

Living in Space



**Information for KS1 teachers
and group leaders**

What will the show involve?

Living in Space explores what it takes to launch an astronaut into space and how the entire crew of scientists, engineers and trainers have a role to play. Discover the wonders and challenges of life in space including how to stay healthy, dealing with the effects of microgravity and investigating the materials to use for a space suit.

Is there anything I need to do to prepare the children before the visit?

The show which provides a very gentle introduction to the topic of human spaceflight and looks at some of the roles involved in being part of the space crew. Although it's not necessary for the children to have any prior knowledge of the subject, if you're not already doing space themed activities at school it might help set the context for the workshop if you talk to the children beforehand about the International Space Station and the first British ESA astronaut Tim Peake. You can find lots of useful information on www.destinationspace.uk and www.esa.int/Principia

Risk assessment

- Please visit our website education.eureka.org.uk/resources to download both the general museum risk assessment and the one for your chosen session.
- We advise you to make a preview visit to carry out your own risk assessment for the overall visit.

Evaluation

Eureka! constantly aims to improve its programmes for school groups and feedback from adults and children is an essential part of this. We value all comments made and will always try our best to act upon them. You will be sent a link to an online survey following your visit and we'd be extremely grateful if you could complete and return as soon as possible after your visit.

Additional resources & information

The following pages contain various supporting resources and information related to the science show.

Please find the following documents in this pack:

- **National Curriculum links** – *showing how the workshop fits in with the national curriculum for science.*
- **Teacher's assessment chart** - *this outlines the aims and objectives of the show, including the key activities which children will be taking part in and their learning outcomes.*

Living in Space: KS1 Science Show

Primary Science National Curriculum links

Year	Programme of study	Links to:
1 & 2	Working scientifically	<ul style="list-style-type: none"> Asking simple questions and recognising that they can be answered in different ways Observing closely, using simple equipment Performing simple tests Identifying and classifying Using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions
1	Everyday materials	<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock Describe the simple physical properties of a variety of everyday materials
2	Animals, including humans	<ul style="list-style-type: none"> Find out about and describe the basic needs of animals, including humans, for survival (water, food and air)
1	Everyday materials	<ul style="list-style-type: none"> Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials. Describe the simple physical properties of a variety of everyday materials.
2	Uses of everyday materials	<ul style="list-style-type: none"> identify and compare the suitability of a variety of everyday materials, for particular uses

Living in Space: KS1 Workshop

Teacher assessment chart

Aims and objectives – by the end of this workshop children should have learned:

- That ESA stands for European Space Agency and that Tim Peake is the first British ESA astronaut.
- How astronauts get into space and how they return back to Earth.
- That the International Space Station is a big science lab in space and what the challenges of living and working in space are.
- About the different roles involved in sending astronauts into space.
- How to identify and compare the suitability of a variety of everyday materials and choose which would be best to make a space suit from.

<p>Overview: Through a series of interactive activities, powerpoint presentation and discussion, this show offers fantastic insight and learnings into what it takes to undertake a space mission.</p>	
Activities	Learning Outcomes
Introduction to the session, to Tim Peake and to some of the different jobs people do here on Earth as part of a space mission.	<p><i>To understand that Tim Peake is the first British ESA astronaut and ESA stands for European Space Agency.</i></p> <p><i>To find out what the Mission Planner, Flight Surgeon, Engineer, Scientist and Flight Controller do.</i></p>
<i>Blast off:</i> a volunteer is needed to help launch our 'rocket' into space.	<i>To understand how astronauts get into space.</i>
<i>Keeping healthy on the ISS:</i> a demonstration to show how dirty water can be filtered and recycled to make safe drinking water.	<i>To understand that as there isn't any running water on the ISS, most water is recycled, including the astronaut's urine.</i>
<i>Bernoulli blower game:</i> a fun experiment using a couple of volunteers to illustrate how astronauts have to contend with things floating around on the ISS	<i>To show the effects of microgravity.</i>
<i>Space toilet:</i> using poo shaped balloons and a vacuum cleaner and comparing this suction with how the space toilet works.	<i>To find out the answer to the most popular question 'how do astronauts go to the toilet?'</i>
<i>Time for bed:</i> using a volunteer and a special sleeping bag to show how astronauts sleep on the ISS	<i>To find out how astronauts sleep on the ISS</i>
<i>Building a space suit:</i> using the experts' guidance, the children have to choose the right materials to build a space suit ready for a spacewalk.	<i>To identify and compare the suitability of a variety of everyday materials.</i>
Returning to Earth: after watching a short video of what the planet looks like from space, a parachute is used to show how the Soyuz lands back on Earth.	<i>To find out how astronauts return to Earth.</i>