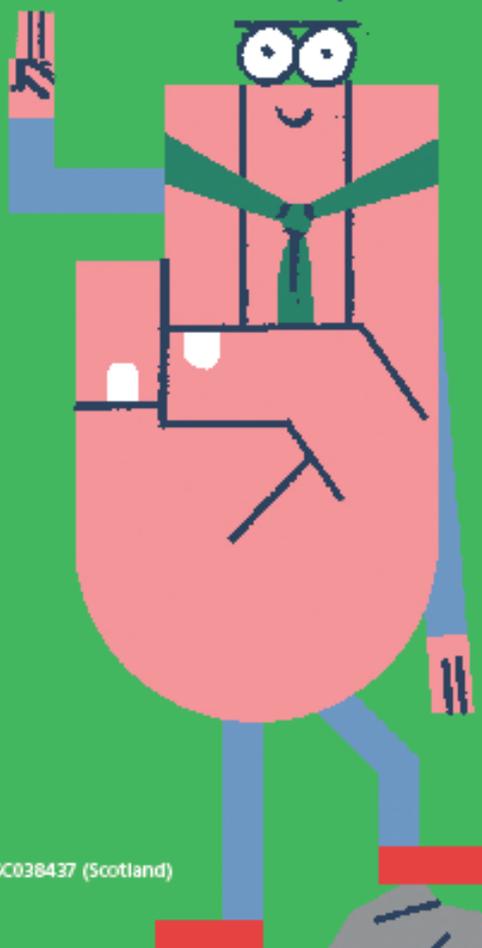


WEST DEVON - BADGES AT HOME :

cubs

ASTRONOMER ACTIVITY BADGE

- Make a model of the solar system
- Explain the difference between a planet and a star
- Learn how to observe the sun safely
- Observe the moon with binoculars or a telescope
- Find out about two space related subjects
- Identify three constellations



How to complete your badge:

Complete all of the following sections:

- Make a model of the solar system
- Explain the difference between a planet and a star
- Learn how to observe the sun safely and explain how the Earth moves around the sun
- Observe the moon with binoculars or a telescope if you have one and describe its features
- Find out about two space related subjects and present some information about them
- Identify three constellations

Some Ideas:

<http://www.seasky.org/solar-system/solar-system.html>

https://www.researchgate.net/figure/a-and-b-Models-of-our-solar-system-and-the-sun-earth-moon-system-If-it-is-necessary_fig12_309727184

<https://www.ducksters.com/science/star.php>

<https://www.theschoolrun.com/homework-help/solar-system>

<https://www.scouts.org.uk/activities/let-the-sun-shine-in/>

<https://spaceplace.nasa.gov/all-about-the-moon/en/>

<https://www.naturalnavigator.com/find-your-way-using/stars/>

<https://www.thoughtco.com/cassiopeia-constellation-4165137>

<https://nineplanets.org/kids/>

https://www.esa.int/kids/en/learn/Life_in_Space/Space_Stations/The_International_Space_Station

Make a model of the solar system

For this section of the badge you need to make a model of the solar system using things you have at home. You could use anything that you have available to you but be as creative as you can. Your model should include all eight planets which are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (in order starting with the closest to the sun) as well as the sun. Once you have made your model take a photo of it and upload it to Online Scout Manager. Below are some useful links which can be used for inspiration.

Useful links :

<http://www.seasky.org/solar-system/solar-system.html>

https://www.researchgate.net/figure/a-and-b-Models-of-our-solar-system-and-the-sun-earth-moon-system-If-it-is-necessary_fig12_309727184

Explain the difference between a planet and a star

For this section you need to be able to explain the difference between a planet and a star. Use the links below to help you work out whether the statements in the box below are about a planet or a star.

Useful links :

<https://www.ducksters.com/science/star.php>

<https://www.theschoolrun.com/homework-help/solar-system>

- 1) It is a giant sphere made up of mostly hydrogen and helium
- 2) They orbit around the sun
- 3) There are eight of them
- 4) The smaller they are the longer they live
- 5) When the hydrogen runs out, the outside of it expands and it becomes a red giant

Learn how to observe the sun safely and find out how the Earth moves around the sun.

For this section you need to identify ways that you can be safe when studying the sun. First, use the box below to write down some ways that you can stay safe in the sun you can ask people around you for ideas or use a useful website which is linked above. Next, use the link below to create a pinhole projector which you can use to observe the sun safely. **AT NO POINT SHOULD YOU LOOK DIRECTLY AT THE SUN!**

Useful link :

<https://www.scouts.org.uk/activities/let-the-sun-shine-in/>



Observe the moon with binoculars or telescope and describe some of the features.

For this section of the badge you need to describe some of the features of the moon after observing it. If you have binoculars or a telescope you could go out in the evening and view the moon through them. Then you should use the box below to write down different features you can see e.g. the type of surface, the colour and anything else you can see. If you don't have binoculars or a telescope do not worry, there is an attached link below which you can use to view the moon and then write down different features in the box below.

Useful link :

<https://spaceplace.nasa.gov/all-about-the-moon/en/>

Find out about two space related subjects and present some information about them.

For this section you need to collect some information on two different space related subjects which can be a planet or some space technology. Create a fact file or poster all about you chosen subject, some examples of information for the space station are how many astronauts can it hold? When was it launched? How long does the average astronaut stay there for? Examples of information for the planets are how many moons does it have? How far away from the sun is it? What are the conditions like on your chosen planet? There are some links below which might be useful in gathering information.

Useful links :

<https://nineplanets.org/kids/>

https://www.esa.int/kids/en/learn/Life_in_Space/Space_Stations/The_International_Space_Station

Identify three constellations

For this section you need to identify three different constellations in the night sky. Some of the more obvious constellations that can be seen include: Orion's Belt, otherwise known as the Three Sisters; Ursa Major, otherwise known as the Saucepan; Cassiopeia, otherwise known as the 'W'. However, if you have another constellation you would like to find you can look out for it. Once you have found it in the sky use the box below to write the constellations you have seen and draw the shape of them.

Useful links :

<https://www.naturalnavigator.com/find-your-way-using/stars/>

<https://www.thoughtco.com/cassiopeia-constellation-4165137>

Once you have completed your challenge, upload this completed form to Online Scout Manager under 'Badges' and click the 'Astronomer' Badge. Then click 'Complete at Home' and submit your evidence.

Good Luck!