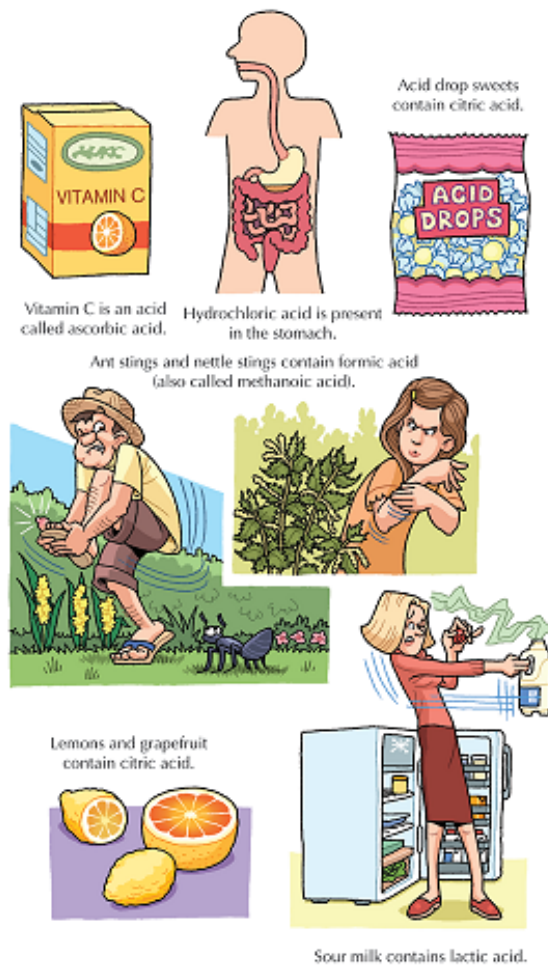


Acids and Bases

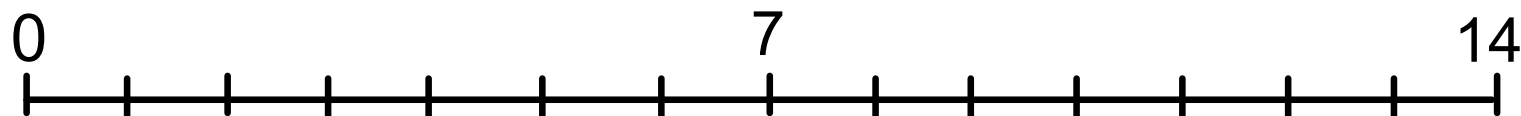
What acids do you know?

Acid comes from Latin and means sour.
It is dangerous to taste certain acids so we
need a better way to test for acids.



pH Scale

Water Washing Soda
Lemon Juice Sodium Hydroxide
Window Cleaner Orange Juice
Hydrochloric Acid



The pH scale is a scale that measures how acidic or basic a chemical is.

The scale goes from 0 to 14.

0 - 6 is **Acid**, 7 is **Neutral** and 8 - 14 is **Basic**.

Another word for a Base is an Alkali.

Bases

Bases are chemically opposite to acids.

Some common bases are....

Sodium Hydroxide - NaOH

Found in drain cleaner, also known as Caustic Soda.



Toothpaste

Antacids - like Rennie

This mixes with your stomach acid to make salt and water.



If you turn in a car what do you use to show which way you are going?



An **indicator** changes colour to show if a chemical is an Acid or a Base. The most common indicator is a chemical called **Litmus**. It's taken from a lichen and is **purple**.

We can make our own Litmus indicator from **Red Cabbage**.

Using Red Cabbage as a Indicator.



Litmus

An Acid is a chemical that turns litmus from **Blue** to **Red**.

A Base is a chemical that turns litmus from **Red** to **Blue**.



Universal indicator - turns different colours with different pHs.
Universal indicator can be in a paper or liquid form.

Universal indicator - turns different colours with different pHs.



Experiment

Substance Tested	Colour	pH
HCL	Red	1
Lemon Juice	Light Red	3
water	Green	6
toothpaste	Light Blue	8
NaOH	Dark Blue	14

Conclusion

Different substances have different pHs and these can be tested using an universal indicator

What you should know -

An indicator shows if a substance is an acid or a base
(by a colour change)

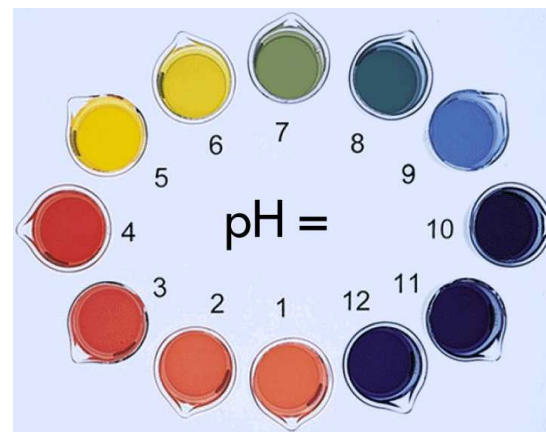
Acids turn **litmus red**

Bases turn **litmus blue**

A solution with pH 7 is **Neutral**.

A solution with pH 0 - 6 is **Acidic**

A solution with pH 8 - 14 is **Basic** (Alkaline)



Universal Indicator shows how strong an acid or base is.

Universal indicator is a mixture of different indicators.