

Sets (s): All

YEAR 7

SUBJECT science

Knowledge Focus: acids and alkalis



Ysgol Uwchradd  
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**This half term : Skills, Knowledge and Understanding to be developed:**

This topic introduces the ideas of the properties of acids and alkalis and neutralisation reactions. Pupils will identify hazard symbols such as harmful and corrosive. Pupils will look at acids in food and drinks for taste and to preserve foods. Pupils will test for acids and alkalis using litmus and the strength of acids and alkalis with universal indicator.

Plan and observe investigations on soils.

Literacy RS2, RS5, RS8, RC1

**Key Terms to be learned this half term:**

Acids, alkalis, hazard, corrosive, concentrated, diluted, irritant, harmful, hydrochloric acid, sodium hydroxide, strong acid, litmus, pH scale, weak acid, strong alkali, weak alkali, neutral, neutralisation, universal indicator, litmus,

**Week 1 and 2 Learning Objectives etc:**

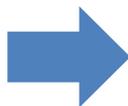
7Ea Identify some hazard warning symbols such as harmful and corrosive (7Ea5,6 or 7).

Carry out experiments comparing 3 different acids (7Ea2 and Ea3).

Literacy task 'The problem with acid rain' comprehension.

7Eb Learn why acids are important. Look at food and drinks that use acids for taste and to preserve the food (7Eb5,6 or 7).

Learn how we can tell if something is acid by using litmus paper. Carry out the litmus test to test various household products to see if they are acids, alkalis or neutral.



**Objective assessments:**

Practicals 7Ea2/3

Literacy task

**Homework:**

Poster on the dangers and safety of handling acids

7Ea 'Handling acids'

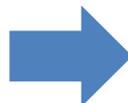
**Week 3 and 4 Learning Objectives etc:**

Find out how we can find out if something is an alkali or an acid using an indicator. Investigate acids and alkalis with red cabbage indicator. Then write up method describing how an indicator can be made 7Ec3 and 4 help sheets.

Learn about the pH scale and how we can measure the strength of acids and alkalis. Look at examples of the pH values of common substances.

Carry out the test of substances with universal indicator solution to find the strength of acids and alkalis (7Ed3).

Make a pH chart (7Ed7)



**Objective assessments:**

Making own indicator. Write up as a full practical.

Literacy task writing a method

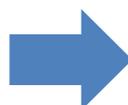
Planning and carrying out the investigation

**Homework:**

Research products we use, their Ph and uses '7Ed Ph'

**Week 5 and 6 Learning Objectives etc:**

Look at what a neutralization reaction is. Neutralising an alkali with an acid (exploring science pg74) or neutralisation circles. Observe rainbow fizz.



**Objective assessments:**

**Homework:**

Research alkalis and their uses.

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Find out how sherbert is made 7Ee8 and 9

Observe an experiment on acid corrosion using a fizzy drink (7Eb4). Complete SA.

Understand how alkalis are used in everyday life Ec[7]

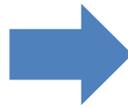
Plan and carry out an investigation to find out the pH of soil samples (spotlight 7 pg 80).

SA Numeracy task 7Eb4

Complete table of results and plot graph analyse data.

Week 7 Learning Objectives etc:

Produce a poster on all the information you have learnt during this topic.



Objective assessments:

Summarise the topic key points

Homework:  
7Ee6 reverse word