

Starters for STEM are 10 activities that parents can use at home to help children develop their science, technology, engineering and maths skills. These activities are easy to resource and provide children with the stimulus to talk about the world around them. If you see a link you can explore how to extend these activities, you will need to sign up, for free, to access these materials. Don't forget to share your work on social media

#ScienceFromHome

Flower focus

Observe a flower carefully in your garden or in your local area. Can you see the pollen? Does it look the same as the pollen on a different plant? Watch carefully. Are the flowers visited by any pollinators? www.stem.org.uk/rx32vx

Plastic from milk?

Heat up some milk, don't boil it, and then add 5 teaspoons of vinegar. Stir it around and then carefully pour the mixture through a strainer. Wash the lumps in water and then mould into any shape you like. <https://sciencebob.com/make-plastic-milk/>

Floating garden challenge

Lots of places in the world struggle with flooding and are unable to grow crops. This challenge asks you to create your own garden that can float. Using what you have in your home or garden, can you create a garden that is able to float? <https://www.stem.org.uk/rxzc3>

Can you see in the dark?

Use a pencil to put a hole in the end of an old shoe box and one on the top of the box at the opposite end to your first hole. Place an object inside the box, under the hole on the top. Cover that hole with your finger. Now look through the hole at the end of the box. Can you see the object? How about if you uncover the hole on the top? Try other objects. Does the same thing happen?

Jelly race

Time how long it takes to transfer cubes of jelly from one plate to another using chopsticks or the ends of two spoons. Add some orange juice, now try again. Which was easier? Why do you think this?

Heart beaters

Can you tickle yourself? How many litres of blood do you have in your body? How many times does your heart beat in a day? Test your family with a body trivia quiz. Create your own cards or download some from here: <https://bit.ly/2RFJVRN>

The complete resource can be downloaded here: <https://bit.ly/3a9VtTU>

Bouncing egg

Put an uncooked egg, shell and all, into a bowl or old jam jar. Pour vinegar into the jar, until it has covered the egg. Leave it for 24 hours and have a look at what is happening. What do you see? After 24 hours carefully take out the egg. What do you notice about it? Drop the egg from 10cm above a surface and see what it does.

<https://bit.ly/2zRW7sX>

Finding perimeters

Use a ruler, or tape measure if you have one, to find the perimeter of different rectangles and squares in your home. Remember to measure the length of each side and add these together.

Celery science

Look carefully at the end of a piece of celery. What do you see? What part of a plant is the celery stick? Get an empty yogurt pot or paper cup and fill it a third full with water. Add a few drops of food colouring. Carefully put the celery into the water the widest end down. Leave it a few hours and then overnight. Do you notice anything? Why has that happened?

www.stem.org.uk/rxytm

Static Magic

Can you pick things up without touching them? Blow up a balloon and tear up some paper shapes. Create some static electricity by rubbing the balloon on your top or hair. Hold the balloon over the paper shapes, can you collect them all? What is the largest shape you can pick up? How far away can you hold your balloon and it still collects the paper?