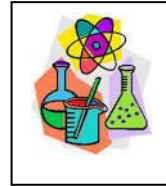


Science At Home!



A fun booklet of science experiments that you can do at home...

Hi Everyone,

Everyone knows me as Mrs Bevis the Headteacher, however I am also the Science Co-ordinator for the school and this week is a special week – British Science Week.

As British Science Week celebrates science, engineering, technology and maths - I thought it would be a great opportunity to produce this leaflet so that you and your whole family can all take part in Science Week.

Science is in everything we do and everywhere we go! There is science in eating an apple, taking a walk in the sunshine, jumping in puddles, playing your favourite music and even looking at the stars in the evening.

I have put together some fun science activities that you might like to try at home. I hope you get time to try a few out and have some great experiences. It would be fantastic if you could take photographs of what you and your family have achieved and send it in to as I would like to put some on display.

All the science activities in this leaflet have been chosen so that you can complete them at home, under the supervision of an adult.

Enjoy Science Week and have fun... remember Science is everywhere!

From

Mrs Bevis

Static Electricity: Jumping Bugs!

You will need:

- 1 Balloon
- Tissue Paper for drawing bugs
- 2 felt tip pens

Instructions

- Blow up the balloon.
- Tie a knot in the balloon.
- Draw small bugs on the tissue paper and cut them out.
- Spread out the 'bugs' onto a large flat surface (kitchen table) as the bugs will 'jump' as some will be attracted and some will be repelled by the balloon.
- Rub the balloon on top of your head or on your clothes.
- Hold it above the bugs and see them 'jump'.



Could you explore this further?

- Can bugs made out of other materials jump?
- What if we made bugs out of normal paper?
- What if we made bugs and stuck them to paper clips?
- I wonder if the bugs were bigger it would still work

The Science Bit:

- The 'bugs' are moved by Static Electricity.
- As you move the balloon back and forward, you give it energy.
- The energy from your hand makes the balloon move.
- As it rubs against the wool in your jumper, some of the electrons in the rubber molecules are knocked free and gather on your body.
- This leaves the balloon with slightly too few electrons.
- Since electrons are negatively charged, having too few electrons makes the balloon slightly positively charged.
- Your jumper meanwhile gains these extra electrons and becomes negatively charged.
- Your jumper is negatively charged, and the balloon is positively charged.
- Opposite charges attract, so your jumper sticks to the balloon.

Magic Colour Changing Flowers

This science activity takes a long time so needs to be started off first thing in the morning and observed throughout the day – by lunchtime the children should see the petals begin to change colour.



What you will need:

- White flowers (carnations are the best)
- A vase
- Food colouring (liquid food colouring is the best)
- Water

Method

- Pour water into the vase and add about 5 drops of food colouring.
- Add the flowers.
- Keep checking the flowers every couple of hours.

The Science Bit: This is biology!

The petals of the flower should start to change colour – especially around the edges.

Flowers, like most plants, need water to stay alive.

The water moves up the stem by a process called 'osmosis' (each cell inside the plant pulls the water up from the cell below).

The cells form a 'pathway' from the stem the petals.

You can cut the stems to see the 'pathway'!

TOP TIPS: You could swap the flowers for celery sticks with their leaves still attached. You could also split the flowers into different vases with different colours.

Sky Rainbows!

This is a fun outside science activity.



What you will need:

Rainbow pictures,
A black pen to make a dot,
A bright sky!

Method

- ❖ Print off a picture of a rainbow (or get the children to draw one!).
- ❖ Draw a black dot in the middle of the rainbow.
- ❖ Take the picture of your rainbow outside on a bright day.

Safety: Remind Children they are not to look at the sun – when you take the children outside – get the children to have their backs to the sun so that this is not a problem.

- ❖ Prepare the children by saying that they must only look at the dot on the rainbow for 30 seconds – they must not look anywhere else or at anyone else.
- ❖ Count with the children whilst they are looking at the dot. .
- ❖ When the children have finished ask them to look immediately at the sky what do they see?
- ❖ When you look immediately into the sky you see a rainbow!
- ❖ Additional activity – try with different shapes or different colours or different pictures eg: stars, rockets, aeroplanes, etc.

The Science Bit:

You will see an after-image because when you look at the rainbow the cone cells in your eyes are stimulated so much that they adapt to the image and lose their sensitivity. When you start looking at a bright and light background, the cells in your eyes 'remember' the image and that is why it looks like there is a rainbow in the sky.



If you have enjoyed these mini science experiments, have a peak at these great websites, but remember ALL experiments will still need adult supervision.

<https://www.britishscienceweek.org/>

<https://sciencebob.com/category/experiments/>

<http://www.sciencekids.co.nz/experiments.html>

<http://www.hometrainingtools.com/a/funaroles-science-project>

<https://www.twinkl.co.uk/blog/30-simple-science-experiments-for-kids-to-do-at-home>