



Year: 7

Topic: Acids and Alkalis

Links to KS3 National Curriculum:

Pupils decide on the most suitable type of enquiry to carry out and outline the planned approach/method, recognising, deciding upon and justifying each of the following when appropriate.  
investigations into the patterns of behaviour of elements and compounds and their use to describe and predict their behaviour in chemical reactions

Key words:

alkaline, beaker, dissolve, hydrochloric acid, indigestion tablets, neutralisation, pestle and mortar, pH, pH scale, solution, universal indicator

**Homework:**

Work through acids and alkali booklet

Lessons	Skills/practicals
<b>Lesson 1 How hazardous are acids?</b>	
Name some hazards in the lab Describe the reactions of different acids. Explain What a hazard is and how it can minimised.	
<b>Lesson 2 Hazard Symbols</b>	
Name some Hazards symbols Describe the difference between irritant and corrosive Explain why a certain hazard symbols should be used	
<b>Lesson 3 Acid, Alkali or neutral?</b>	
Name examples of everyday substances that are acids and alkalis. Describe the colour changes associated with litmus indicator Explain why litmus is purple in neutral solutions.	<b>Class practical: Testing the pH of everyday substances OR Comparing indicators</b>
<b>Lesson 4 Making an indicator</b>	
Name a natural Indicator Describe how different plant material can be used as indicators. Evaluate the effectiveness of different indicators.	<b>Class practical: Making cabbage indicator</b>
<b>Lesson 5 The pH Scale</b>	
Name the pH of a substance from its colour with UI Describe the main features of the pH scale Explain The how pH gives an indication of strength of an acid/alkali.	<b>Class demonstration: Rainbow in a burette</b>

<b>Lesson 6 Neutralisation Practical</b>		
<p>Name the reaction of acids reacting with alkalis as neutralisation.</p> <p>Describe the reactions of acids with alkalis by the colour changes that take place with indicators.</p> <p>Explain the changes that take place on neutralisation and dilution to the pH scale.</p>		
<b>Lesson 7 Making Copper sulphate crystals</b>		
<p>Name some apparatus needed for the process</p> <p>Describe any colour changes through the process</p> <p>Explain how to use the apparatus safely to complete the process</p>		<p><b>Class practical:</b> Making copper sulfate crystals</p>
<b>Lesson 8/9 Neutralisation assessed task</b>		
<ul style="list-style-type: none"> <li>- plan how to test three different powders for their antacid abilities on neutralizing a green stomach acid solution</li> <li>- carry out the experiment</li> <li>- write up the results.</li> </ul> <p>Alternative/additional Analysing assessed task available without prac. Examples of methods of comparing antacids can differ, using 'investigating antacids worksheet'</p>		<p><b>Levelled task</b></p> <p><b>Specified practical:</b> Neutralisation investigation "which antacid tablet is the most efficient?"</p>
<p><b>Numeracy:</b> Present answers to a given number of decimal places 7N15a Draw conclusion from data and recognise that some may be misleading KS3.19 Read and interpret scales 7M1 Measure to complete a task ks3.5</p>	<p><b>Literacy:</b> Select and organise ideas and information to give a clear and full account (Structure and organization) 7WS2 Use varied and appropriate vocabulary accurately including subject specific words and phrases (Language) 7WL2</p>	