

Introduction

Question loops are useful recap activities. This loop can be used as revision for simple chemistry concepts. 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:

- Chemical and physical changes
- Evidence for chemical change
- Combustion
- Fuels

Where the activity fits in

Revising Year 7 chemistry topics.
QCA SoW Unit 7F Simple chemical reactions

Skills

Vocabulary

Acknowledgements

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

Q1 A permanent change in a material is usually a

A27 When a solid becomes a gas.

Q2 A temporary change in a material (for example, ice melting and refreezing) is called a

A1 Chemical change.

Q3 Evidence for a chemical change are things you can

A2 Physical change.

Q4 Fuel burning is a chemical change because

A3 See, hear or smell, like bubbles of gas being made.

Q5 The scientific name for burning is ... A4 New substances are made.

Q6 During combustion

A5 Combustion.

Q7 Materials that release energy when they burn are called

A6 New substances are made, and heat and light energy is released.

Q8 When fuels burn they react with ...

A7 Fuels.

Q9 Hundreds of years ago people thought burning was

A8 Oxygen.

Q10 Which two people changed these ideas?

A9 The release of phlogiston.

Q11 These two scientists showed that ...

A10 Joseph Priestley and Anton Lavoisier.

Q12 The fire triangle shows us three things that are needed to keep a fire going. These are ...

A11 Air is a mixture of gases including oxygen, which is a pure substance.

Q13 Firemen use the fire triangle information to

A12 Fuel, oxygen and a source of heat.

Q14 The fuel for a Bunsen burner is ...

A13 Put fires out. They cut off the fuel, prevent oxygen reaching the fire, or take away the source of heat.

Q15 Methane burns in air to make ...

A14 Methane.

Q16 Many fuels burn to make carbon dioxide because they have lots of ...

A15 Carbon dioxide and water vapour.

Q17 How can you find out if a gas is carbon dioxide?

A16carbon atoms in them

Q18 Which gas is made when metals react with acids?

A17 Pass it through limewater. Carbon dioxide turns limewater milky.

Q19 This metal does not react with acids to produce hydrogen

A18 Hydrogen.

Q20 When metal reacts with acid, the metal disappears or gets smaller. We sometimes call this

A19 Copper.

Q21 Which gas is produced when metals react with carbonates?

A20 Corrosion.

Q22 In a solid the particles are

A21 Carbon dioxide.

Q23 In a liquid the particles are

A22 In fixed positions but vibrating.

Q24 In a gas the particles are

A23 Linked together by weak forces,
but moving past each other.

Q25 When a solid melts the particles ...

A24 Well separated and moving very fast in random directions.

Q26 When a liquid boils the particles ...

A25 Have enough energy to break away from their fixed positions. Liquids do not have a fixed shape.

Q27 What is sublimation?

A26 Have enough energy to break the weak forces between them and become separate particles. Gases do not have a fixed shape or a fixed volume.

Question loop: Simple chemical reactions (7F)