



Teacher Resource

Life in Space

Focus Questions

Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

1. In 24 hours, the International Space Station (ISS) makes 16 orbits of the _____.
2. It is not possible to grow food in the ISS. True or false?
3. How do astronauts shower?
4. Why did astronauts in the SpaceX capsule have to wear nappies?
5. What question would you like to ask an astronaut about life in space?

Activity: See, think and wonder

After watching the BTN Life in Space story students will reflect on the story and then respond to the following:

- What do you think it would be like to live in space?
- What are the positives and challenges of living in space? Create a T-chart.
- Would you like to live in space? Why or why not?
- What was surprising about the Life in Space story?
- Think of three questions you have about the story.

Positives	Challenges

EPISODE 33

16th November 2021

KEY LEARNING

Students will learn more about what life is like living on the International Space Station and the impact space has on the human body.

CURRICULUM

Science – Year 5

The Earth is part of a system of planets orbiting around a star (the sun).

Science – Years 5 & 6

Scientific knowledge is used to solve problems and inform personal and community decisions.

Science – Year 7

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available.

Activity: Glossary

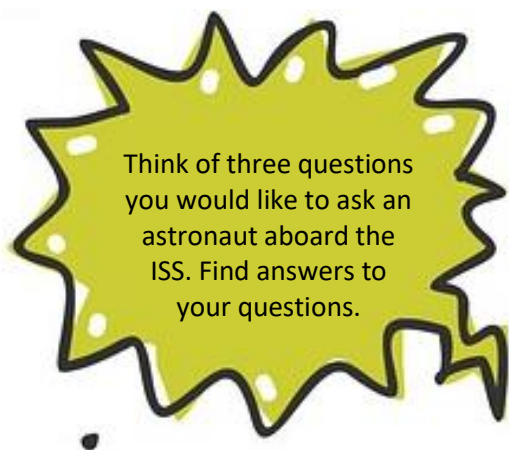
Students will brainstorm a list of keywords that relate to the Life in Space story. Here are some words to get them started.

INTERNATIONAL SPACE STATION	MICROGRAVITY	ASTRONAUT
SPACEX	ORBIT	SOLAR SYSTEM

Activity: Living in Space Research

After watching and discussing the BTN Living in Space story, what questions do students have and what are the gaps in their knowledge? Students will develop their own question/s for inquiry, collecting and recording information from a wide variety of sources. Students may develop their own question for inquiry or select one of the questions below.

- Investigate what it would be like living in microgravity (Eating, sleeping, having a shower, going to the toilet). What would be some of the positives and challenges?
- What impact does microgravity have on the body?
- What is the International Space Station? Give a brief history.
- What do astronauts do on the ISS? Investigate some of the tasks that they are required to perform.



Activity: How do astronauts live in space?

Students will learn more about what life is like on the International Space Station. These videos provide a snapshot of what living on the ISS is like.

[Everything about living in space](#)
[Life inside the ISS](#)

Students will describe a day in the life of an astronaut on the ISS, including information about sleeping, eating, personal hygiene, exercising and carrying out work on the ISS. What do astronauts do in their spare time?



As a class, watch the [Eating in Space](#) video for an in-depth look at how and what astronauts eat to stay healthy. Students will then respond to the following questions:

- What food do astronauts eat?
- Is there any food they can't eat?
- Does food need any special preparation before it can be eaten?
- Why is nutrition important for astronauts?
- If you lived in space, what foods would you miss the most? Why?

Watch the [Exercising in Space](#) video and explain why it's important for astronauts on the ISS to exercise.

Activity: Effects of space

Watch the BTN [Space Effects](#) story to learn more about the impact space has on the body. Students will investigate in more detail, the effect space has on the human body, why it happens and what can be done to reduce the effects. Ask students to share their research with the class in an interesting way.

What is affected	What happens	Why it happens	What can be done to reduce the effects
<i>Bones</i>			
<i>Muscle</i>			
<i>Cardiovascular system</i>			
<i>The spine</i>			
<i>Inner ear and balance system</i>			
<i>Sleep</i>			
<i>Sense of taste</i>			

Activity: Train like an astronaut

Do you have what it takes to become an astronaut? In this activity, students will investigate what some of the physical demands are for astronauts.

Using a range of physical activities students will use the same body parts/systems as astronauts do in training and on missions in space. Choose from a range of these [NASA activities](#), or use the activities we've picked out below.



Mission 1: Taste in Space

Mission question: Can I compare taste sensations on Earth and in space? In this activity, students will investigate and discover variables that affect their own sense of taste. Download the [Taste in Space handout](#).

Mission 2: Agility Astro-course

Mission question: How can you perform a physical activity that will improve your agility, coordination and speed? In this activity, students will complete an agility course as quickly and as accurately as possible to improve agility, coordination and speed. Download the [Agility Astro-course handout](#).

Mission 3: Jump for the Moon

Mission question: How could you perform a physical activity that would increase bone strength, as well as heart and other muscle endurance? In this activity, students will perform jump training with a rope, both while stationary and moving, to increase bone strength and to improve heart and muscle endurance. Download the [Jump for the Moon handout](#).

Useful Websites

- [SpaceX crew using incontinence pants on return home after toilet malfunctions](#) – ABC News
- [How do astronauts go to the bathroom in space?](#) – Curious Kids
- [A day in the life aboard the International Space Station](#) – NASA
- [Life in Space](#) – JAXA Space Station Kids