



Teacher Resource

New Antarctic Icebreaker

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. What is the job of an icebreaker?
2. Why has Nuyina been described as 'Disneyland for Scientists'?
3. What is the 'moon pool' and what is its function?
4. What does Nuyina mean in Palawa Kani?
5. Which ship does Nuyina replace?

Activity: Class Discussion

Before students watch the BTN story, ask them what they already know about Antarctica. Have they heard of icebreakers that travel to Antarctica? Record their responses.

Discuss the BTN New Antarctic Icebreaker story as a class. Ask students to record what they know about the topic. What questions do they have? Use the following questions to guide discussion:

- Where is Antarctica?
Locate on a map.
- What is an icebreaker?
- What does Nuyina mean in Palawa Kani?
- Which icebreaker did it replace?
- How does the icebreaker help with scientific research?
- What words best describe the new icebreaker?
- What questions do you have about the story?



EPISODE 30

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KEY LEARNING

Students will learn more about Australia's new Antarctic icebreaker Nuyina. They will also explore the important role ships have played in Australia's scientific endeavours in Antarctica.

CURRICULUM

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 physical conditions and their environment.

Activity: Glossary

Students will brainstorm a list of key words that relate to the BTN New Antarctic Icebreaker story. Students may want to use pictures and diagrams to illustrate the meaning and create their own glossary. Here are some words to get you started.

| | | |
|---------------------|------------|------------|
| ICEBREAKER | ANTARCTICA | EXPEDITION |
| SCIENTIFIC RESEARCH | SEA ICE | VOYAGE |

Activity: Antarctic Icebreaker Research

After watching and discussing the BTN New Antarctic Icebreaker story, what questions do students have? Below are some questions students can research.

- What is an icebreaker? What special features do they have? What happens when the ships move through ice covered water?
- What makes the *Nuyina* better suited to Antarctic travel than the previous icebreaker, *Aurora Australis*?
- Investigate the history of Antarctic icebreakers. How have they changed over time?
- Why is *Nuyina* described as the 'triathlete of Antarctic vessels'? Research and explain the [three important functions](#) of the ship.
- *Nuyina* is home for scientists and expeditioners during long voyages. Find out more about what life is like aboard the icebreaker. [Here is some information](#) to get you started.
- Investigate the marine science research the Antarctic icebreaker does. What special research features does the *Nuyina* have? Take a look at the different capabilities onboard the *Nuyina* in [this video](#).



Students can learn more about the important role ships have played in our understanding of Antarctica. Watch the [Ships of Science](#) video and respond to the following questions:

- Why have ships played an important role in Australia's scientific endeavours in Antarctica?
- What did you learn watching the Science of Ships video?
- What questions do you have?



Activity: Antarctic Explorer App

Students can check out the [Antarctic Explorer App](#) to experience an interactive 3D augmented reality model of the icebreaker Nuyina. There are also augmented reality portals that open to real unique scenes from Antarctica.



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.

Expedition to Antarctica

Imagine you are an adventurer visiting Antarctica for the first time. What will you need to understand about Antarctica's environment before embarking on your trip? Plan an itinerary for your adventure. What challenges might you face?

Extreme Weather

Investigate some of the ways animals and people are affected by the extreme weather conditions in Antarctica. What equipment, behaviours and adaptations do they have for coping with extreme conditions?

Australia's connection to Antarctica

Describe Australia's connection to Antarctica. Create a timeline showing major expeditions and discoveries made by Australians in Antarctica.

Origami Icebreaker

Get crafty – make your own Antarctic origami icebreaker. Follow the instructions [here](#)

Activity: Douglas Mawson - Science Legend

This BTN [Science Legends profile](#) about Antarctic explorer Sir Douglas Mawson gives a snapshot of his life and achievements. For a more detailed look at his expedition, watch the BTN [Mawson Expedition](#) story. Here is the [teacher resource](#) for this story.



Activity: BTN Antarctica Special

BTN reporter Emma went on a journey to one of the world's most remote and amazing places - Antarctica! She's met the people that live and work there, discovered why the frozen continent is so important to science and spotted some of the amazing animals that call it home. Check out the special [here](#).

Take a look at this [BTN video](#), where a group of experts answer questions that kids had about Antarctica and the people and animals that live there. What questions would they ask an expert about Antarctica?



Useful Websites

- [Antarctic Icebreaker](#) – BTN
- [Aurora Australis](#) – BTN
- [Australia's New Icebreaker RSV Nuyina](#) – Australian Antarctic Division
- [New Antarctic icebreaker RSV Nuyina docks in locked-down Hobart](#) – ABC News
- [Icebreakers and Strengthened Ships](#) – Cool Antarctica
- [Nuyina Poster](#) – Australian Antarctic Division