Fun Size: Starting Forces & Space loop — Teacher notes

Introduction
Question loops are useful recap activities. This loop can be used as revision for Year 6 physics topics and as an introduction to Year 7. 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 CDROMs.

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
- Recap of Year 6 content.

Where the activity fits in
Revising Year 6 and introducing Year 7 physics topics.

Skills
Vocabulary

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

Q1 A force can be a push or a ……

A27 No, we are always the same distance away. In the summer we are **tilted** more towards the Sun.

Q2 To measure forces we use a ……

A1 Pull

Q3 Our 'weight' is a force caused by ……

A2 Forcemeter

Q4 Forces are measured in ……

A3 Gravity pulling on our mass

Q5 Is your weight more or less on the Moon?

A4 newtons

Q6 Is your mass more or less on the Moon?

A5 On the Moon it is less. One sixth of what it is on Earth.

Q7 Is gravity the same on the Moon?

A6 Your mass is the same.

Q8 When you sit on a chair, does the chair push on you?

A7 No, the gravity force on the Moon is much less than on Earth.

Q9 What happens if you pull on an elastic band?

A8 Yes, the chair pushes up to exactly equal your weight.

Q10 When a tug-of-war isn't moving, is there a force?

A9 The elastic gets longer.

Q11 Why do some objects float?

A10 Yes, but both teams are pulling equally, so the forces cancel out.

Q12 Why do corks float to the surface if you push them underwater?

A11 Because they have an upthrust from the water equal to their weight.

Q13 Why do some things sink?

A12 They have an upthrust greater than their weight. This makes them go up.

Q14 Why do parachutes fall slowly?

A13 The total amount of water they push out of the way is less than their weight.

Q15 What happens if the forces on an object are unbalanced?

A14 Because of the resistance of the air to moving things.

Q16 Am I standing still at the moment?

A15 It changes speed or direction.

Q17 What is the Sun?

A16 No, we are all going through space at millions of metres per second.

Q18 Is the Sun small?

A17 It's a star that gives us heat and light.

Q19 Is the Moon small?

A18 No, it is many times bigger than the Earth. It's the biggest thing in the Solar System.

Q20 Does the Moon give out light?

A19 Yes, about one fifth the size of the Earth.

Q21 Is the Earth flat?

A20 No, like the planets it only reflects the light from the Sun.

Q22 Which moves, the Earth or the Sun?

A21 No, it's ball shaped. It just looks flat because it 's so big and we are so small.

Q23 How long does it take for the Earth to spin once on its axis?

A22 The Earth spins on its axis, and orbits the Sun as well. So it is us that are moving.

Q24 Where is the Sun at night?

A23 24 hours

Q25 How long does it take for the Earth to go round the Sun?

A24 Shining on the other side of the Earth.

Q26 How long does it take for the Moon to go round the Earth?

A25 365 days

Q27 Is the Earth nearer the Sun in summer?

A26 28 days

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