

Teacher Resource

Antarctic Animals

Focus Questions

1. Before watching the BTN story, brainstorm a list of animals that you think live in Antarctica.
2. Where is Antarctica? Find using Google Maps.
3. Why are scientists doing sighting surveys for blue whales?
4. Blue whales are the 2nd largest animal that's ever lived. True or false?
5. Why are whales hard to track?
6. What helps scientists track whales?
7. Why are the scientists in the BTN story interested in krill?
8. There are many animals that eat krill. Name one.
9. How many penguin species live in Antarctica? Name one.
10. What was surprising about this story?

Activity

Pre-viewing questions

Before students watch the *Antarctic Animals* story ask them to respond to the following questions:

- What do you know about the conditions in Antarctica?
- What types of animals would you expect to see in Antarctica?
- How do animals survive in extreme weather conditions?

What do you see, think and wonder?

After watching the BTN *Antarctic Animals* 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?

Activity

Glossary – Antarctic Animals

Students will develop a glossary of terms that relate to Antarctic animals. Below are some key words to get them started:

| | | |
|-----------|------------|----------|
| ecosystem | adaptation | krill |
| habitat | species | food web |

Key Learning

Students will learn more about Antarctic animals and create a profile of one.

Curriculum

Science – Year 4

Living things, including plants and animals, depend on each other and the environment to survive

Science – Year 5

Living things have structural features and adaptations that help them to survive in their environment

Science – Year 6

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

Activity

KWLH

Hold a class discussion after watching the BTN *Antarctic Animals* story. What questions were raised in the discussion (what are the gaps in their knowledge)? The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

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

Questions for inquiry – Antarctic Animals

Students will develop their own question/s for inquiry about Antarctic animals, collecting and recording information from a wide variety of sources. Students may develop their own question for inquiry or select one or more of the questions below.

- Investigate the importance of krill as a food source for animals in Antarctica. Find out which animals feed on krill. What does krill feed on? Draw a diagram showing what animal feeds on what. Explore what would happen to all these animals if krill suddenly died out.
- What impact does pollution have on Antarctic animals? Draw a food web illustrating how the chemicals accumulate in Antarctic species, starting with how they enter the food chain through algae.
- With the extreme conditions found in Antarctica, many Antarctic animals have adaptations which allow them to live in their habitat. Choose an animal and conduct research to find out how they survive.

Activity

Profile

Students will imagine they are marine biologists studying an Antarctic animal in detail. Students will choose an animal to explore, create a profile and then share their findings with the class. Here are some suggestions:

- Weddell seal
- Sea lion
- Squid
- Adelie penguin
- Emperor penguin
- Krill
- Blue whale

Students can use the profile worksheet at the end of this activity to organise and present their information.

- Common and scientific name
- Appearance - what are some of their physical characteristics?
- Describe their habitat.
- Threats - what are some of the threats to their survival?
- Adaptations and interesting features.

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Creature Feature

Common Name: _____

Scientific Name: _____

Life Span: _____

Size: _____

Characteristics: _____

Threats to species: _____

Adaptations: _____

Habitat: _____

Behaviour: _____

Interesting features or facts: _____

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Activity

Penguin wave better than a group hug

Emperor penguins form a big, tightly packed huddle to keep warm in Antarctica, the coldest and windiest continent on Earth. But how do the ones on the outside of the huddle keep warm? Watch this [video](#) to find out about a clever way of ensuring that no penguin is left out in the cold.



What's polluting the whales?

Explore how chemical pollutants affect the Antarctic food web. A scientist shows that baleen whales are consuming Antarctic krill contaminated by accumulated residues of persistent organic pollutants (POPs) from pesticides and industrial chemicals. Watch this [video](#) to find out why these pollutants are concentrated at the Earth's polar regions.



Seals help climate research

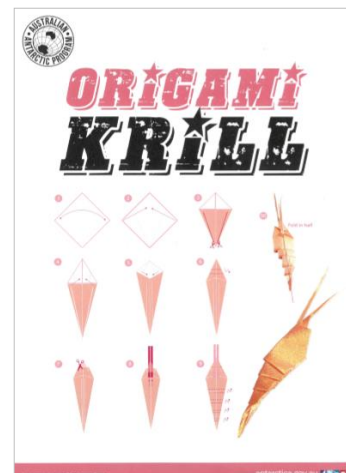
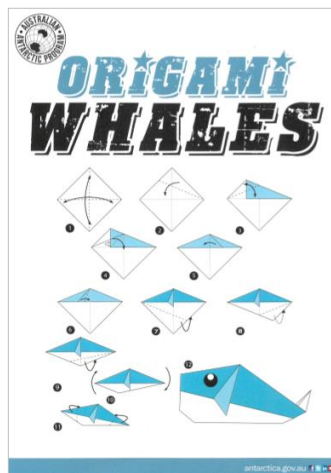
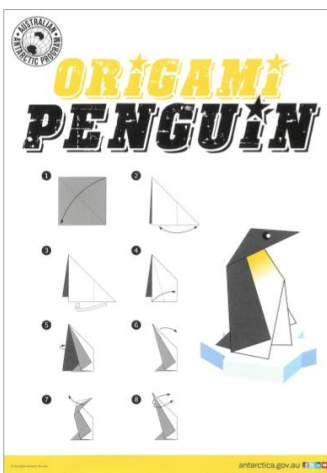
Discover how seals are helping scientists study Antarctica, polar regions, oceans and climate change. Scientists use Weddell and southern elephant seals to gather data and monitor the way currents move heat around the world's oceans. Watch this [video](#) to find out more.



Activity

Get Crafty – Origami Antarctic Animals

Make your own Antarctic origami animals. Follow the instructions at the end of this activity.



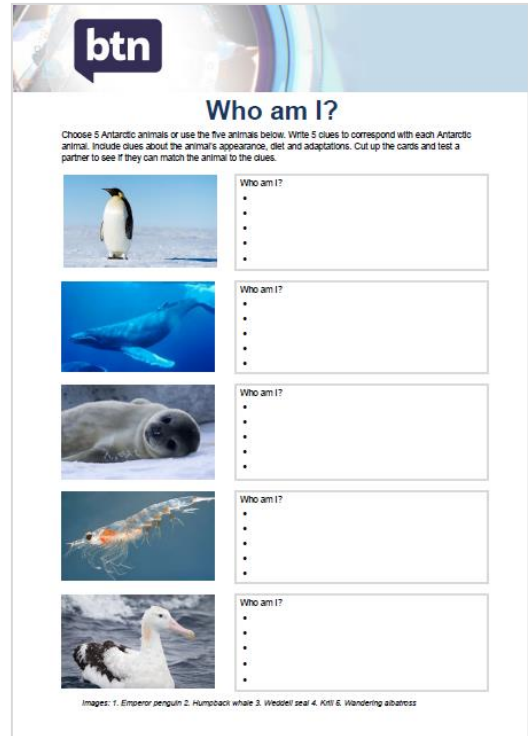
Copyright: Australian Antarctic Program

Activity

Who am I?

Students will make their own *Who am I?* game to learn more about Antarctic animals.

- Students will research and write 5 clues to correspond with each animal in the *Who am I?* worksheet at the end of this activity, with the first clue being the hardest and the last clue being the easiest.
- Include clues about the animal's special features, its predators and how it adapts to its environment.
- Students will test their game on a partner.



The worksheet features a blue header with the 'btn' logo. Below the header, the title 'Who am I?' is centered. A short instruction reads: 'Choose 5 Antarctic animals or use the five animals below. Write 5 clues to correspond with each Antarctic animal. Include clues about the animal's appearance, diet and adaptations. Cut up the cards and test a partner to see if they can match the animal to the clues.' The main content consists of five rows, each with a small image of an animal on the left and a 'Who am I?' box on the right. The boxes contain five bullet points for writing clues. The animals shown are: 1. Emperor penguin, 2. Humpback whale, 3. Weddell seal, 4. Krill, and 5. Wandering albatross. A small caption at the bottom of the worksheet lists these animals with their corresponding numbers.

Useful Websites

BTN – Life in Antarctica

<http://www.abc.net.au/btn/classroom/life-in-antarctica/10876796>

BTN – Antarctic Science

<http://www.abc.net.au/btn/classroom/antarctic-science/10911036>

BTN – Antarctic Future

<http://www.abc.net.au/btn/classroom/antarctic-future/10527558>

Australian Antarctic Division – Antarctic Animals

<http://www.antarctica.gov.au/about-antarctica/wildlife/animals>

Australian Antarctic Division – Antarctic animals adapting to the cold

<http://www.antarctica.gov.au/about-antarctica/wildlife/animals/adapting-to-the-cold>

Discovering Antarctica – Ecosystems and Foodwebs

<https://discoveringantarctica.org.uk/ecosystems-and-foodwebs/>



Creature Feature

Common Name:

Scientific Name:

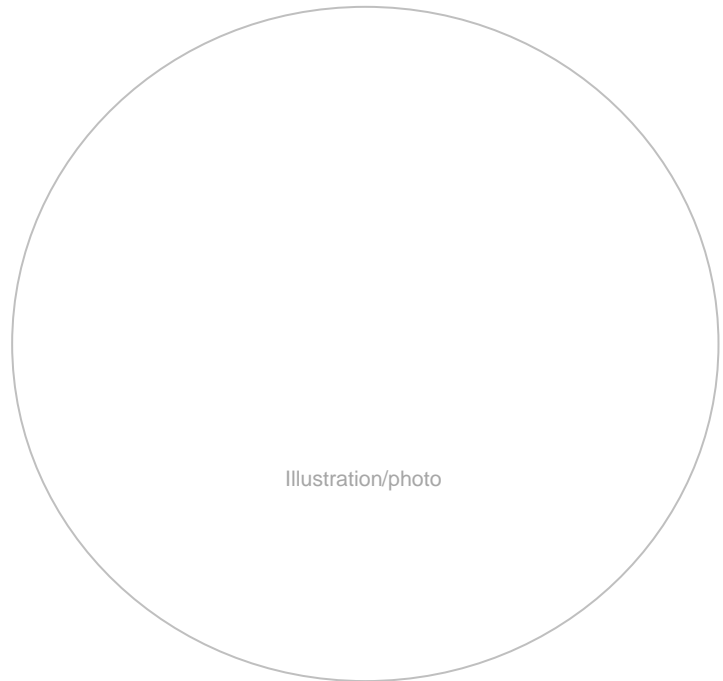
Life Span:

Size:

Characteristics:

Threats to species:

Adaptations:



Habitat:

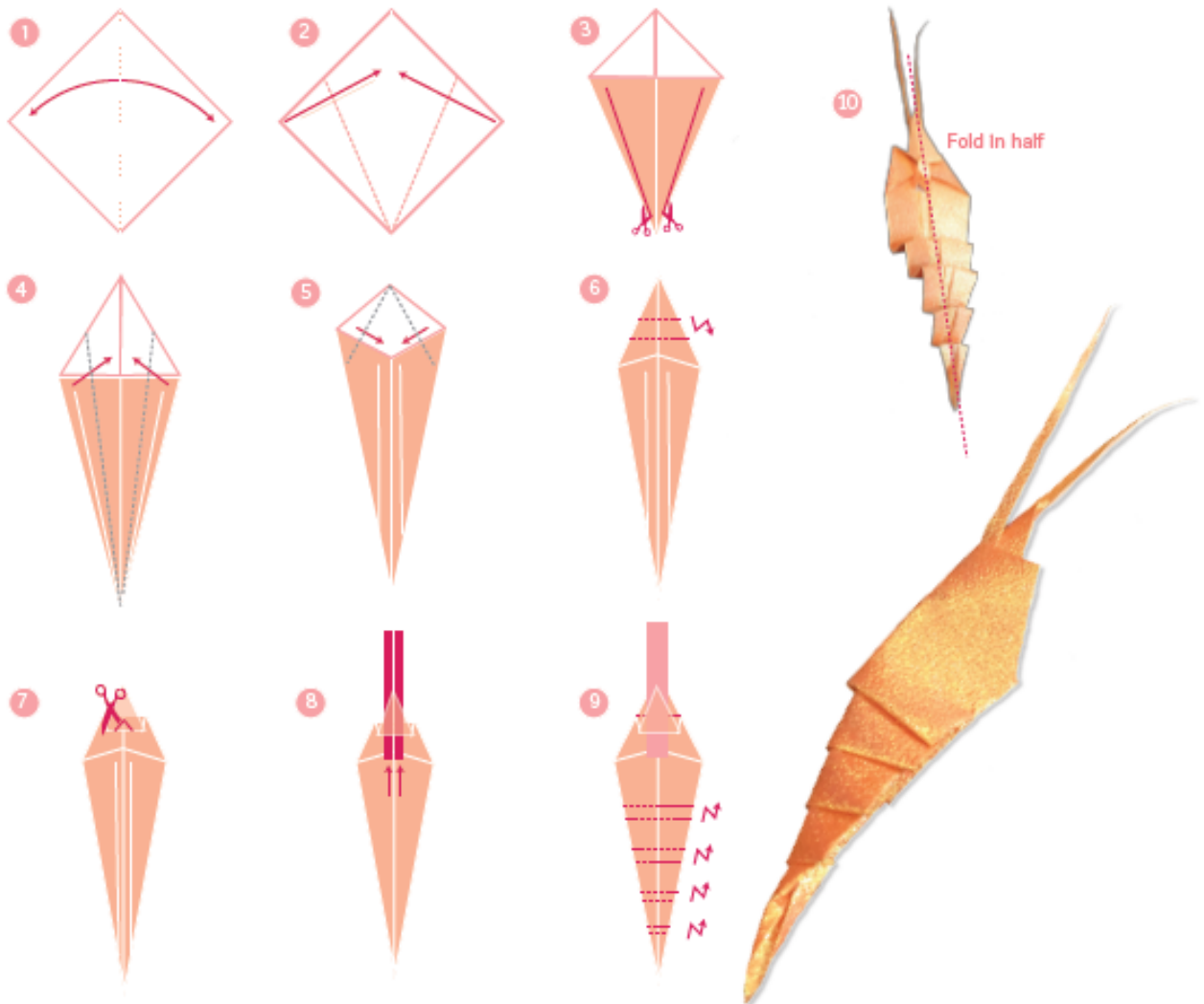
Behaviour:

Interesting features or facts:



ORIGAMI

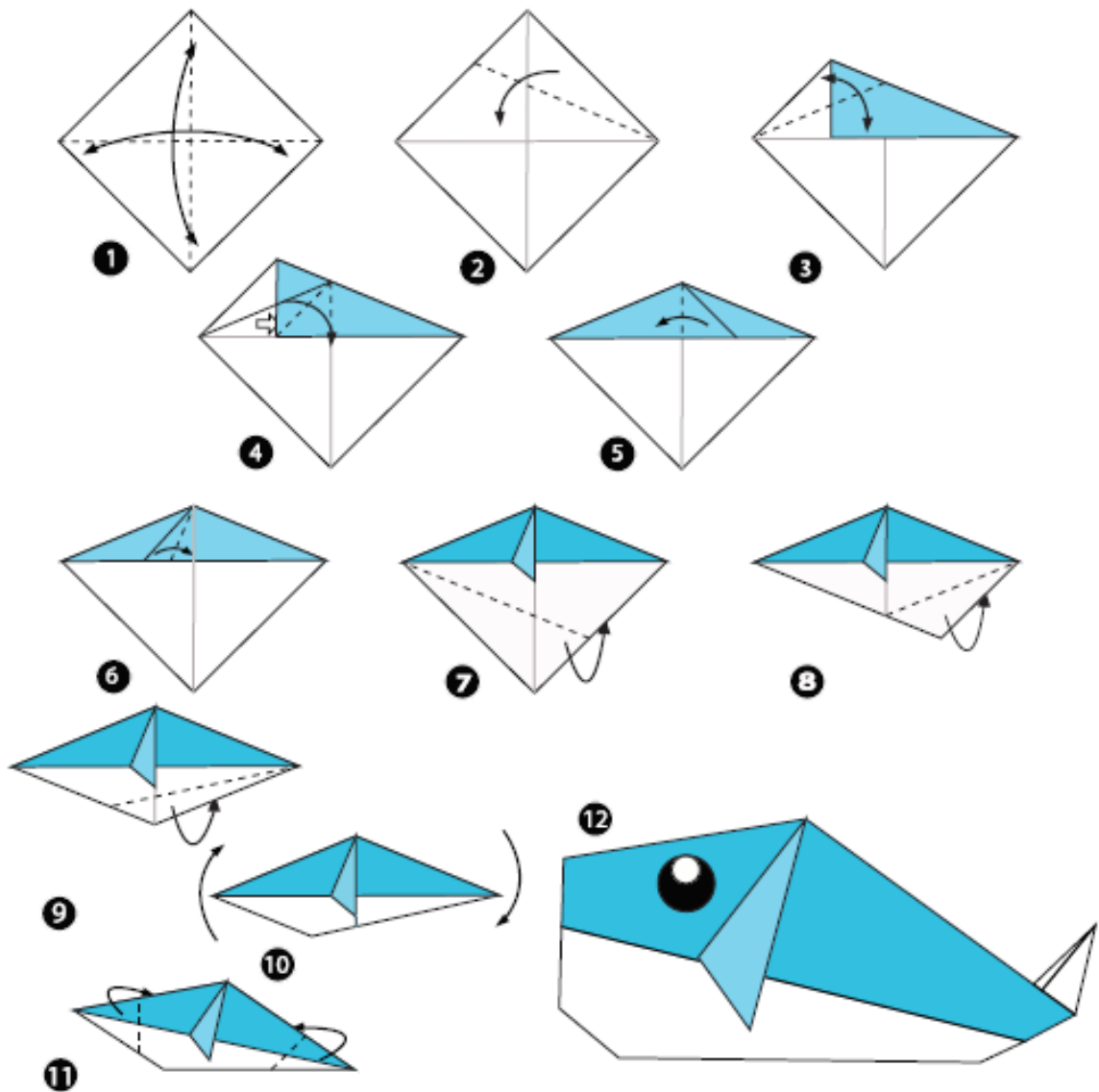
KRILL





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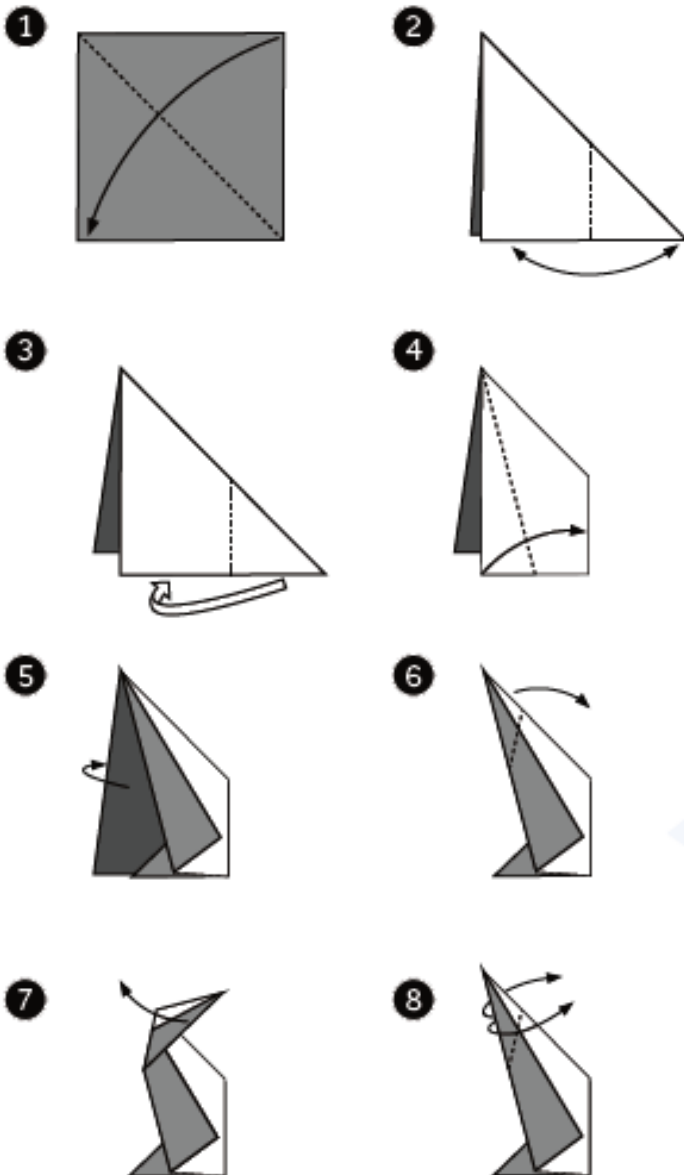
WHALES





ORIGAMI

PENGUIN



Who am I?

Choose 5 Antarctic animals or use the five animals below. Write 5 clues to correspond with each Antarctic animal. Include clues about the animal's appearance, diet and adaptations. Cut up the cards and test a partner to see if they can match the animal to the clues.



Who am I?

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Who am I?

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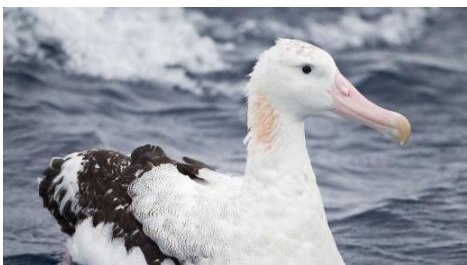
Who am I?

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Who am I?

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Who am I?

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Images: 1. Emperor penguin 2. Humpback whale 3. Weddell seal 4. Krill 5. Wandering albatross