Science at Home



Would you like to become a Super Scientist?

We knew you would!

To celebrate Science Week, we would really love it if you tried some science at home with your parents or carers. We have given you a special set of Super Science activities that you could try over the week and we would love to hear about them.

You could take photographs, draw pictures or even write up your experiment and hand it in to Mrs Greer during Science Week (don't forget to put your name on and maybe a super science name too!). She will choose one that shows the most 'Super Scientist' skills and you may even win a small prize!

If you decide to have a go, please remember to check with your parents/carers first and carry out all the activities with them, you will need their help too!

We cannot wait to see what you get up to!

Good Luck

These easy experiments and activities can be done indoors, at the kitchen table or outside in the garden.

1. SUPERSIZE A MARSHMALLOW

Can you really SUPERSIZE a marshmallow? YES YOU CAN!



You will need: a marshmallow and a microwave

Step-by-step guide to super-sizing a marshmallow:

1. Put a large marshmallow on a plate and ask a grown-up to microwave it for 30-60 seconds.

2. You'll see that it grows...and grows... and then goes black inside.

Marshmallows are foamy because they've got loads of tiny air pockets in them. The microwaves heat up the water vapour inside them, making the molecules bounce around more and more, pushing the air pockets outwards. But, eventually, the sugar starts to burn (so they'll taste better after just 30 seconds!). They are super hot when they come out, so be careful!

2. MAKE DRAGON EGGS

Have you ever tried making magical dragon eggs? Fool your friends, and then eat them!



You will need: eggs and food colouring

Step-by-step guide to making dragon eggs:

1. Ask a grown-up to hard-boil some eggs.

2. Let them cool and then roll them on the work-surface to crackle the shell all over.

3. Half-fill some cups with water and mix in a good dollop of food colouring into each cup (the gel paste work best).

4. Pop an egg into each cup and leave in the fridge overnight.

5. Peel off the shell and you'll see that the dye is taken up wherever the shell is cracked.

6. Now gobble them up!

3. MAKE EDIBLE POO

Who’s ready to make fake poo?? Urghhh, disgusting AND yummy!



You will need: chocolate, raisins, biscuits

Step-by-step guide to making edible poo:

1. Break the chocolate into the bowl and drizzle the syrup over it.

2. Finely crush the biscuits.

3. Ask an adult to microwave the chocolate for 30-60 seconds until melted.

4. Mix in the biscuit crumbs and raisins.

5. If the mixture is too dry, add more syrup or microwave for ten more seconds.

6. When it's cool enough to handle, roll the mixture into two or three sausage shapes.

You should find it looks just like real poo! Tell everyone it's poo... and then eat it! It's poo-a-licious!

4. MAKE AN EGG FLOAT

What do you think, can you make an egg float?

You will need: lots of salt, measuring jug of water, an egg and a spoon

Try this eggsperiment... put an egg in a glass of water. What happens? Now stir in lots of salt and try again. What happens now? Salty water is denser than freshwater. As the water becomes denser than the egg, the egg begins to float!

5. SPOOKY EXPERIMENT

Turn a real bone into a bendy bone! Ideal for Halloween science crafts.

You will need: 2 chicken bones (legs are ideal), jar with a lid (large enough to hold one bone with space at the top), vinegar, clingfilm

Step-by-step guide to making a real bone bendy:

1. Remove all the meat from both bones and wash and dry them carefully.

2. Gently try to bend both bones.

3. Place one bone in the jar, cover with vinegar and replace the lid.

4. Wrap the other bone in cling film and leave for three days.

5. For best results, change the vinegar in the jar after three days and then leave the experiment for another two days.

6. MAKE AND TEST STRAW PLANES

Can a triangle fly? Give it a try!

You will need: a paper straw, 2 strips of paper, tape

Step-by-step guide to making a flying triangle:

1. Cut out a paper strip 2.5cm x 20cm.

2. Cut out another paper strip 2.5cm x 12cm.

3. Fold the longer strip into a triangle with equal sides and secure with sticky tape.

4. Make a circle with the shorter strip and secure with tape.

5. Now fix the triangle onto one end of the straw, and the circle onto the other.

6. Your flying machine is ready to throw

Try creating some more straw planes in different shapes - try changing the shape of the smaller loop or changing the length of the straw. Remember to change one variable at a time and record your results like a real scientist!

7. MAKE WATER WALK!

Did you know you can make water walk? That's impossible isn't it?

You will need: water, 3 clear glasses, yellow and blue food colouring, kitchen roll

Step-by-step guide to making water walk:

1. Fill two glasses with water.

2. Add some blue food colouring to one and some yellow food colouring to the other.

3. Place the two glasses of coloured water either side of the empty glass.

4. Fold a sheet of kitchen roll lengthways until it fits into the glass.

5. Now place one end of the kitchen roll into the blue water and the other end into the empty glass. Do the same with the other piece of kitchen roll and the glass of yellow water.

You should find the water will start 'walking' up the kitchen roll and over into the middle glass. After a couple of hours, the middle glass should have a mix of the two colours of water in it. This is because the water travels through tiny gaps between the kitchen roll's fibres. This is called capillary action. Plants use capillary action to help them move water from the ground up through their stems.

8. Homemade slime or goo

Create some epic custard goo! Just like slime but wey more fun!



You will need: 1 cup of custard powder, ½ cup of water, large mixing bowl

1. Pour 1 cup of custard powder into a large mixing bowl then mix in ½ a cup of water.

2. Now get in there with your hands– try grabbing a handful, pressing it into a ball and then relaxing your grip.

Hit it, scratch it, stir it – it's crazy! Mixing cornflour (the main ingredient in custard powder) with water makes a non-Newtonian fluid. Without any pressure on it, the cornflour particles flow around suspended in water and the mix acts like a liquid. But put pressure on it and the water is pushed out the way, the cornflour particles pack together and it acts like a solid!