

Teachers' Resource Kit

Illustrated History of Antarctica

MARCIA STENSON

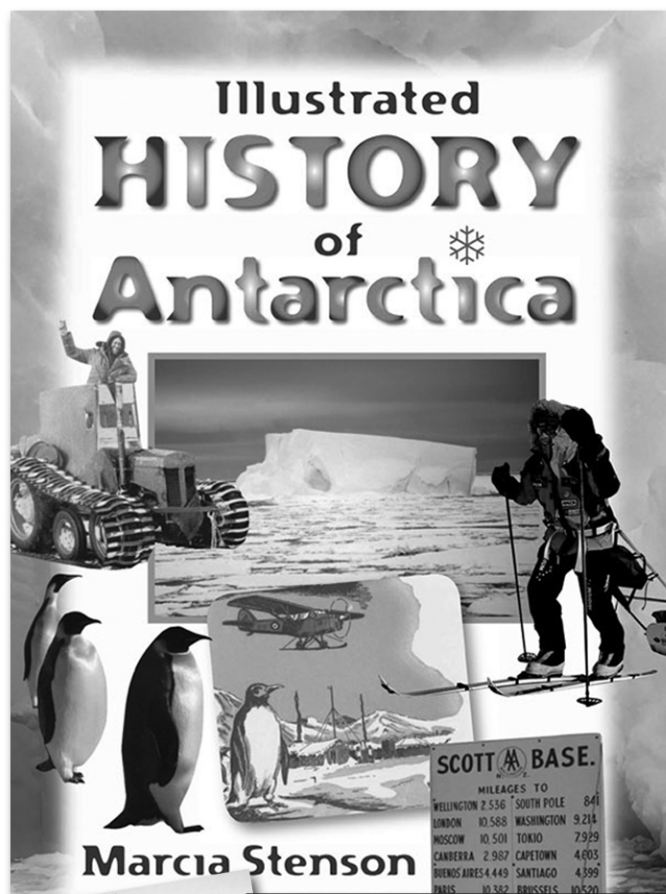
Especially aimed at children aged 8 to 12, *Illustrated History of Antarctica* is a companion book to Marcia Stenson's previous titles *Illustrated History of New Zealand* and *Illustrated History of the South Pacific*, which won the 2007 New Zealand Post Children's Book of the Year Award. This book provides fascinating detail on:

- Antarctica's geological history and physical environment
- The Southern Ocean
- Antarctica's earliest explorers, whalers and sealers
- The race for the Pole
- Antarctic science
- Antarctic tourism
- The relationships between New Zealand and Antarctica, and between Australia and Antarctica.

Its strength lies in the way Marcia teases out quirky and mind-boggling stories that really appeal to kids. It is heavily illustrated, colourful and lively. This guide is easy to read and very informative about Antarctica, a perennially popular study topic.

MARCIA STENSON

Marcia Stenson is the author of *Illustrated History of New Zealand* and *Illustrated History of the South Pacific*. She has been a secondary school History teacher and a Deputy Principal, and she has written a number of books.



Including classroom activities for students aged 8-12, in the following areas:

- The Southern Ocean & Subantarctic Islands
- Human Footprints in Antarctica:
 - Sealers & Whalers
 - Explorers
 - The First International Geophysical Year
 - International Involvement & Treaties
 - Humans in Antarctica Today

Teachers' notes developed by Raymond Huber



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Private Bag 102950, North Shore Mail Centre, Auckland
tel: 09 444 7197, fax: 09 444 7524
email: customerservice@randomhouse.co.nz

Before Reading the Book

Assess students' existing knowledge and impressions:

- Look at an outline map of the Antarctic with any place names blanked out. How many places/seas can students name?
- Add labels to your map as you progress through the book.
- Brainstorm names of any famous Antarctic explorers, facts and events known to students.
- What images spring to mind with the word Antarctica? Get students to sketch an impression. Compare with the book's images.
- Cover Images: Name them. (Sir Edmund Hillary on tractor, iceberg, emperor penguins, drawing of base, Scott Base sign, skis). Why do you think they were chosen?

Introduction

- The prefix 'ant-' means opposite. Why is the Antarctic so named? (See also p.32.) List five other words where 'ant-' is used in this way.
- What are two major differences between the Antarctic and the Arctic?
- Why is the Antarctic an important continent for New Zealand?
- Which two ways does the planet Earth depend on the Antarctic for survival?
- The Antarctic is the richest source of extraterrestrial matter. This has inspired many science fiction stories. Write a single-page short story about scientists finding a meteor or alien life at the pole.
- Define these positions (see also pp.14, 50): South Geographic Pole, South Magnetic Pole, and Pole of Inaccessibility. Draw the three poles on a sketch map (p.15).
- What is the Point of Safe Return? Write a poem with this title.

Where Evidence Comes From

- Why is there no archaeological evidence from this region?
- What are the three main sources of information about Antarctica's past?
- Why are diaries not always a reliable source of facts? On the other hand, what do diaries reveal (about people) that artefacts don't? What kinds of evidence do scientists prefer? Why?
- What did the fossil *Glossopteris* prove?

Antarctica: The Continent

- Antarctica holds world records for cold temperatures (p.17), and being both the highest and the lowest continent (p.13). Give details of these records.
- Create a time-line to record stages in the break up of the supercontinent Gondwanaland. Make the start date at 183 million years ago (write as 'MYA'). Write some significant events on your time-line.
- Where is the world's biggest ice block?
- Why does the South Geographic Pole marker have to be shifted every year?
- Ice Numbers:
 1. The thickest ice is _____ metres deep.
 2. The Transantarctic Mountains are _____ km long.
 3. Beardmore glacier is _____ km long.
- Research latitude and longitude, using this book and an encyclopaedia. The lines running *across* the globe are lines of _____. The equator has the number ____° latitude. The lines reach 90° at the North and South poles. The lines running *up* and *down* are lines of _____. The 0° longitude line runs through London, England. The longitude lines go up to ____°. The 180° line runs just past East Cape.
- On a map of the world, draw some of the main lines of latitude and longitude.
- How would the blizzards, katabatic winds and cold temperatures each affect human beings trying to survive in Antarctica? (See also p. 26).
- How are lichens adapted to survive?

The Southern Ocean and Subantarctic Islands

- Research the arrival of ‘growlers’ on the NZ coast in November 2006.
- Referring to an atlas, draw a map showing the location of the Snares, Bounty, Antipodes, Auckland, Campbell and Macquarie islands.
- What makes these islands (and surrounding ocean) so hazardous for ships?
- Write a story titled ‘The Treasure of the General Grant’.
- Create an illustrated diagram of the Antarctic Convergence food chain. Why are krill so important in oceans? Draw a krill.
- Name as many Antarctic or subantarctic penguin species as you can.

Human Footprints in Antarctica

- List the equipment and supplies used by early explorers to survive. Are any of these things still used today?
- Look at the photo of food rations on page 26. Try to name all the foods.
- These days all human waste (including toilet waste) must be stored and removed from Antarctica. Why are rubbish and human waste a problem in Antarctica?
- How have humans affected penguins over the years?
- Research the life of one of these early explorers: Francis Drake, Antonio de la Roché, or Edmond Halley.
- Draw a map and label some of the places in the Antarctic circle visited by Captain Cook (add dates where possible).
- Choose one of these explorers and write a description of their Antarctic voyage: Jules-Sébastien Dumont d’Urville, Charles Wilkes, James Clark Ross, Carsten Borchgrevink.

The first humans in the Antarctic

- Look at the map on pages 32, 33. What are the differences compared with the world map today? Create a fantasy map of the world by distorting the shape of countries. Illustrate with ships and sea monsters in the old style.

Whalers and sealers

- Which European products were made from seals, penguins and whales? Are any still made today?
- Look at the photos of dead animals on pages 40-42. Write a personal response to these images.

- ‘Beyond 40 degrees South is no law; beyond 50 degrees South is no God.’ What did these words mean in the 1800s?
- Make up a suitable sailors’ tune to fit the words.
- Design a poster that shows the main events in the history of whale hunting in the area. Research the latest news about commercial whaling by Japan in this area. Should hunting whales be banned?

The heroic age of Antarctic explorers

- Describe the personality of Robert Falcon Scott.
- What were some the lessons that Scott’s group learned about survival in the Antarctic conditions?
- Imagining you were one of the group, write a diary about the first trip to the interior. Describe your feelings.

Shackleton has another go

- What did Shackleton do differently this time?
- What did he mean by ‘you would rather have a live donkey than a dead lion’?
- Why are David, Mawson and Mackay famous?

Scott’s second expedition

- What had Scott learned from his first expedition?

- ‘Was Scott a hero or a bungler?’ Evaluate his achievements in exploring the Antarctic. Why do you think his team’s death is often related in such vivid detail by historians?
- Why do people usually admire adventurers such as Scott? What are they doing that few others will attempt? Is it important for humans to keep going to unexplored regions (on Earth or in space)?
- Research the negative effects of human exploration/colonisation. Then write a speech that discusses the pros and cons of exploring new frontiers. Use famous explorers as examples.

Roald Amundsen

- Sketch a portrait of Amundsen, based on the photo on page 58, using a soft pencil (e.g. 6B) to achieve different tones.
- Fill in the table on the next page to show the differences between Scott’s and Amundsen’s trips to the Pole:

	Scott Expedition	Amundsen Expedition
Start point		
Team size		
Team experience		
Preparation		
Transport		
Animals		

- Why do you think each man had to kill his own dogs?

Douglas Mawson's incredible journey

- Why was radio called 'wireless telegraph' in those days?
- What is the effect of a Vitamin A overdose?
- What other physical changes did Mawson experience?
- Plot a distance of 160 km from your home town on a map of NZ. Imagine walking this distance as Mawson did — alone, with little food and freezing weather.

Shackleton's epic journey

- Plot the journey by filling in events for these key dates:

January 15, 1915:

October 27, 1915:

November 21, 1915:

April 9, 1916:

April 24, 1916:

May 20, 1916:

- What makes Shackleton's survival story so unique in history?
- Watch one of the many movie dramatisations of Shackleton's incredible expedition. E.g. *Shackleton* (2002), *Endurance* (1999).

Aeroplanes, adventurers & international rivalry

- What did Richard Byrd discover about the Antarctic continent?
- Who was the first woman on the Antarctic?
- Why didn't Germany claim any land there?

- Why did various countries want to claim ownership of the area? (See also p.87.)

The first International

Geophysical Year

- What kind of science was studied in Antarctica in 1957-58?
- What achievement did the first IGY have in the Antarctic apart from scientific achievements? (See also p.87.)
- What skills and abilities did Sir Edmund Hillary contribute to the overland expedition to the Pole?

International involvement & treaties

- Discuss each article of The Antarctic Treaty (p.88). Do you agree with them? Why or why not?
- Describe the Madrid Protocol.
- There is some illegal fishing in Antarctic waters. Longline fishing is threatening some kinds of fish. (A longline can have thousands of hooks and be kilometres in length). Name some of the threatened fish species.

- What role does Greenpeace play in Antarctica? (See also p.29.) Write a protest letter complaining about fishing or whaling in the area.

Humans in Antarctica today

- Describe one important kind of scientific research carried out in Antarctica. Research the training required to become a scientist.
- List the technology that has made life easier in the Antarctic.
- Research the Erebus plane crash of 1979. Why did this tragedy have such an impact on New Zealanders? (See also p. 6).
- Read Bill Manhire's poem about the crash, 'Erebus Voices'. It can be found on the Te Ara website:
<http://www.teara.govt.nz/EarthSeaAndSky/SeaAndAirTransport/AirCrashes/1/ENZ-Resources/Standard/2/en#breadcrumbtop>
- Debate the topic: 'Tourism is good for the Antarctic continent.'

Epilogue

- What does the future hold for Antarctica?
- Create a painting based on the final photo (p.104). Use a limited range of

colours (e.g. blue, purple, black), and mix white paint with the colours to achieve carefully graded tones for the ice and sky.