

Lesson 4 - pH Scale

Chemistry - Key Stage 3

Chemical Reactions

Mrs Walsh



Simple indicators

Substance	Indication with red litmus	Indication with blue litmus	Acid or alkali?
Sodium hydroxide			
Vinegar			
Milk			
Lemon juice			
Tap water			



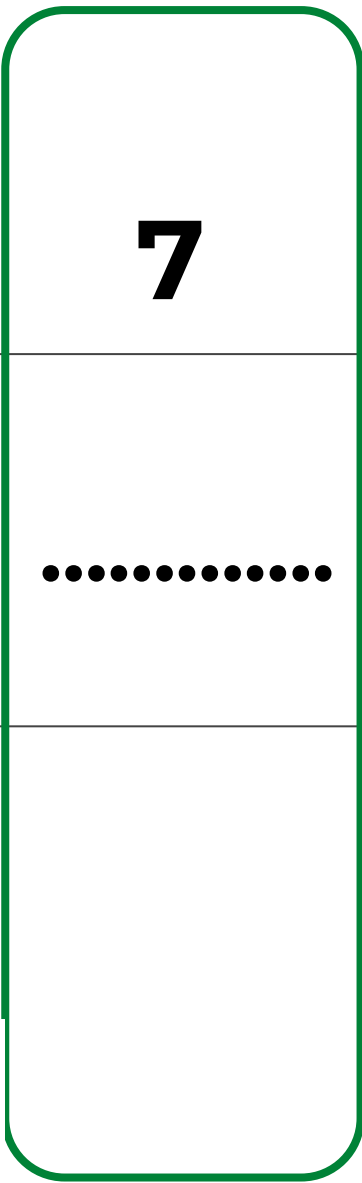
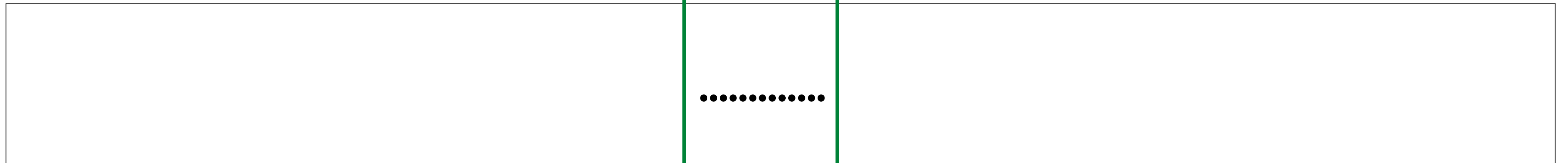
pH Scale



Indicators: How acid or alkali?

The pH scale

1 2 3 4 5 6 7 8 9 10 11 12 13 14



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Acid, alkali, or neutral?

Strong acid	Weak acid	Neutral	Weak alkali	Strong alkali



Acid, alkali or neutral?

- Lemon juice **pH 2**
- Pure water **pH 7**
- Oven cleaner **pH 13**
- Hydrochloric Acid **pH 1**
- Sodium Hydroxide **pH 14**
- Milk **pH 6.5**
- Smelling Salts **pH 11**
- Acid Rain **pH 4**
- Toothpaste **pH 9**
- Washing Soda **pH 12**
- Orange Juice **pH 5**
- Vinegar **pH 3**
- Alcohol **pH 7.3**



Comparing simple indicators with pH scale



Compare blue/red litmus paper indicators with the pH scale in determining whether a substance is acid, alkali, or neutral.

- *Blue/red litmus paper can tell us whether.....*
- *However, it doesn't tell us*
- *The pH scale can tell us, but red/blue litmus paper can not.*
- *Therefore.....*

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