

October Science Newsletter

Every half term, there is going to be a Science Newsletter published in the science section of the school website. It is my aim is to give families some ideas, experiments and games that they can play at home, hopefully creating excitement, interest, questioning and discussion from the children. This is not homework and it is purely for ideas. Most of the activities can be adapted for different ages of children.

I hope you enjoy doing these and I look forward to hearing all about what you found out.

Mrs Harvey
Science Co-ordinator



Hibernation

Begin by talking about hibernation. What do they know already? Either ask the children to research what it is or find out more. You can explain that some animals, such as hedgehogs or bears have a long, deep sleep during the cold winter. Explain that to keep warm when they are hibernating, many animals grow extra layers of fur and fat and make cosy warm nests or dens to sleep in.

To investigate this, an adult can fill two hot water bottles with hot (not boiling) water from the kettle and secure the lids. Let the children feel how hot they are. Then cover one hot water bottle with furry fabric, to pretend to be a bear and put it into a cardboard box covered with leaves. The other one can be left uncovered and without fur.

Over the course of a few hours, keep feeling the hot water bottles to see which cools the quickest. Talk about why the children think the fur-covered one stays warmer for a longer length of time. Link the discussions to animals when they hibernate, and to the children's own experiences of wrapping up warm when it is cold. Older children can use the vocabulary of thermal insulation.



Gloop!

This investigation is fun for all ages and there is lots of interesting science to talk about on many different levels. All children will investigate the properties of solids and liquids through cornflour.

You will need: cornflour, a bowl, water and coloured food dye.

Method:

- 1) Put two cups of cornflour in the bowl.
- 2) Add one cup of water and two drops of food dye.
- 3) Mix the cornflour, dye and water with your hands. It will take a few minutes to blend them together.
- 4) Roll some of the mixture into a ball between your hands. What do you notice? What happens when you stop rolling?
- 5) Punch the mixture when it is in the bowl. How does it feel?
- 6) Hold some of the mixture up and let it dribble through your fingers. What do you notice? How does it feel now?

Can the older children find out why this happens? To note, cornflour is made up of lots of long, stringy particles. They don't dissolve in water, but they do spread themselves out. This allows the gloop to act both like a solid and liquid. When the mixture is rolled or pressure is applied, the particles join together and the mixture feels solid. If the mixture is left to rest or held up and allowed to dribble, the particles slide over each other and it feels like a liquid.



International Space Station Spotting

If you go on this website, you can find out when you may be able to spot the International Space Station from a location. See if you can see it. Find out information about the International Space Station.



Quiz Time

- 1) The nest a harvest mouse lives in is as small as a:
 - a) Grapefruit
 - b) Orange
 - c) Plum
- 2) Which bird lays an egg a quarter of the size of its own body?
 - a) Kiwi
 - b) Cuckoo
 - c) Hen
- 3) Which spiky nocturnal animal was used as a croquet ball in Lewis Carroll's *Alice in Wonderland*?
- 4) To fill a jar with honey, how many trips to collect nectar would a bee need to make?
 - a) 200
 - b) 2,000
 - c) 2,000,000
- 5) How much of its life does a dormouse spend asleep?
 - a) 25%
 - b) 75%
 - c) 95%
- 6) Which is the world's smallest breed of dog?
 - a) Poodle
 - b) Fox terrier
 - c) Chihuahua
- 7) Which mammal lives in the Egyptian pyramids?
 - a) A tomb rat
 - b) A tomb bat
 - c) A tomb cat
- 8) What is the smallest spoon a newborn kangaroo could be picked up with?
 - a) Teaspoon

- b) Soup spoon
 - c) Ladle
- 9) Irukandji jellyfish are only 1cm wide but their venom is stronger than a king cobra's. Is it:
- a) 5 times as strong
 - b) 10 times as strong
 - c) 100 times as strong
- 10) Which of these do hedgehogs eat?
- a) Snails
 - b) Mice
 - c) Grass

For the answers see the bottom of the newsletter!!!!

Maybe you could make a quiz up for someone else?

Word Challenge

Can you find out what this scientific word means? Can you give an example where it may be used in science? Can you use the word as many times as possible in a day?

EYFS	floating and sinking
Year 1 and 2	observe
Year 3 and 4	classify
Year 5 and 6	evidence

Class activities and challenges

Year Group	Topics	
Foundation	Autumn, Floating and Sinking	<ul style="list-style-type: none"> • Go on an Autumn walk and spot the signs of Autumn • Can you find objects that float and sink?
Year 1	Sorting and classifying materials according to their properties and purpose.	The children could identify materials around their house and count how many different materials are in one room. They also look at materials and their purpose. A fun activity is to imagine / try out making objects from different materials that have a different purpose, for example a paper flannel, a chocolate spoon, a cardboard cushion etc. This can lead nicely into reusing/ recycling...
Year 2	Habitats and the plants and animals that live there.	Children could explore the habitats in their local area / parks / beaches or gardens. This could be a mini-beast hunt, bird-spotting, rock-pooling etc. On their habitat hunts, children could talk about the features of each habitat. Is there a water source, food source, a cover or shelter, a place to raise young? What makes a good habitat? Are these habitats threatened or in danger? How could we protect them?

		<p>Another fun project for Autumn is to build a mini beast hotel ready for winter hibernation</p> <p>Here's instructions from the Eden project:</p> <p>https://www.edenproject.com/learn/for-everyone/how-to-build-an-insect-home</p>
Year 3	Forces	Our main focus will be magnetism. We will be building our scientific skills of developing questions, making predictions, carrying out experiments and recording results.
Year 4	Electricity	<ul style="list-style-type: none"> - recognising what uses electricity at home (main power or battery) - making circuits with batteries - use balloons to make static electricity - once balloon is static charged can they pick anything up (pieces of paper, cat hairs etc.)
Year 5	Changing State for solids, liquids and gases.	<p>We are looking at condensation, evaporation and freezing/ solidifying in particular and how these link to reversible and irreversible changes.</p> <p>Children could observe their house for a week and make a house map with annotations of where they see these processes happening in real life?</p>
Year 6	Human Body	<p>Skeleton, circulation and some digestion. Perhaps you could make a flexible body using split pins.</p> <p>Can you name the main bones of the body?</p>

Little animals quiz answers: 1: c, 2: a, 3: hedgehog, 4: c, 5: b, 6: c, 7: b, 8: a, 9: c, 10: a