

Summer of STEM: Space



Explore activities that parents can use at home to help children develop their science, technology, engineering and maths skills over the summer holidays. 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

Explore Earth & Space

Join the alien explorer, Paxi, on his adventures around Earth and Space. Discover the Solar System, comets and how scientists are investigating whether there is life on Mars.

<https://www.stem.org.uk/cx6yuu>

Images of the Earth

Draw a picture of what you can see from your window or in the local park. Imagine what it would look like from above and draw this. There are lots of satellites observing the Earth and taking measurements and images. Can you think reasons why this is important? What problems might it help us solve? See if you can recognise well-known places on the Earth from their satellite images:

<https://www.stem.org.uk/rx352f>

Space Careers

Write down the alphabet. Now see if you can think of one job per letter that has a link to space. Think about: the different things that we send to space, what astronauts may be doing in space and what they need to do these things and how items that we use every day may link to space.

<https://www.stem.org.uk/esero/careers-space>

Living on the Moon

The ESA are looking at ways in which we could build a village on the Moon. Make a list of the problems there may be with building a settlement on the Moon. Can you come up with any ideas to solve these problems? Design a dwelling for the Moon. This resource might help you:

<https://www.stem.org.uk/rxfon2>

Fruit Solar System

Find out the relative size of the Sun and each planet and match it to the different kinds of fruit listed in the activity below. Then create your own model of our solar system using fruit. You can choose different fruit or other similar sized objects, if you don't have all of the fruit at home.

<https://www.stem.org.uk/rxyx3>

Eating in space

Draw a picture of your favourite meal. Imagine that you are an astronaut on the International Space Station. What would happen to the food on your plate? Do you know why? Find out how astronauts manage to eat meals in space. Then design a space dinner for a celebration meal on the ISS.

<https://www.stem.org.uk/rx347r>

Daytime moon observation

When you're outside see if you can find the Moon in the sky. What shape is it? Keep a log of the shape of the moon each day and draw a picture of its shape. Be careful when looking into the sky and ask a parent to tell you how to do this safely.

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

Mission X – Building a bionic hand

It is difficult and tiring for humans to work in space. Bionic hands that can be remotely operated can help humans work more efficiently in space. Try making a model bionic hand using cardboard, straws, string and elastic bands. You can find out more here:

<https://www.stem.org.uk/content/bionic-hand>

Exploring Mars

Scientists are planning a trip to Mars, but they are sending a robotic rover called Rosalind Franklin to explore the red planet and search for signs of life. Can you design your own rover to explore mars and say why each part of your design will do and why you've chosen it. Then try and build a model of it using recycling from your home. (ask an adult first). This resource will help you with idea:

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

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>

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Space Coding Challenge

Use Scratch to help to ESA Kids mascot, Paxi, to complete his missions. https://www.esa.int/Education/Expedition_Home/SpaceCodingChallenges

Martian Explorers

Learn about missions to Mars, and design your own space robots and Mars rovers.

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

Once upon a time

Join Rosetta and Philae on their journey to rendezvous with a comet in these animated videos. The fairy tale begins at launch and follows the comet-chasing duo on their voyage to Comet

<https://www.stem.org.uk/rx77b5>

Edible meteorites

Both the Moon and Mars are littered with meteorites, and of course we can find them on the Earth too. Bake your own edible meteorites to help you learn more about them.

<https://www.stem.org.uk/rxfgb5>

Meet the Moon experts

In this collection of four videos from the European Space Agency, research scientists talk about making use of resources on the Moon, 3D printing on the Moon, living there and future lunar exploration.

<https://www.stem.org.uk/cxgb9r>

Moon Camp Challenge

Participate by designing a lunar lander, a lunar rover, a rocket and a space station, or design a complete base on the Moon. Once you upload the design, you will receive a Moon Camp participation certificate.

<https://mooncampchallenge.org>

Colour in Earth

During his mission to the International Space Station, Tim Peake shared many spectacular photographs of the Earth. This resource uses some of these to support children in recognising features from an aerial view, and develop their understanding of maps and keys/legends.

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

AstroFood

Learn about different types of fruits and vegetables and which parts we eat and decide what you would grow in space.

<https://www.stem.org.uk/rxg4f5>



We Are Aliens!

These great animated clips explore life within in our own Solar System and beyond.

<https://www.stem.org.uk/cx5wx>

Paxi Kids Games

Try out some online games with Paxi.

<https://www.esa.int/kids/en/Games>

