

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

Create a sundial

Stand a stick up with plasticine in the middle of a paper plate. Mark the position of the stick's shadow every hour.

The next day, see if your sundial tells accurate time while playing outside.

Interesting insects

How many different insects can you name? Can you find any insects near where you live?

<https://www.stem.org.uk/cxes6z>

Spotting shapes

When you are out on a walk see what shapes you can spot. Can you find 3 things that are the shape of a square, 3 circles and 3 triangles?

<https://www.stem.org.uk/rxwhq>

Stop apples from browning

Slice up an apple, and let each slice soak in a different liquid, e.g. water, honey water, milk, lemon juice. Then take them out, lay them on a tray, and check the brownness after three minutes, six minutes, and so on.

Pepper and soap trick

Pop some water in a bowl. Sprinkle some pepper flakes onto the water. Put a bit of liquid soap, or washing up liquid on your finger and dip that finger into the bowl. Observe what happens to the pepper flakes. Why are people likening this to washing hands?

Brilliant bodies

Try testing your body by seeing how long you can balance for or make a reaction tester to see how good your reactions are. Download a reaction tester here.

<https://bit.ly/3cp0FED>

Spaghetti shapes

Can you build a cube using 4 marshmallows and 12 half lengths of uncooked spaghetti? How wobbly is it? Can you make it stronger using more half lengths of spaghetti? Try making a pyramid with marshmallows and spaghetti. Which is the stronger of your two shapes? <https://www.stem.org.uk/rxfjyo>

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Boat building

Using just 1 sheet of paper and some paperclips design a raft that will hold as many coins or marbles as possible. You can download the activity card here to help you.

<https://bit.ly/34E7YW5>

Secret messages

Use a cotton bud dipped in lemon juice to write a message on paper. Let the juice dry and then heat the message with a hair dryer. Your secret message should appear when heated up.

Puzzling puddles

After a rain shower you will see puddles on the ground. Use a piece of chalk to draw around one of them and take a picture of it. Over time take more pictures and compare them. What happens to the puddle?