



Teacher Resource

Artemis Launch

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. When was the last mission to the Moon?
2. The first Artemis mission will have astronauts on the spacecraft. True or false?
3. What is the name of the spacecraft being used in the Artemis mission?
4. Where is the Kennedy Space Centre?
5. Which two astronauts will step on the Moon as part of the Artemis program?

Activity: Moon Quiz

Begin the Artemis activity with a quick true or false quiz. Circle the correct answer.

1. Man first walked on the Moon in 1969.	True	False
2. In Greek mythology, Artemis is the twin sister of Apollo and goddess of the Moon.	True	False
3. Humans can breathe easily on the Moon because the atmosphere is similar to that on Earth.	True	False
4. The temperature on the Moon is similar to temperatures on Earth.	True	False
5. From Earth, we always see the same side of the Moon.	True	False

Answers: 1 True, 2 True, 3 False, 4 False, 5 True

Activity: Class Discussion

Students will discuss the BTN story in pairs and then share their thoughts with the class.

- When was NASA's last mission to the Moon?
- What is the aim of the Artemis 1 mission?
- Is space exploration important? Why or why not?
- What questions do you have about the Artemis Launch story?

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KEY LEARNING

Students will learn more about NASA's plan to go back to the Moon with the Artemis mission.

CURRICULUM

Science – Year 5

Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives.

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 6

The growth and survival of living things are affected by the physical conditions of their environment.

Science – Year 7

Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and the moon.

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 key words that relate to the BTN Artemis Launch story. Here are some words to get them started.

LUNAR	MISSION	EXPLORATION
UNCREWED	ORBIT	GRAVITATIONAL PULL

Activity: KWLH

Discuss the information raised in the BTN Artemis Launch story. What questions were raised in the discussion and what are the gaps in students' knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic.

What do I <u>k</u> now?	What do I <u>w</u> ant to know?	What have I <u>l</u> earnt?	<u>H</u> ow will I find out?

Students will develop their own question/s to research or choose one or more of the questions below.

- Research and prepare a profile on Earth's Moon. Include the following information: distance from Earth, how long it takes to orbit Earth, the minimum/maximum temperatures of the Moon and geographical features of the Moon. Include any other interesting facts you find.
- What are the relationships between Earth, the Moon and the Sun? Draw a diagram showing the relative sizes and movement of Earth, the Moon and the Sun. In your description include words like orbit, revolution and axis.
- How does gravity affect the Moon? Investigate Earth's gravitational pull on the Moon and explain why we only ever see one side of the Moon.
- Investigate why the discovery of water on the Moon is significant. Apart from drinking, how can it be used?
- How can we see the Moon? Explain why we can sometimes see the Moon during the day.
- Can humans survive and thrive on the Moon?
- Who are the astronauts on the Artemis mission? Find out more about the men and women who have been selected for future missions.
- What is Australia's involvement in the Artemis mission?

Activity: Lunar Living

Students will explore the possibility of one day living on the Moon. They can watch [The Living on the Moon video](#) and the [BTN Moon Living video](#) to as a starting point for their research. Students will then find out more about the conditions on the Moon so they can plan and design a settlement on the Moon that will sustain human life. Things they will need to consider include:

- What are the three basic things we need to survive?
- What are the conditions like on the Moon?
- What needs to be considered when planning a colony on the Moon? For example:
 - Water supply
 - Atmosphere
 - Temperature
 - Solar radiation
 - Food Production
 - Waste Management
 - Gravity
- What materials could be used to build a space settlement? Investigate the idea of using Moon dust and Sulphur to make bricks.
- What do you think it would be like to live on the Moon?
- What are the benefits of having a space settlement on the Moon?
- What are the challenges?



Further Investigation

Find out more about the [Artemis Base Camp](#) - NASA's plan for a lunar colony.

Activity: What would you pack for the Moon?

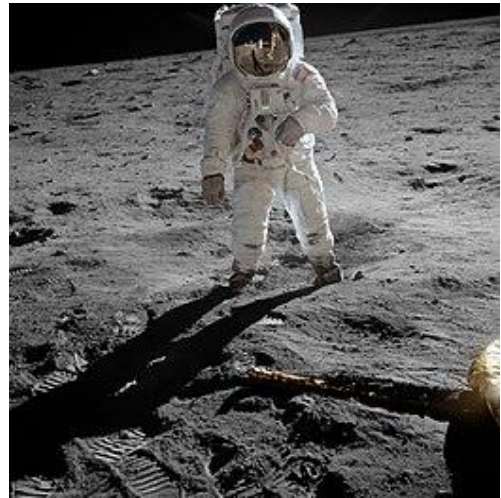
What would you pack in your lunar suitcase if you were going to the Moon? Astronauts on the International Space Station are only allowed a 12.7cm x 20.3cm x 5.1cm case to carry personal belongings. Students can challenge themselves to select items that fit within this space. Ask them to make a list of what they would pack and their reason for taking it. Students can share their suitcases with the class.



Activity: Apollo 11 Mission

Artemis 1 is NASA's first mission to the Moon since Apollo. Students will explore the Apollo 11 space mission in detail and use the following questions to guide their research.

- Summarise the mission.
- When did the mission take place?
- What was the purpose of the mission?
- Who was the crew? What were their roles?
- What did the mission discover?
- Which countries were involved in the mission?
- How has the mission helped us understand the Solar System and beyond?
- What were some challenges of the mission?
- Include photographs and diagrams in your research project.



[Source of image](#)

Further investigation

Students will choose one of the following to investigate further:

- Imagine you are one of the astronauts on the Apollo 11 mission. Write a journal entry in your diary about your experiences before, during or after the mission.
- How has space exploration changed since the first landing on the Moon? Make comparisons between now and then. Make predictions about future space missions and exploration. Include illustrations with your prediction.

Useful Websites

- [Artemis](#) – NASA
- [Moon Water Discovery](#) – BTN
- [Moon Landing Anniversary Special](#) – BTN
- [NASA Artemis: Newsround's guide to the next Moon missions](#) – Newsround
- [Moon Exploration](#) – BTN
- [Track Artemis 1 Mission in real time](#) – NASA