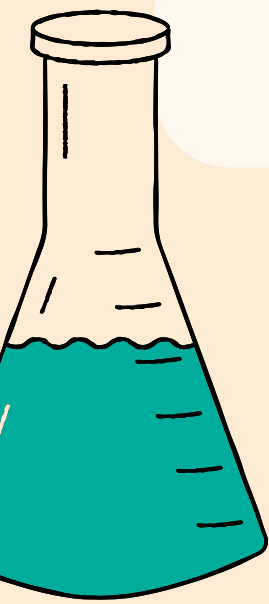


INTRODUCTION TO ACIDS & BASES BY:CE

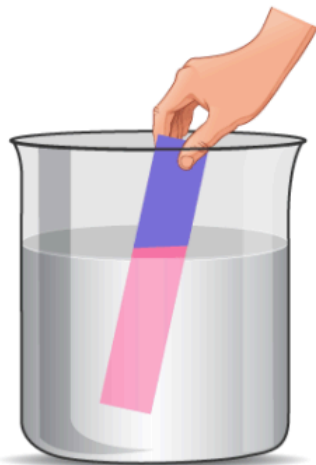


What is the differences between **Acids** & **Bases**



Acids

- Sour taste
- reactivity with metals
- Ability to turn blue litmus paper red



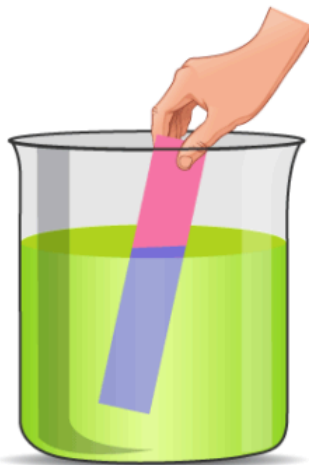
Acid

Blue litmus turns red



Bases

- Bitter taste
- feel slippery
- Ability to turn red litmus paper blue



Base

Red litmus turns blue



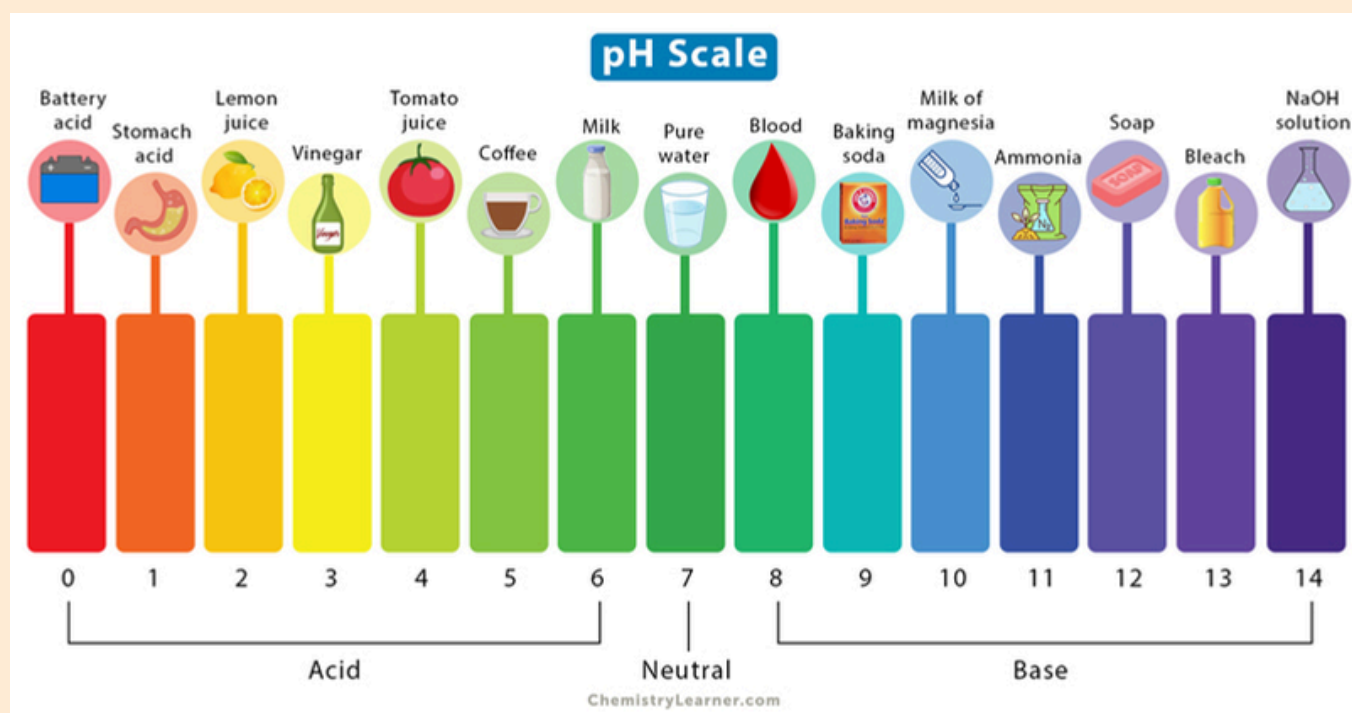
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Acids and Bases are both conductor of electricity

Acids are chemical substances that have a PH lower than 7

Neutrals are substances that have a PH equal to 7, such as pure water.

Basis are chemical substances that have a PH greater than 7,



Identifying acids and bases ..

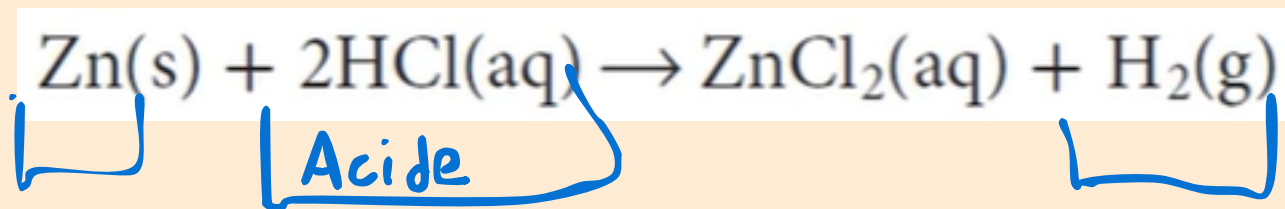
Acids and **bases** can be identified by their reactions with some metals and metal carbonates.

CO_3

Mg

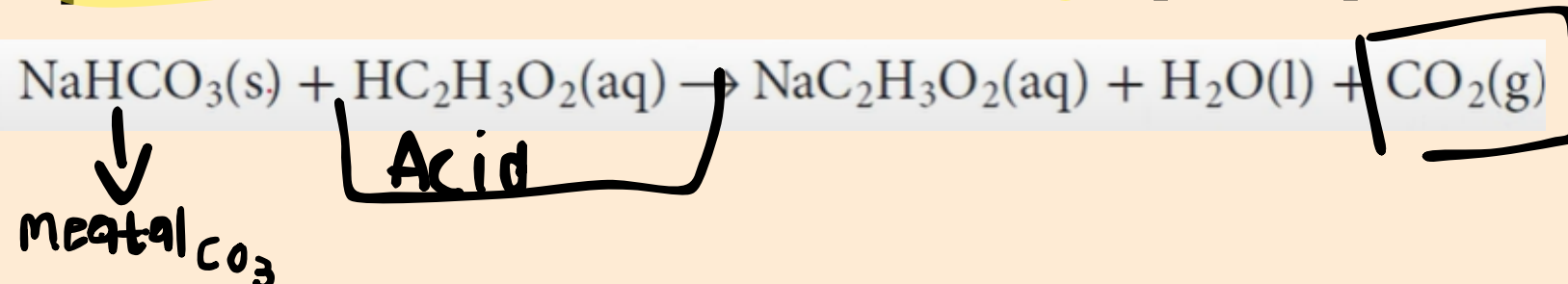
Zn

Magnesium and zinc react with **acids** to produce hydrogen gas (H_2).



metal CO_3

Metal carbonates and hydrogen carbonates also react with **aqueous solutions of acids** to produce carbon dioxide (CO_2)



If a reaction happens, that means it's acidic solution. If nothing happened, that means it's Basic solution

All water solutions contain hydrogen ions (H^+) and hydroxide ions (OH^-).

An **acidic** solution contains more hydrogen ions than hydroxide ions.



A **basic** solution contains more hydroxide ions than hydrogen ions.



Acids and bases are conductors of electricity because they produce ions (H^+) and (OH^-) when they dissolve in water.

"Ions in water = conducting electricity"

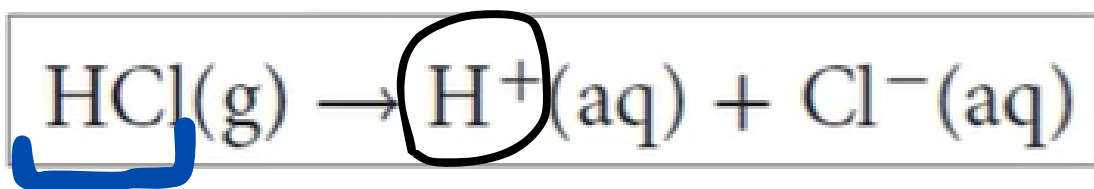
How to find out if a solution is ACIDIC or BASIC.

We have three ways

1st way is ARRHENIUS MODEL .

An acid is a substance that contains hydrogen and ionizes to produce hydrogen ions in aqueous solutions.

- **Contains hydrogen.**
- **Ionizes (disassociates into ions) in aqueous solution.**
- **Produces hydrogen ions (H^+) when dissolved in water.**



there is hydrogen

so it will be acid

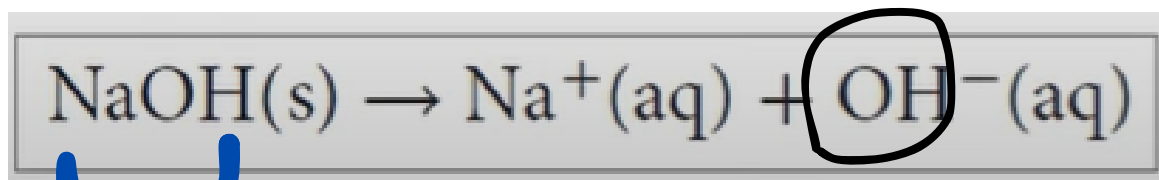
How to find out if a solution is ACIDIC or BASIC.

We have three ways

1st way is **ARRHENIUS MODEL**.

A base is a substance that contains hydroxide in the formula and produces a hydroxide ion in solution.

- Contains hydrogen.
- Dissociates in solution to produce hydroxide ions (OH^-).



there is hydrogen

so it will be basic

How to find out if a solution is ACIDIC or BASIC.

We have three ways

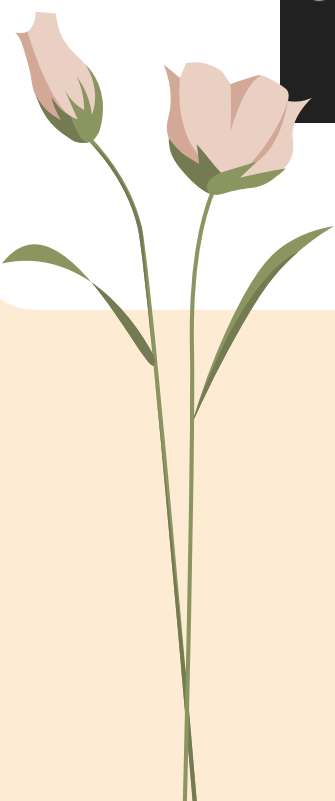
2nd way is BRONSTED-LOWERY MODEL

of **acids** and **bases** states that an acid is a hydrogen ion donor (فائد) and a base is a hydrogen ion acceptor (مستقبل)

- An acid is a hydrogen ion (H^+) donor (فائد)

A base is a hydrogen ion (H^+) acceptor (مستقبل)

- Acid: HCl donates H^+ to water:
$$HCl + H_2O \rightarrow H_3O^+ + Cl^-$$
- Base: NH_3 accepts H^+ from water:
$$NH_3 + H_2O \rightarrow NH_4^+ + OH^-$$



How to find out if a solution is ACIDIC or BASIC.

We have three ways

3rd way is Lewis Model

Acid: A
substance that
accepts an
electron pair.

Base: A
substance that
donates an
electron pair



Good!
Luck!



11A 

Welcome all   مراجعات وفيديوغات شرح بالتوفيق
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