



Teacher Resource

Science Week 2026

Focus Questions

As a class, discuss the stories featured in the BTN Science Week 2026 Special. Students will then respond to the following focus questions:

Agricultural Science

1. How did most humans find food before agriculture began?
2. What is thought to have encouraged people to start planting crops?
3. Name two ways modern agriculture can have a negative impact on the environment.
4. Give two examples of new technologies being developed to make farming more sustainable.
5. Why do you think the development of agriculture is described as changing the world forever? Use examples from the BTN story to support your answer.

Cultural Burning

1. What percentage of Australia's native plants respond positively to fire?
 - a. 25%
 - b. 50%
 - c. 75%
2. How do the seeds from Banksia plants respond to fire?
3. How can ash from fires help seeds grow?
4. How are cultural burns different to naturally occurring bushfires?
5. What are some ways you can learn about Country? Give 1-2 examples.

Living on Mars

1. What type of planet is Mars?
 - a. Rocky planet
 - b. Gas giant
 - c. Ice giant
2. Mars is considered the most Earth-like planet in our Solar System. True or false?

EPISODE 23

18 August 2026

KEY LEARNING

Students will explore the topics explained in the BTN Science Week 2026 Special including agricultural science, cultural burning, living on Mars and a school seed program.

CURRICULUM

Science – Year 5

Examine how particular structural features and behaviours of living things enable their survival in specific habitats.

Science – Year 6

Investigate the physical conditions of a habitat and survival of living things is affected by changing physical conditions.

Science – Year 5 & 6

Investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions.

HASS Year 5

The impact of the development of British colonies in Australia on the lives of First Nations Australians, the colonists and convicts, and on the natural environment.

Design and Technologies – Years 5 & 6

Explain how and why food and fibre are produced in managed environments.

3. What is Mars' atmosphere mainly made of?
4. Why can't humans live on Mars right now? Give 2-3 reasons.
5. What are some challenges scientists need to overcome to send humans to Mars?

Seed School

1. What is the purpose of the SEEDS program?
2. What does SEEDS stand for?
3. A lot of Australian native plants are at risk of disappearing. True or false?
4. Why are Australian native plant species becoming endangered? Give 2-3 reasons.
5. Choose one native plant species from the BTN story. Draw a botanical drawing of the plant and include its scientific name.

Activity: Agricultural Science Key Words

Students will brainstorm a list of key words that relate to the BTN Agricultural Science story. Here are some words to get them started. Ask students to write what they think is the meaning of each word then check these against the dictionary definition.

Agriculture

Hunter and Gatherer

Biodiversity

Deforestation

Sustainable Farming

Domesticated

Neolithic Revolution

Methane

Activity: What's in your lunchbox?

Introduce your students to the idea of food production, resources and the development of agriculture. Working in pairs, ask students to look at their lunch or imagine a typical meal. Choose one item of food and discuss:

- Where did it come from?
- How was it grown or produced?
- What resources were needed?
- How might people have got this food 12,000 years ago?

Reflect on the following questions:

- What was the most surprising thing you discovered about your food?
- What did you learn about where your food comes from?
- How did this activity change the way you think about the food you eat?



Activity: Investigating Agriculture

Students will investigate how agriculture has changed over time and how farming has shaped people, places and the environment. Choose one or more of the questions below to explore.

Investigate the past

- Why did some communities begin growing crops instead of only hunting and gathering food?
- How did changes in Earth's climate influence the development of agriculture?
- How did agriculture change the way humans lived?
- How did farming contribute to the growth of cities and civilisations?

Investigate Australia

- How have First Nations Peoples cared for and managed Country?
- How did European farming practices change Australian landscapes after colonisation?
- What environmental challenges do Australian farmers face?

Investigate the environment

- What impact does modern farming have on the environment and biodiversity?
- How can science and technology help farmers produce food more sustainably?
- What are some innovative ways scientists are trying to feed a growing global population?
- If you could invent one new farming technology, what would it do? What problem does it solve?

Activity: Design a farm for the future

Ask students to imagine what might farming look like 100 years from now. They will create a labelled diagram of a farm that could operate for the next 100 years. Their diagram should show:

- Crops
- Animals
- Water sources and irrigation
- Native vegetation
- Habitat for wildlife
- Ways to reduce waste
- Ways to protect soil
- Farming technology
- Renewable energy
- A strategy for reducing environmental degradation



Students write 150–200 words explaining how their farm balances food production and environmental protection.

Activity: Cultural Burning

Students will learn more about First Nations fire practices. After watching the BTN Cultural Burning story, hold a class discussion using the following discussion starters.

- What do you THINK about what you saw in this video?
- What does this video make you WONDER?
- What did you LEARN watching the the BTN Cultural Burning story?
- Think of three questions you would like to ask about the BTN story.

Resources

These ABC Education videos show Indigenous fire practitioners explaining cultural burning. They explore how this practice helps manage the land and lowers the risk of large bushfires.

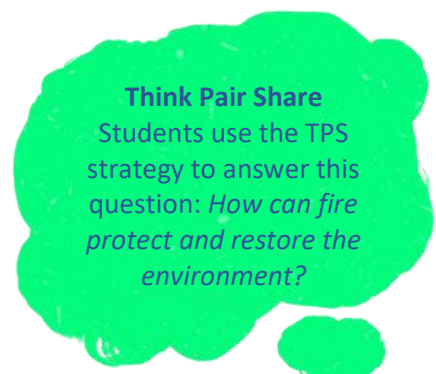
[The Kimberley: Traditional burns](#)

[Big Weather: Benefits of Indigenous fire practices video.](#)

Class Discussion

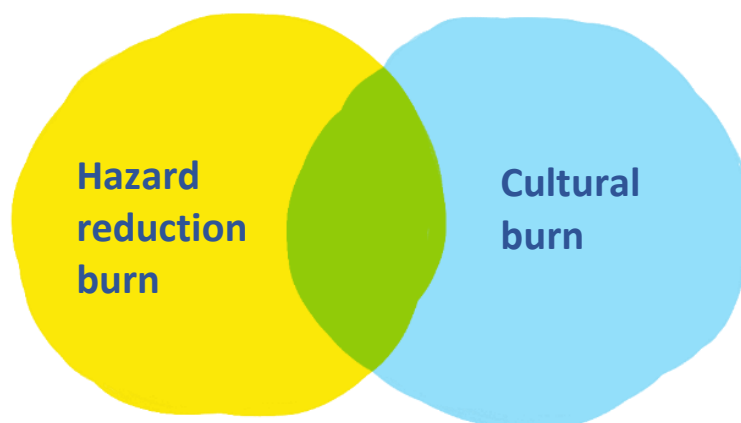
After watching the videos, students can discuss and respond to the following questions:

- What is cultural burning?
- What is a 'cool burn'?
- How is cultural burning different to a hazard reduction burn?
- Why is protecting the tree canopy important during a cultural burn?
- How can cultural burning help biodiversity?
- What is mosaic burning in cultural burns?
- Why is local knowledge important when managing fire?
- Fire management is part of how [First Nations Peoples look after Country](#). What does this mean?
- How can we learn from First Nations Peoples about caring for Country?



Venn Diagram

Ask students to create a Venn diagram comparing a 'hazard reduction burn' done by emergency services with a traditional 'cultural burn' led by Traditional Owners. Share your diagram with a classmate.



Activity: Why do seeds love fire?



Banksia



Flannel flowers

Research a native Australian animal or plant (for example; the echidna, grass tree or banksia).

How does it survive a low-intensity cultural burn?

What adaptations does it have? What benefits does it get from the new growth that happens just weeks after the fire?

Activity: Mars Q&A

Are you curious about Mars? Students will make a list of questions they have about the BTN Living on Mars story and space exploration. Students will use the internet to find answers to their questions and share their findings with the class. Students will use the facts they have discovered about Mars to create a quiz and then test their classmates.

What do you know about Mars?

Why do we study planets?



Activity: Life on Mars

Students will plan and design a settlement on Mars that will sustain human life. The following questions can help guide students' research:

- What are the conditions like on Mars?
- What needs to be considered when planning a colony on Mars? For example:
 - Water supply
 - Atmosphere (air supply)
 - Temperature
 - Food production
 - Gravity
 - Waste management
- What materials could be used to build a space settlement?
- Create an advertisement or poster to advertise your colony.



Further Learning

Write a science fiction story about your journey to Mars and what you found when you arrived.

Activity: Australian Native Seeds

Class Discussion

Discuss the BTN Seed School story as a class, using the following questions to guide the discussion.

- What is the difference between an Australian native plant and an introduced plant?
- Why do we need native plants?
- What native plants do you know? Make a list.
- What things are threatening our native plants?
- What are seed orchards?
- Why is it important to collect native seeds?

Get to know the plants in your school yard

- Students choose a plant in their school grounds.
- Describe the plant they have chosen using words and an illustration. Describe the different parts of the plant and any other interesting features.
- Can students identify what type of plant it is? Find its botanical name.
- Is the plant native or an introduced species?
- Are there any bugs or wildlife on or near the plant? Make and describe observations, include sketches.
- How much sun, shade and water does the plant get?

Improve the biodiversity in your school yard

Students will work together to plant and care for native plants in their school yard. Ask them to consider the following:

- Which plants are native to your area? What kind of native plants will you plant? Where will you source the native seeds or plants?
- What conditions does the plant need to grow?
- Where will it look the best? Where will it be most appreciated?
- What materials and tools are needed?
- Predict and record the growth rate, for the first days/weeks/months, and see whose predictions are most accurate.
- Include an information label next to the plant for other students to learn more about it and the biodiversity of your school yard. Include the botanical name, when it was planted and some basic information.
- Prepare a map of your school yard which highlights important plants in your school yard.

Start Collecting

Get your class involved in seed collecting. Students collect samples of Australian native plants and remove the seeds for storing. Seeds need to be kept cool and dry in either cloth or paper (not plastic). Make [plantable seed paper](#), [seed balls](#) or [seed pots](#) using the seeds you have collected. Build a [seed library](#) to help give and take local seeds to grow in your community.



Activity: Australian Wildflowers

This year ABC Radio National is celebrating some of Australia's most spectacular wildflowers — from seasonal blooms in WA, to tropical flowers around Darwin, and the wonderfully weird world of orchids.

What's your favourite wildflower? [Vote now](#)

To help you join in, we've put together a free downloadable ABC Science Week Wildflower Poster & Colouring-In Pack featuring our wildflower contenders. Resources are available on the [website](#) for download.



Activity: Science Week Profiles

Students will research the life and achievements of one of the people featured in the BTN Science Week 2026 Special, Frances Bodkin or George Goyder. Students will create a timeline poster and prepare an oral presentation summarising key events in their life and their contributions to Australian science and society.



Timeline Poster

Your students' task is to create a timeline poster, responding to the following areas of research.

Research

- Early Life - Information about your significant person's parents. When/where was your significant person born? What type of education did your significant person receive?
- Family - Personal information; Was your significant person married? Did they have children?
- Legacy - What event and/or action led to them becoming a significant person? What did they do that had an impact on the lives of others?
- 2 x 'Interesting Facts' and 2 x 'Did You Know?'
- A minimum of 6 and a maximum of 10 photos with captions.
- Include a bibliography on the back of your poster.

Further Research

Students will choose one of the activities to further investigate their significant person.

Interview

- Imagine you could sit down and talk to them. What questions would you ask about their life and achievements?

Portrait

- Plan and create a portrait.
- Explore and experiment with different techniques and mediums to produce a portrait.

5 w's

- What are some of the key events in their life?
- Write a summary for one key event, which answers the 5 W's – Who, What, Where, When and Why?

Useful Websites

- [Seeds of Science](#) – ASTA Teacher Resource Book

Agricultural Science

- [The development of agriculture](#) – National Geographic
- [Agricultural science resources](#) – Department of Primary Industries, QLD Government

Cultural Burning

- [What is cultural burning?](#) – Australian Museum
- [Burn Off Season](#) – BTN

Living on Mars

- [Life on Mars](#) – BTN
- [All About Mars](#) – Space Place NASA
- [Humans in Space: Mars](#) - NASA
- [Space Seeds](#) – BTN
- [Water on Mars](#) – BTN

Seed School

- [Endangered Seeds](#) – BTN
- [Doomsday Seed Vault](#) – BTN