Ri Lates
Surviving in space
**First floor**

- **Rocket booster**
  - Why do rockets split as they go into space? Use our rocket simulator to find out!

- **Hydrogen launch**
  - How far can you get with water? Find out with this explosive demo every 30 minutes.

- **Mars Rover**
  - Code one of our Mars Rovers to collect samples from the terrain.

- **Rockets and beyond**
  - Get your hands on real-life rockets capable of breaking the sound barrier, with UKSEDS.

- **Tardigrades**
  - Have a closer look at the hardiest creatures on Earth, with Science London.

- **Space debris**
  - Chat to Stuart Grey about space debris and his animation.

- **Build a spectroscope**
  - Make your own spectroscope and find out how that can help us inhabit Mars.

**Lower ground floor**

- **Micrometeorites**
  - Fire small objects to discover why micrometeorites are such a danger.

- **Dangerous CO₂**
  - Explore why you really can't have CO₂ leaking into a space station.

- **Lower the pressure**
  - Have a play with our vacuum pump and imagine what would happen to your body.

- **Vestibular mess up**
  - Can you walk when you’ve put your vestibular system into a spin?

- **Bone damage**
  - Join the Royal Veterinary College to see the fragility of our bones that life in space induces.

**Ground floor**

- **Ri Tours**
  - Dig into the archives and discover the RI’s history as well as CHRISTMAS LECTURES past.

- **Tours**

**Lower ground floor**

- **Rocket fuel**
  - Learn how rockets propel themselves 100km above Earth with explosive chemistry demos.

- **Weightless water**
  - What happens when water becomes weightless, and why does this matter?

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**First floor**

- **Toluca meteorite**
  - Hold a section of a 3 tonne meteorite which fell to earth over 10,000 years ago.

- **Level Up Human**
  - Could we adapt ourselves to life elsewhere in the Universe? Join Simon Watt for a recording of his new podcast exploring what it means to be human.

- **Mars Rover**
  - Code one of our Mars Rovers to collect samples from the terrain.

- **Tardigrades**
  - Have a closer look at the hardiest creatures on Earth, with Science London.

- **Film room**
  - Sit back and relax with short films from the Ri Channel.

- **Ri Tours**
  - Dig into the archives and discover the RI’s history as well as CHRISTMAS LECTURES past.

- **Talks**
  - See back for times.

  For Ri Tours and Level Up Human, please go to their room to sign up on arrival. The rest of the activities are drop-in.
Don't miss...

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:00</td>
<td><strong>Building spacecraft, 7.00pm</strong></td>
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<tr>
<td>8:00</td>
<td><strong>The story of space debris, 8.15pm</strong></td>
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<tr>
<td>9:00</td>
<td><strong>Space medicine, 9.15pm</strong></td>
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<td>10:00</td>
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1. **Building spacecraft, 7.00pm**
   What do you need to consider when planning a spacecraft launch? How do you protect people and vehicles from the immense changes in temperature? Join Vicki Lonnon for a demo-filled talk all about spacecraft design. European Space Agency and Airbus

2. **The story of space debris, 8.15pm**
   When attempting to live in space, orbiting our world, you are certainly not alone. Millions of pieces of space debris are currently orbiting the Earth. Dr Stuart Grey tells the story of where it all came from, what it is made of, and what might become of it all. UCL

3. **Space medicine, 9.15pm**
   Living in space pushes the human body and mind to the limits. How do they respond to the extreme isolation and confinement of living in space? Join ESA-sponsored medical doctor Beth Healey as she explains how her research might impact space medicine. ESA

We could not run Ri Lates: Surviving in space without activities, speakers and support from:

European Space Agency
Royal Veterinary College University of London
Science London
Kingston University London
AIRBUS Defence & Space
Imperial College London
UK SEDS
UCL

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