

## Introduction

Question loops are useful recap activities. This loop can be used as revision for simple energy 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 27<sup>th</sup> 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](mailto: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

- Recap pupil knowledge of physical units, energy transfer, energy sources

## Where the activity fits in

QCA SoW Unit 7I  
Energy resources topics

## Skills

Recall, vocabulary

## Acknowledgements

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

Q1 What is the unit for measuring energy?

A27 Light energy transferred into electrical energy

Q2 What is the name for fuels from underground, such as coal, oil and gas?

A1 Joule

Q3 What is good about solar energy, wave energy and wind energy?

A2 Fossil fuels

Q4 How do wind farms affect the environment?

A3 They are renewable energy resources

Q5 What is the **original** source of nearly all energy sources?

A4 They cause noise and visual pollution

Q6 What is the device used to burn natural gas in the laboratory?

A5 The Sun

Q7 What is the proper name for natural gas?

A6 A Bunsen burner

Q8 What colour is the safety flame of a Bunsen burner?

A7 Methane

Q9 Why is this flame safe?

A8 Yellow

Q10 What device is used to measure temperature?

A9 You can see it

Q11 What units are used to measure temperature?

A10 A thermometer

Q12 What is 'normal' room temperature?

A11 Degrees Celsius ( $^{\circ}\text{C}$ )

Q13 What units are used to measure volume?

A12 20°C

Q14 What units are used to measure mass?

A13 Cubic metres (m<sup>3</sup>)



Q15 What is the temperature of boiling water?

A14 Kilograms (Kg)

Q16 What is the scientific word for burning?

A15 100°C

Q17 How can you find the food energy content of a small piece of food?

A16 Combustion

Q18 What energy transfers happen when a fuel is burnt?

A17 Burn the food, use the energy to heat water and measure the change in temperature

Q19 How is electricity generated from a fuel?

A18 Chemical energy in the fuel is transferred to heat and light energy

Q20 What are fossil fuels made from?

A19 The fuel is burned and used to make steam, the steam turns a turbine connected to an electric generator

Q21 How long has it taken for fossil fuels to be formed?

A20 The remains of dead plants and animals buried underground

Q22 Name two very old renewable energy devices

A21 Millions of years

Q23 What energy transfers happen in a light bulb?

A22 Windmills and water mills

Q24 What energy transfer happens in a set of brakes?

A23 Electrical energy transferred into light and heat energy

Q25 What energy transfer happens in a greenhouse?

A24 Movement energy transferred into heat energy

Q26 What energy transfer happens in a cell phone battery being re-charged?

A25 Light energy transferred into heat energy

Q27 What energy transfer happens in a solar cell (photo-voltaic cell)?

A26 Chemical energy transferred into electrical energy

Question loop: Energy resources