

 **DESTINATION
SPACE!**
Join The Crew



**Information for KS2 teachers
and group leaders**

What is Destination Space?

In December 2015, Tim Peake became the European Space Agency's first British astronaut and spent 6 months living and working on board the International Space Station.

Destination Space is just one of the many education programmes, backed by the UK Space Agency, which uses Tim's Principia mission to enthuse school children and families about the wonders of human spaceflight and space related careers.

This programme was originally created and delivered by the UK Association for Science and Discovery Centres in Bristol (ASDC) working in partnership with expert teams at the National Space Centre in Leicester, Science Museum in London and Jodrell Bank Discovery Centre in Cheshire. Eureka! is one of twenty science and discovery centres across the UK who has been delivering the programme.

Workshop synopsis.

With Tim's mission to the ISS, we are looking to recruit and train the next generation of space scientists. This workshop focuses on some of the key skills needed to be not only an astronaut, but a scientist or engineer working in the space industry.

After a brief bit of training and a demonstration and explanation of how astronauts get off the ground, the simulated mission activities begin. Through problem solving and experiments students get a chance to use their communication, mathematical, English and team working skills to control a robot arm and investigate two of the problems facing astronauts in space; floating liquids and the effects of a vacuum.

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

This session focuses on the topic of human spaceflight and looks at some of the science, technology, engineering and maths involved in being part of the space crew. Although it's not essential that the children 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 British ESA astronaut Tim Peake. You can find lots of useful information on <http://www.destination-space.uk/> and <https://principia.org.uk/> There are also some great activity ideas and video clips on these websites too.



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Evaluation

Eureka! constantly aims to improve its programmes for school groups and feedback from adults and children is an essential part of this. Feedback is incredibly important to us as a way of measuring the impact of events and programmes and we often use metrics and anecdotal reflections for funding applications.

We would be hugely grateful if you could complete a teacher's questionnaire and also ask your pupils to each fill in a child's evaluation form too. Teachers will be given a questionnaire at the end of the workshop and we'd appreciate it if you could fill this in on the day and hand to a member of staff.

After your visit we will send out a questionnaire for the children to complete (preferably within 1 week of the visit). Copies of both forms are included in this pack.

Additional resources & information

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

Please find the following documents in this pack:

- **Teacher's assessment chart** - *this outlines the aims and objectives of the session, including the key activities which children will be taking part in and their learning outcomes.*
- **Evaluation forms** – *from the lead teacher and children to complete.*
- **Risk assessment** - *for the workshop. We advise you to make a preview visit to carry out your own risk assessment for the overall visit.*



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Destination Space: KS2 Workshop

Learning Outcomes

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

- That ESA stands for European Space Agency; that the UK is part of ESA and that Tim Peake is the first British ESA astronaut.
- That the International Space Station is a big science lab in space where astronauts like Tim, live and work.
- The effects living and working in microgravity has on the human body.
- The basic principal of how rockets work.
- How to work effectively as a team and develop their investigation and scientific enquiry skills.
- That it takes a great number of people doing a variety of different roles here on Earth to send an astronaut into space and to look after them whilst they're there.

Overview: Space exploration requires a whole field of experts including scientists, trainers, engineers and astronauts. This workshop 'recruits' and 'trains' the next generation of space explorers. Packed with experiments, investigations and problem-solving activities linked back to human space flight young crew members will leave inspired.

Activities	Learning Outcomes
Introduction to the session, Tim Peake & his Principia mission, ESA and the ISS	<i>To understand that Tim Peake is the first British ESA astronaut; that ESA stands for European Space Agency and that the UK is part of it; that the ISS is a huge science lab in space.</i>
<i>Astronaut training: resistance test</i> The class is split into two teams and a volunteer from each team will compete against each other in a fitness based test.	<i>To understand the effects microgravity has on the body and why astronauts need to exercise every day.</i>
<i>Getting into space: the whoosh bottle experiment</i> A demonstration to show what reaction must take place in order for a rocket to blast off.	<i>The basic principle of how rockets work and what is needed for combustion to happen.</i>
<i>Class activity: robot arm</i> Working in groups of 3 or 4, children will use the robot arms to complete a variety of tasks.	<i>Working on their communication skills and problem solving.</i>
<i>Class activity: survival in space</i> Working in groups of 3 or 4, children will carry out two investigations - the absorbency of different materials and what might happen if an astronaut is exposed to space outside the ISS	<i>Working on their investigation and scientific enquiry skills.</i> <i>Finding out about the space nappy.</i> <i>Understanding why astronauts must wear a special pressurised suit.</i>



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Dear Teachers of KS2 students

We are delighted you brought your class to take part in our Destination Space programme.

We would be hugely grateful if you could get your children to each fill in an evaluation form and to post them all back to us at Eureka! The National Children's Museum, using the attached envelope.

Please could you ask the children to complete this form within 1 week of your visit to Eureka!

Please could you staple all their forms together, along with your own evaluation form and attach this as the cover sheet.

What is your school name?		
What is your School Post Code (or full address)?		
What date did you visit?		
How many children did you bring (approximately)?		
How many of these children are on pupil premium (approximately)?		
Please give your name (if you wish)		
Please give your email if you wish for future contact.		

We would like to find out what you thought about your visit to Eureka! and the Destination Space workshop, please answer the following questions as best you can.

1. How old are you? Please circle. **7** **8** **9** **10** **11**

2. Did you enjoy the visit to Eureka? Please circle. YES NOT SURE NO

3. Did you enjoy the Destination Space workshop? Please circle. YES NOT SURE NO

3. What did you like most about the day?

4. What did you learn during your visit? This could be something from the Destination Space workshop or from exploring the museum

1.

2.

5. Measuring impact – for pupils

Please read the following statements and tick the face which most applies to you.

			
During my visit:			
I enjoyed myself			
I learnt something new			
I did something new			
My visit today made me feel:			
More confident with science			
Keen to find out more			
More interested in science			
That studying science might be fun			
That working in science might be interesting			
Eureka! is a good place to learn about science in a different way to school			
When I get back to school I think the experience from today will help me with some of my schoolwork			
I would recommend this place to my friends			

Thank you for taking the time to fill in this questionnaire

We would like to find out what you thought of today's workshop and what, if any, impact this visit had on you and the children in your group.

Please complete this form and return it via email to jenny.goodall@eureka.org.uk. Thank you for your assistance.

What is the name of your school?		
What is the postcode or road name of your school?		
What Year group did you bring today?		
Approximately how many pupils did you bring today?		
Approximately how many of these are on pupil premium?		

1. How would you rate the following aspects of the day? (Please tick)

	Very good	Good	Average	Poor	Very Poor
The knowledge of the staff running the workshop/show					
Access to the science content					
The equipment					
The venue					
Overall, how would you rate the workshop/show					

2. What did you particularly like about today's activities?

3. Do you have any comments or suggestions that you'd like to share with us?

4. Do you feel that the day was good value for money? (Please circle your response)

Yes

No

Not Sure

4b. Please explain your answer

Please turn over →

5. How did you hear about the event (please tick all that apply)

- ☐ Received leaflet/email direct from Eureka!
☐ Word-of-mouth recommendation from colleague
☐ Eureka! website or social media
☐ Other {please specify}

6. Measuring impact – for teachers

Please read the following statements and tick the option which most applies to you.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Impact on my pupils					
I feel this visit inspired my pupils					
My pupils learned something new about science					
Eureka! is a good place to learn about science in a different way to school					
I feel my pupils will be more interested in science than before they came					
The visit supported the pupil's hands-on practical skills					
About me					
I discovered something new during my visit					
The visit met my curriculum needs					
When I get back to school I will use experiences from today to help reinforce what I teach					
The visit made me feel more positive towards science					
I would recommend a visit to other teachers					

Thank you for taking the time to complete this form and if you have any other comments about the day overall, please use the space below.

Please return completed forms to jenny.goodall@eureka.org.uk or alternatively post to:
 Jenny Goodall, Play & Learning Officer, Eureka! The National Children's Museum, Discovery Road, Halifax, HX1 2NE