

## Teacher Resource

# Aurora Australis

## Focus Questions

1. Where is Antarctica? Locate using Google Maps.
2. What is an icebreaker?
3. What has been the icebreaker's job over the past 31 years?
4. How does the icebreaker help with scientific research?
5. What is the icebreaker's nickname?
6. Where is the icebreaker heading to for its final voyage?
7. What is the name of the new Antarctic icebreaker?
8. How did the new icebreaker get its name?
9. What does the name mean in Palawa Kani?
10. What was surprising about the BTN story?

## Activity

### What do you see, think and wonder?

After watching the BTN *Aurora Australis* story, students will respond to the following questions:

- What did you SEE in this video?
- What do you THINK about what you saw in this video?
- What did you LEARN from this story?
- What was SURPRISING about this story?
- What QUESTIONS do you have about this story?

## Activity

### Glossary

Students will develop a glossary of words and terms that relate to the Antarctic icebreaker. Below are some words to get them started.

Antarctica	Icebreaker	Exploration
Expedition	Sea ice	Voyage

## Key Learning

Students will learn more about the Antarctic icebreakers – *Aurora Australis* and *Nuyina*. They will also learn about Antarctica, its environment, climate and history.

## 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 of their environment.

### Science – Year 7

Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures.

### HASS - Years 5 & 6

Locate and collect relevant information and data from primary sources and secondary sources.

## Activity

### Antarctic Icebreaker Research

Students will be exploring the Antarctic icebreaker or Antarctica's environment in more detail. They can develop their own key questions to investigate or respond to one or more of the questions below. Students can complete the following KWLH organiser to explore their knowledge and consider what they would like to know and learn.

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

Here are some possible questions for students to 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 *Aurora Australis*?
- Investigate the history of Antarctic icebreakers. How have they changed over time?
- What does a journey on the icebreaker from Australia to Antarctica look like for a passenger? Describe an average day on board the icebreaker. These [expeditioner diaries](#) will give an insight into what the journey is like for passengers.
- Investigate the marine science research the Antarctic icebreaker does. What special research features does the *Nuyina* have?
- Describe the landscape and weather conditions you would expect to see and experience on an 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? What equipment and clothing will you need? What transport will you use? Plan an itinerary for your adventure. What challenges do you think you will face on your adventure?
- Investigate some of the ways animals and people are affected by the extreme weather conditions in Antarctica. What equipment, behaviours and/or adaptations do they have for coping with such extreme conditions? For example, explain how emperor penguins' huddling behaviour helps to keep them warm, and effectively makes sure that no individual penguin is left to freeze on the outside of the huddle.

## Activity

### Research Project - Aurora

Explore the history of the *Aurora*, Australia's first Antarctic exploration vessel. The [State Library of Victoria - Aurora](#) and [Cool Antarctica - Aurora](#) are a good starting point for students' research about the *Aurora*. The following will help guide their research:

- Describe the *Aurora*.
- When was it built and what materials were used to build the ship?
- Imagine and describe what the conditions were like aboard the *Aurora* on the first Australian led expedition to Antarctica.
- Describe the challenges that Douglas Mawson and his crew would have faced aboard the *Aurora*.



# Activity

## Compare and contrast

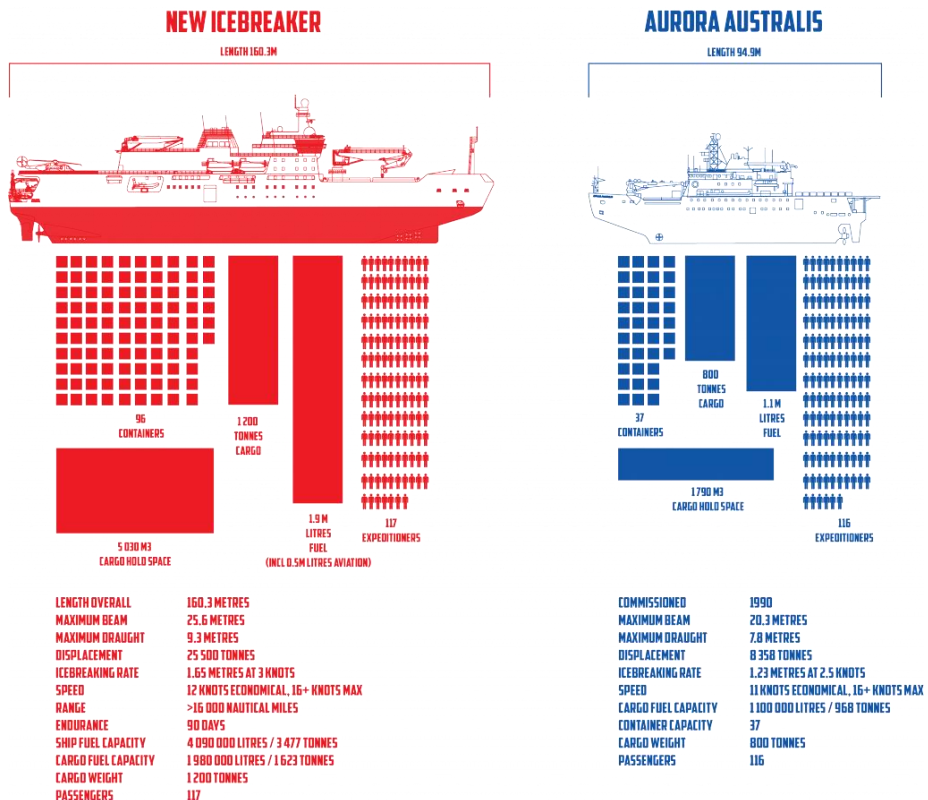
Students will create a table highlighting the similarities and differences between the *Aurora* and the new icebreaker *Nuyina*.

Compare features like the:

- length and weight
- materials used to build the ship
- colour
- passenger capacity
- maximum speed
- uses other than Antarctic travel
- special features for travelling through ice.



Now compare the Aurora Australis to the new icebreaker *Nuyina*. Students can analyse the infographic below and note the differences. Here is a [link to the original infographic](#).



## Activity

### Quiz

1. Antarctica is not a continent.
  - a) True
  - b) False
2. In which year was the Aurora Australis launched?
  - a) 1979
  - b) 1989
  - c) 1999
3. What nickname was given to the icebreaker *Aurora Australis*?
  - a) Boaty McBoatface
  - b) Orange Roughy
  - c) Polar Express
4. What is the new icebreaker's name?
  - a) Nuyina
  - b) Aurora
  - c) Antarctic
5. What does Nuyina mean in Palawa Kani?
  - a) Antarctica
  - b) Great Southern Land
  - c) Southern Lights

## Activity

### Antarctica Q & A

In this [BTN video](#), a group of experts answer questions that kids had about Antarctica and the people and animals that live there. Respond to the following questions:

- What did you learn watching this video?
- What information was surprising?
- What question would you ask an expert about Antarctica?



## Useful Websites

Antarctic Icebreaker - BTN

<https://www.abc.net.au/btn/classroom/antarctic-icebreaker/10522910>

Antarctic Special – BTN

<https://www.abc.net.au/btn/classroom/antarctica-special/10937004>

Australia's new icebreaker – RSV Nuyina – Australian Antarctic Division

<http://www.antarctica.gov.au/icebreaker>

Icebreaker Specifications – Australian Antarctic Division

<http://www.antarctica.gov.au/icebreaker/about-the-ship/capability>

Cool Antarctica – Icebreakers and Ice strengthened ships

<http://www.coolantarctica.com/Antarctica%20fact%20file/History/ships/icebreaker.php>

ABC Science – Icebreaker Aurora Australis

<http://www.abc.net.au/science/articles/2015/03/25/4204494.htm>