Teacher Resource

# Aussie Astronauts

## 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. The federal government has announced more funding for the Australian Space Agency. What will the money be spent on?
2. What has made it easier and cheaper to get people into space?
3. What do you need to study to become an astronaut?
4. Do you think it's important for Australia to be involved in space exploration? Why or why not?
5. Would you like to be an astronaut? Why or why not?

## Activity: Class Discussion

After watching the BTN Aussie Astronaut story, hold a class discussion using the following discussion starters.

- Why do we explore space?
- Is space exploration important? Why or why not?
- What are the advantages and disadvantages of space exploration?
- Is it important for Australia to be involved in space exploration? Why or why not?
- How has space exploration affected people's lives?
- How do you become an astronaut?
- What skills are needed to be an astronaut?
- What questions would you like to ask an astronaut?



**EPISODE 8**
22nd March 2022

**KEY LEARNING**
Students will learn more about Australia's involvement in space exploration and what training is required to become an astronaut.

**CURRICULUM**
**Science – Year 5**
The Earth is part of a system of planets orbiting around a star (the sun).

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

**Science – Years 5 & 6**
With guidance, pose clarifying questions and make predictions about scientific investigations.

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions.

## Activity: Glossary

Students will brainstorm a list of key words that relate to the BTN Aussie Astronaut story. Here are some words to get them started.

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|---|---|---|
| EXPLORATION | ASTRONAUT | SOLAR SYSTEM |
| MICROGRAVITY | ORBIT | MISSION |

## Activity: Space Research

The KWLH organiser provides students with a framework to explore their knowledge on the topic of astronauts and space and consider what they would like to know and learn.

| What do I **know**? | What do I **want** to know? | What have I **learnt**? | **How** will I find out? |
|---|---|---|---|
| | | | |

### Questions to research

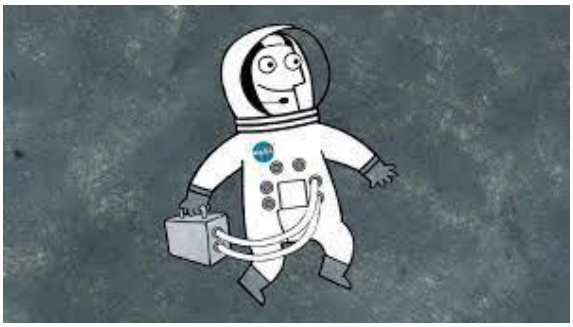
Students will develop their own question/s to research about space exploration. Students will collect and record information from a wide variety of sources. Students may develop their own question for inquiry or select one of the questions below.

- Why should we explore space?
- Is space exploration important? Why or why not?
- What are the advantages and disadvantages of space exploration?
- How has space exploration changed since the 1960s?
- What is the future of space exploration?
- What role has Australia played in space exploration?
- How has technology used in space exploration changed over time?
- How have advancements in space technology helped us on Earth?
- What types of careers are there in space exploration?
- How will space exploration change in the future? Make a prediction about how space exploration will change in the future. Illustrate your prediction/s and provide an explanation.
- Create a timeline showing the history of space exploration. Highlight Australian involvement on your timeline.

# Activity: Life as an Astronaut

Listen to astronaut Jerry Carr talk about his training to become an astronaut and the years he spent at NASA. Students can then respond to the following questions:

- How long does astronaut training usually take?
- Describe the training Jerry did to become an astronaut.
- Why do human space travellers need so much training?
- Would you ever travel into space? Give reasons for your answer.
- What was surprising about Jerry's talk?



# 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.

## Activity – Choose a project

Individually or in small groups, students will choose one of the following projects to work on and then present their findings to the class.

**Astronaut Profile**
Research an Australian astronaut who has gone into space and create a profile of them.

**Apollo 11 and Parkes**
Investigate Australia's involvement in the Apollo 11 mission. Watch this BTN story to find out more.

## Useful Websites

- Space industry sets sights on launching Australia's next astronaut with help of $65 million funding boost – ABC News
- Astronaut Training – BTN
- Andy Thomas – Australian Museum
- Astronaut Requirements - NASA