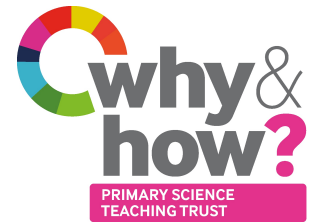


SCIENCE FUN AT HOME



Have some fun at home with these science activities from **Science Sparks** and the **Primary Science Teaching Trust**



BEFORE YOU START! Please read through this with an adult:

- * Make sure you have read the 'IMPORTANT NOTICE' on the back of this page.
- * If you have a space outside that you can use safely, then you can do the 'Try this outdoors' activity outside. Don't worry if not as you could still do it indoors.
- * Talk to your adult about sharing the science you have done and if they want to share on social media, please tag [@ScienceSparks](#) and [@pstt_whyhow](#) and use [#ScienceFromHome](#)

SCIENCE FUN FOR WORLD SPACE WEEK

1 TRY THIS INDOORS ... Earth, Sun, Moon

You need three people for this: one to be the Sun, one to be the Earth and one to be the Moon. Together you can act out part of our solar system. Use paper or card to make a band to fit around your head and secure it with staples or tape. Stick on a circle of card and colour it to show if you are the Sun, Earth or Moon. The Sun stands in the middle, the Earth orbits (goes round) the sun and the Moon orbits the Earth. You could do this indoors or outside.

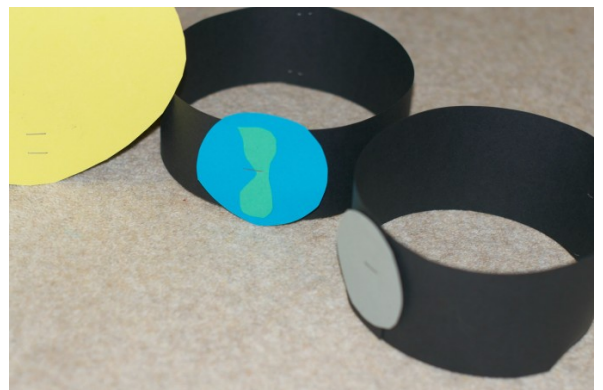
WHAT DO YOU NOTICE?

Things to talk about ...

It takes just over 365 days (one year) for the Earth to orbit the Sun and it takes just over 27 days (one month) for the Moon to orbit the Earth. Can you act out one year as the Sun, Earth and Moon?

You will need

- * A shallow dish
- * Sand, soil or flour
- * Marbles (or other small round objects)
- * A ruler
- * Paper or card
- * Colouring pens
- * Staples or tape



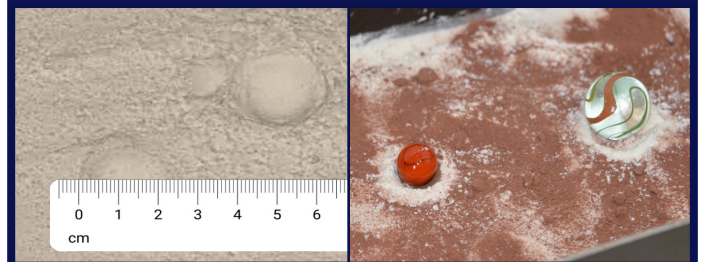
2 TRY THIS OUTDOORS ... Meteor craters

Fill a shallow container with sand or earth (or you could use flour) and smooth the surface. Hold a marble above the tray, let it go and watch it fall and make a crater in the sand. Try it again, dropping the marble from higher up, or using a different sized marble. Use a ruler to measure the sizes of the craters you have made. **Warning: this activity can get messy!**

WHAT DO YOU NOTICE?

Things to talk about ...

What happens to the size and shape of the craters if you change the size of the marble? What about when you drop the marble from different heights? What if you use other small round objects? When and how did the craters on the Moon form? Do they have names? Are there any craters on Earth?



You can try using sand, earth, flour or anything soft and powdery. The picture on the right has a dusting of cocoa powder over the flour so you can see more clearly what happens to the surface when the marble hits it. Use a ruler to measure the size of the craters.

3

WHAT IS THE SCIENCE?

The further a planet is from the Sun, the longer its orbit (how long it takes to go round the Sun once). Earth's orbit is just over 365 days. Mercury's orbit is only 88 days, while Neptune's orbit is 165 years!

Meteoroids are pieces of dust or rock floating through space. If they enter the Earth's atmosphere and start to burn up, they become a meteor (or shooting star). Craters are made when a meteor crashes into the surface of a planet or a moon. There are millions of craters on the Moon – over 5,000 of them are more than 12 miles wide!

4

MORE ACTIVITIES YOU COULD TRY

LEARN MORE ABOUT ORBITS - <https://www.science-sparks.com/stars-planets-moons/>

EXPLORE THE INTERNATIONAL SPACE STATION!

<https://wowscience.co.uk/resource/the-international-space-station/>

THE UNIVERSE IS EXPANDING - <https://www.science-sparks.com/how-does-the-universe-expand/>

HOW MUCH WOULD YOU WEIGH ON ANOTHER PLANET?

<https://wowscience.co.uk/resource/your-weight-on-other-worlds/>

IMPORTANT NOTICE: Science Sparks and The Primary Science Teaching Trust are not liable for the actions or activity of any person who uses the information in this resource or in any of the suggested further resources. Science Sparks and The Primary Science Teaching Trust assume no liability with regard to injuries or damage to property that may occur as a result of using the information and carrying out the practical activities contained in this resource or in any of the suggested further resources.

These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.