Fun Size: Acids loop — Teacher notes

Introduction
Question loops are useful recap activities. This loop can be used as revision for simple acid and alkali units. Key vocabulary for particular topics can be focused on each time the loop is played. There will be several sets of cards in the *Fun-Size* sections of the Science Year ASE CD ROMs.

Running the activity
There are 27 cards, two to a page, all different. Print out the set of 27 cards on 14 sheets of paper (card 28 is a front cover card). It is helpful to print the cards on different coloured paper for each subject area. Cut the A4 sheets in half lengthwise to make a "card" and laminate it for maximum durability. You may also need a stop-clock.
Give out individual cards to each pupil, or split the pupils into small groups and give a certain number of cards to each group until none are left. It is important that all the cards are used every time, or there will be a gap in the loop.
Start the activity by getting one pupil to ask their question. Another pupil will recognise the correct answer on their card and read it out. They should then read their question and so on until the loop returns to the starting person. This should happen with the 27th question asked. Pupils should turn their card over when they have finished. Record the amount of time taken to complete the loop and see if the class can better their time at the end of the lesson

For information and a blank template file contact nigel.heslop@scienceyear.com

Safety
Not applicable.

More ideas
The questions can be used as the basis of a quiz. Key words could be displayed beside the teaching station. Sticky Velcro patches make a good support for the word display. There should only be a few key words to focus attention on the target vocabulary for that session.

Learning outcomes
Develop pupil knowledge of:
- Common examples of acids and alkalis
- Reactions of acids and alkalis
- Indicators
- pH scale

Where the activity fits in
Revising Year 7 Chemistry topics.
QCA SoW Unit 7E Acids and alkalis

Skills
Vocabulary

Acknowledgements
This idea was one originally seen used in a science context by Mike Evans and Linda Ellis.

Q1 Vinegar (a dilute acid) tastes ……

A27 It goes blue

Q2 Very dilute alkalis feel ……

A1 Sour

Q3 All acids and alkalis must be treated with care because they can be ……

A2 Soapy

Q4 To tell the difference between an acid and an alkali you need to use a chemical called an ……

A3 Hazardous

Q5 The scale used to measure the strength of an acidic or alkaline solution is called the ……

A4 Indicator

Q6 The strongest acid solutions have a pH of ……

A5 pH scale

Q7 The strongest alkaline solutions have a pH of ……

A6 pH1

Q8 A neutral solution has a pH of ……

A7 pH14

Q9 When an acid reacts with an alkali they ……

A8 pH7

Q10 A very weak acid solution has a pH of ……

A9 Neutralise each other

Q11 A very weak alkali solution has a pH of ……

A10 pH6

Q12 When you work with acids and alkalis you must wear ……

A11 pH8

Q13 After you have finished working with acids and alkalis you must ……

A12 Eye protection

Q14 Many ordinary substances are acids, for example ……

A13 Wash your hands

Q15 Many ordinary substances are alkalis, for example ……

A14 Fruit juice and vinegar

Q16 Indicators are ……

A15 Soap and toothpaste

Q17 What hazard symbol is put on bottles of acid?

A16 Dye solutions that are different colours in acids and alkalis.

Q18 Why might you put alkaline bicarbonate of soda on bee stings?

A17 The corrosive symbol. It shows a hand being dissolved by a liquid.

Q19 Why might you put acidic vinegar on wasp stings?

A18 Because bee stings are acidic

Q20 Why do indigestion tablets contain alkaline substances?

A19 Because wasp stings are alkaline

Q21 What do acids do to most metals?

A20 Because indigestion is caused by having too much acid in the stomach

Q22 What gas is produced when a metal reacts with an acid?

A21 They corrode most metals

Q23 How do you test to show that a gas is hydrogen?

A22 The gas is hydrogen

Q24 What gas is produced when an acid reacts with carbonate rocks?

A23 Hydrogen burns with a squeaky pop

Q25 How would you test a gas to show that it is carbon dioxide?

A24 The gas is carbon dioxide

Q26 What colour does Universal Indicator go in an acidic solution?

A25 Pass it through limewater. Carbon dioxide turns limewater milky.

Q27 What colour does Universal Indicator go in an alkaline solution?

A26 It goes red

Question loop: Acids and alkalis (7E and 7F)