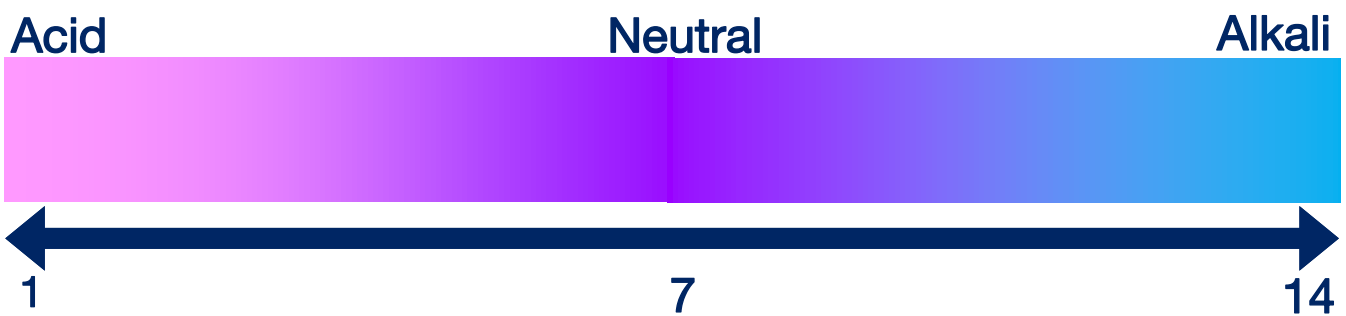


# Acid or Alkali?

Use a red cabbage to test PH of food, drink and household substances

## How to do it...

1. Chop up cabbage and soak in water
2. Once water has turned purple add some to 2 plastic cups
3. One of these cups is your control for comparison and the other is your 'experimental' cup.
4. Add a household substance such as *cola, lemon juice, ketchup, bicarbonate of soda, soap, vinegar, or tooth-paste* to the cup.



## The Science Bit...

- Acids and alkalis change the number of hydrogen ions ( $H^+$ ) in a solution. Acids produce more  $H^+$  ions and alkalis produce lots of hydroxide ( $OH^-$ ) ions. The hydroxide ions neutralise the  $H^+$  removing them from the solution.
- Red cabbage is a indicator of acidity.
- The more acidic something is the more pink the red cabbage water will turn
- The more alkali it is the bluer it will go.
- Red cabbage contains a substance called Flavin a pigment responsible for the red, blue and purple colours in some plants.
- The more hydrogen ions there are the pinker the Flavin goes, but in alkali conditions the pigment breaks up and turns blue.

This is known as a pH test, in scientific laboratories pH testing is used to test the acidity of different substances.

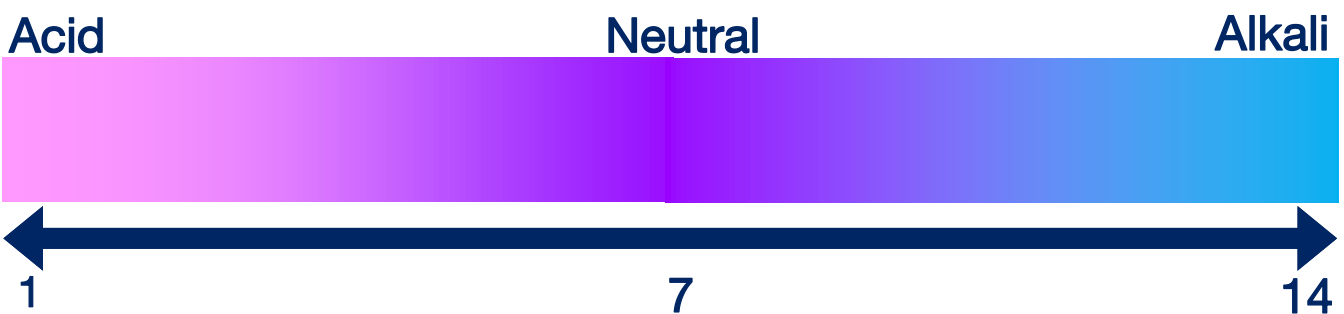
*Why not create your own colourful pH scale with red cabbage?*

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