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How do you become a space traveller?

People in space

time

100 minutes

learning outcomes

To:

- work together in a group to write a script for a play
- be able to design a mission logo for a space mission
- know the difference between an astronaut and a cosmonaut
- know what is meant by 'space'
- know that the first creature sent to orbit around the Earth was a dog
- know that Yuri Gagarin was the first man in space
- know about Dutch astronaut André Kuipers or any astronauts from their own country
- know that Neil Armstrong was the first man to set foot

on the Moon, in 1969

- know what you have to do to become an astronaut
- know that ESA is the European Space Agency
- name a number of different types of spacecraft

end products

- a script for a set of research questions for each group
- a play by the whole class about space travellers

materials needed

- coloured paper
- colouring pencils
- felt-tip pens

Preparation

For the activity **Write a script** cut out the research questions from the cut-out sheet, so they can be handed out to the various groups.



Design your own mission logo 30 min.

Together, look at the mission logo on the worksheet. Ask the children if they know what it is. Explain that this is the mission logo of Dutch astronaut André Kuipers. André Kuipers spent ten days in the ISS space station in 2004. Ask the children if they know what ISS stands for. Explain that ISS stands for International Space Station and that it is a space station that orbits the Earth. The ISS has been permanently inhabited since 2000. André carried out scientific experiments in the space station. His mission was called Mission DELTA. This stands for Dutch Expedition for Life science, Technology and Atmospheric research. In 1991 Helen Sharman was the first Briton to go into space, as part of Project Juno. All space missions have their own mission logo.

Organise the children into groups of four. Ask each group to design a mission logo. The mission logo needs to contain a number of things:

- the name of the mission
- the colours of the national flag of the astronaut
- a drawing showing the activities that will be carried out during the mission (for example, research)

The children complete Task 1 on the worksheet. Hand out the craft materials for each group to make their own logo. They should draw their design in the box on the worksheet.



The children investigate a number of important facts about astronauts.



Write a script 25 min.

Give each group a set of research questions with answers. Explain that they need to use these questions and answers to write a script for a five-minute play. The children complete Task 2 on the worksheet. Each child is assigned their own task in the play.






The play 45 min.

The children perform the play. The information from the worksheet must be incorporated into each act. After the play, the children complete Task 3 of the worksheet. Discuss the play and the things the children have learned.



How do you become a space traveller?

1	Design your own mission logo
	
	Your group is going to design its own mission logo.
	Discuss with the group what it needs to include.
a	What is the name of your mission?
b	Which country does your astronaut come from?
c	What does the flag of that country look like?
	<div><div>draw your flag HERE</div></div>
d	What activities will be carried out during the mission?

e

Draw your logo in the box below.

draw
your logo
HERE



You are going to investigate a number of important facts about astronauts.

2

Write a script



1 Your teacher will give you a set of research questions.

2 Use them to write a five-minute play with your group.

3

The play



You have now seen several short plays about astronauts.

Use what you learned watching the plays to answer the following questions:

a

What is an astronaut?

What is a cosmonaut?

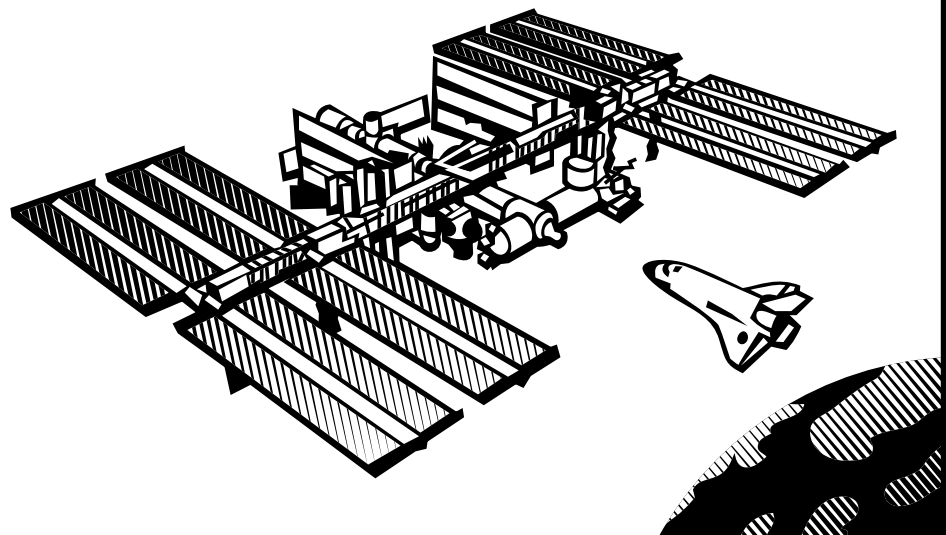
What is meant by 'space'?

b What was the first living creature to be sent into space?

And who was the first person?

When was that?

Who was the first Briton in space?



c Who was the first man on the Moon?

When was that?

d	How do you become an astronaut or a cosmonaut?
	What kind of training do astronauts and cosmonauts have?
	What is the ESA?
e	What kind of vehicle do astronauts and cosmonauts use to travel into space?
	What language do they speak in space?
f	What do astronauts and cosmonauts do in space?
	What do astronauts and cosmonauts have to do when they return to Earth?

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cut-out sheet

What is an astronaut? What is a cosmonaut? What is meant by 'space'?

A space traveller is a person who is, or who has been, in space. A space traveller on a spacecraft launched by NASA or ESA is called an astronaut. A space traveller on a spacecraft launched by the Russian Federation is called a cosmonaut. People have different ideas about where space begins. It starts roughly 100 kilometres from Earth.

What was the first living creature to be sent into space? And who was the first person? When was that? Who was the first Briton in space?

For many years people dreamed about travelling into space. When they had developed the technology to launch a space rocket, they didn't send a person but a dog into space. That was in 1957. The Russians sent a rocket (the Sputnik 2) into space with the dog Laika. The dog flew around the Earth for four days before it died due to overheating. The first person in space was the Russian cosmonaut Yuri Gagarin. That was in 1961. He completed one orbit of the Earth. Four British people have travelled in space: Helen Sharman, Michael Foale, Piers Sellers and Nicholas Patrick. Nowadays space travellers to the ISS do not usually stay in space for longer than six months.

**Who was the first man on the Moon? When was that?**

In 1969 Neil Armstrong was commander of the Apollo 11 mission to land on the Moon. When he was on the moon, he spoke the famous sentence: 'That's one small step for a man, one giant leap for mankind.' You can barely hear the word 'a' on the recording.

How do you become a space traveller? What kind of training do astronauts and cosmonauts have? What is the ESA?

Many people who become an astronaut or cosmonaut trained to be something else first, for a pilot or doctor, for example. It takes many years of training to become an astronaut or a cosmonaut. Some of the training takes place under water, so they can experience what it feels like to be weightless. Just like in space, they have to wear a cumbersome suit and use different tools. This helps them to practise working in space. When they have finished their general training, the astronauts and cosmonauts are given special training to help them carry out the tasks of their specific mission. ESA stands for the European Space Agency.

**What kind of vehicle do astronauts or cosmonauts travel into space in? What language do they speak in space?**

Astronauts and cosmonauts travel in a spacecraft. This is a special sort of vehicle for travelling outside the Earth's atmosphere. There are different types of spacecraft. Rockets are used to launch people or objects into space. A re-usable rocket that is able to land like an aeroplane is called a space shuttle.

Some astronauts or cosmonauts go to a space station. This is a permanently manned spacecraft, such as the International Space Station (ISS), that travels in an orbit around the Earth. A space shuttle can be used to get to the space station.

During their training, the astronauts and cosmonauts learn to speak English and Russian. These are the languages used on the space station. Russian is a difficult language to learn, because the letters are different from our alphabet.

**What do astronauts and cosmonauts do in space? What do astronauts and cosmonauts have to do when they return to Earth?**

Most of the work carried out in space for example on the ISS, is scientific research. The ISS is a sort of floating laboratory where cosmonauts and astronauts from different countries carry out research. They look at how certain objects react if there is no gravity. They also investigate the effect of weightlessness upon the human body. This knowledge could make it possible for people to spend a long time in space in the future. After people stay in space for a while they tend to get puffy faces and their bodies are no longer used to bearing their own weight like they would on Earth. That is why the astronauts and cosmonauts have to rest for a while when they return to Earth. While they are on the space station they have to do daily exercises to keep their muscles as strong as possible.