

Starters for STEM



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

Spacecraft Models

Make paper models of ESA spacecraft through cutting out and sticking the templates provided in this link:

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

Floating and Sinking

What can you find in your house that sinks in the bath?

Are there things that float? What do you notice? Can you sort them.

Felt pen chromatography

Do you have any coffee filters or sugar paper? With some felt pens colour a little square onto the paper. Then place a drop of water onto the colour. What do you see? Is it the same for different colours? What do you think is happening?

<https://www.stem.org.uk/rx32hb>

Magnet games

Use a fridge magnet and some paper clips to design a game.

It could be a fishing game or maybe a maze on a paper plate. You will need to test to make sure you magnet will attract the paper clip through the different materials.

There are lots of possibilities when you use your imagination!
<https://bit.ly/3gQUpsw>

Creating crystals

Fill an old jar with water and pour salt, stirring to dissolve it. Keep adding salt until no more can dissolve. Tie a paperclip onto a length of cotton and hang it from a straw, or piece of wood placed across the top of the jar. Leave the jar somewhere safe and observe what happens over the next few days and weeks.

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

Good vibrations

Cut a piece of thread, make sure it is a bit longer than your arm. Tie the middle of it around the handle of a fork.

Wind each end of the thread around one finger on each of your hands, so you are holding the thread, with the fork dangling down.

Place your fingers just near your ears, but not inside them! Knock the fork gently against a table.

What can you hear?
<https://bbc.in/2XrXHUG>

Beulah Henry 1912 – 1970

Beulah was a famous American inventor who invented over 100 new products. She made several umbrella inventions from clip on covers to special umbrella bags.

If you were going to design an umbrella what would it look like and what materials would you use?

Try making a model umbrella using junk box materials you might find at home.

<https://bit.ly/2XYFu72>

Lovely Lava Lamp

Create coloured water by adding a few drops of food colouring. Fill a tall container with a mixture of equal parts coloured water and cooking oil. Stir them up and watch what happens. Have a think why? Add a effervescent vitamin C tablet and watch what happens now. You have created your own lava lamp.

<https://www.stem.org.uk/rx32ha>

Sorting salt and pepper

The salt and pepper has been mixed together. How can you separate the two ingredients? Use everything you know about separating materials to help solve the problem.

You will need some kitchen roll, cups a plate, water and salt a pepper.
<https://bit.ly/3d7bqMV>

Food chains

All animals need food to live. Some animals eat plants, herbivores, and some animals eat other animals, carnivores.

Create a paper chain to show what different animals eat and how they are linked. E.g. first link - leaves, second link caterpillar, third link mouse. What could go on the fourth link?

<https://bit.ly/2XtCO28>