

Antarctica

—

zone on its own

A sequence of learning for upper primary students
Created by Amanda Thomas and Megan Turner



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Phone (03)6233 5181

Email celo@education.tas.gov.au

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Antarctica – zone on its own

An integrated Science / Society and history unit for grades 5 and 6

Introduction

This integrated unit is intended for grades 5 and 6, but could be adapted for younger students. It is anticipated that the unit would extend for a period of four weeks. It aims to develop students' understanding of the Antarctic continent and the people who live and work there.

Students will investigate these factors by comparison with their own lives. A number of topics and issues will be examined, including the environment, climate research stations and human impacts. Students will work in a variety of modes. Team work will provide a major focus but this aspect may be varied to suit a range of classroom environments. Explicit teaching will be used in some lessons, juxtaposed with individual work and sessions which incorporate class discussion and debate.

Objectives

In designing this unit, a number of objectives have been set:

- Students will develop an understanding of the Antarctic climate and environment.
- Students will recognise that place and space influence work and lifestyle.
- Students will investigate how Antarctica is used, its value, and the impact of humans on the region.

Throughout the unit, most activities will also have a general focus objective:

- Students will compare their own lives with life in the Antarctic.

The Tasmanian Curriculum

A number of areas of the Tasmanian Curriculum will be addressed: Science; Society and history; Information and Communications Technology (ICT); English - literacy and Mathematics - numeracy.

Students will develop skills of inquiry, information gathering and analysis. Through various class discussions they will come to recognise the importance of asking questions and, through group work in their teams, see the value of collaborative inquiry. Team work will also help increase respect for others and their opinions, as students will find it necessary to share their ideas and reach agreement in their decision-making.

By participating in various dramatic activities, students will also recognise that being curious, creative and imaginative enables them to see new ways of doing things and helps them to deal flexibly with changing contexts. Reflective thinking will be encouraged through regular entries in an individual learning journal. This develops in students an ability to organise and direct their own thinking and learning.

Students will develop their literacy through this unit. Collaborative work, discussion and debate will enable them to develop skills in language by connecting with others, giving explanations, arguing and deliberating. Improved competence in the area of information

literacy will also result through the use of information and communication technologies such as email, internet (as a means of contacting Antarctic base camps) and word processing software (as a means of presenting work).

This unit provides students with the opportunity to communicate through drama. The arts generally provide an extremely engaging experience for students and are an important way of coming to know and understand through direct, intimate, intuitive experience.

This unit will encourage in students a sense of social responsibility and help them to recognise that in today's world human beings are connected in many ways. It is hoped that students will begin to form an awareness of the interdependence that exists between systems - natural, social, political, and so on - around the globe.

Through a variety of Science and Society and history experiences, learners will be encouraged to investigate the natural and constructed world of the Antarctic continent. They will also come to understand that humans are part of the natural world, in this case the Antarctic, and what they do has an impact upon it.

It is expected that students will also develop a respect for the intrinsic worth or inherent value of the natural environment by studying the unique nature of the Antarctic environment.

Values

Connectedness

Teamwork and class activities (debates, discussions, drama) will develop sharing, cooperation and acceptance resulting in a feeling of a class community.

Creativity

Lessons in drama will encourage students to value the ideas of others, show their originality and respond in an engaging manner to the features of the Antarctic world.

Responsibility

Discovering the Antarctic environment and its value through Science and Society and history lessons, will inspire in students a sense of responsibility towards sustainable development.

Purposes

Learning to relate, participate and care

Students will develop communication and cooperation skills, respect for others, and a sense of care for the environment, working towards a role as an active participant in society.

Learning to learn

By promoting literacy ability in students through writing, speaking and reading, this unit will help form a desire for life-long learning.

Learning to think, know and understand

This unit will assist students to acquire skills in reasoning and creative thinking and increase student capacity for informed decision-making.

Sequence overview

Tuning in

Develop a community of inquiry about Antarctica amongst students by asking them in small groups to develop a placemat or concept map about Antarctica.

Ask students to list the things they know about Antarctica, what they feel, and what they want to find out. Students could then brainstorm ways to find out what they want to know.

Ask students to locate Antarctica on a world map or globe.

Watch *Exploring Antarctica* (Rand McNally, Golden Press Video) to give students a general introduction to Antarctica.

Develop a 'graffiti wall' where students can list things they know about Antarctica as they learn.

Develop a classroom vocabulary list or word wall, which is clearly displayed in the classroom. Children can add to the list and provide the meaning of the words (see Appendix A).

Class novel *The Cruellest Place on Earth* by John Nicholson will be read to students throughout the duration of this unit.



Photo © Antarctic Tasmania

Guided inquiry		
Objectives	Learning experiences	Opportunities to demonstrate understanding
Develop an understanding of the Antarctic environment and climate.	Give students a map of Antarctica. Using various resources, ask them to locate particular features and communities.	Completion of map.
	Introduce students to the concept of day and night, and the seasons.	Comparison between Antarctic day / night, and summer / winter.
	Discuss the Antarctic climate with students. Compare fridge and freezer temperatures with the Antarctic temperature.	Measurement of temperatures.
	Demonstrate the reflection of the sun's rays off white ice (albedo effect), in comparison to darker surfaces.	Observations from experiment and discussion.
	Ask students to compare the highest wind speeds in the local area with Antarctica. Have students stand in front of a fan to feel the cold breeze. (Students could wet their faces to feel even cooler). Have students investigate the effect of using different kinds of materials wrapped around a thermometer, wet and dry, with and without a fan. Record the temperature at regular intervals.	Measurement of wind speeds. Entry into learning journal describing the cool Antarctic climate, compared to something else (e.g. fridge)
	Ask students, working in pairs, to research one of the following topics. Give students a focus question such as, <i>What adaptations do flora and fauna need to be suited to life in Antarctica?</i> <ul style="list-style-type: none"> • Geography • Flora • Fauna • Transport • People in Antarctica • Stations 	Presentation of research

Recognise that place and space influence work and lifestyle.	Develop a class set of questions to ask somebody who has visited Antarctica. These questions should relate to matters such as lifestyle, clothing, food, recreational activities and employment.	Participation
	Divide students into teams in accordance with the Australian Antarctic stations: Mawson, Casey and Davis, and Macquarie Island. Each group becomes responsible for researching their station.	Each station will be required to give an oral report back to the class. Entries into learning journal detailing progress.
	If possible, arrange correspondence between students and Antarctic stations. This would act as a valuable resource to students. Interview people at the stations using the class set of questions.	Correspondence with Antarctica. Entry into learning journal about correspondence.
	Navigation of the Australian Antarctic Division website.	Students to complete a worksheet in relation to the website.
	Compare the distance between Antarctic stations with the distance between students and their neighbours. Discuss the issues associated with this.	Measurement of distance. Discussion of issues.
	Visit the Australian Antarctic Division. Take particular notice of the specialised equipment and other resources used in Antarctica.	Entry into learning journal about the experiences of an Antarctic researcher.
	Ask students working in pairs to conduct an interview, acting in role – one student as an Antarctic researcher the other as an interviewer. Students should use their knowledge about Antarctica to undertake this task.	Written interview report.

Compare life in the Antarctic to students' own lives.	Ask students to record everything they do in one day, including the times they do things. Compare this with the Antarctic way of life. Students should pay particular attention to such factors as sleeping patterns, eating patterns and clothing.	Students should develop two timetables.
	Read students a story about journeying to the Antarctic from John Nicholson's <i>The Cruellest Place on Earth</i> . In teams students must choose from a selection of everyday items those they would take to the Antarctic and justify their choice to the class. This is an introductory drama activity to build confidence.	Participation. Entry into learning journal.
Investigate the impact humans have on Antarctica.	Ask students to form a list of the impacts that humans have on their immediate environment (e.g. school and community).	Contribution to list.
	Ask students to apply these impacts to Antarctica. <i>Are they the same in Antarctica? Better? Worse? Do humans have more impact on the Antarctic environment?</i>	Comparison
	Investigate ways of minimising impact on the environment. Look at the ways we are working to minimise human impacts in the local area, then compare to the Antarctic. <i>Can we use the same methods?</i>	Entry into learning journal.
	Drama activity which simulates an Antarctic disaster.	Entry in a learning journal. Participation.
	Have a class debate about whether humans should go to Antarctica. Divide the class into two groups – one group arguing for, the other against. Students must be able to justify their argument.	Argument. Participation. Report into learning journal.

Lesson plan:

Day / night and the seasons

Purpose

This lesson aims to introduce students to the concepts of day and night, and the seasons. Students will become familiar with these concepts before seeing how they affect Antarctica. Students will then compare the Antarctic daylight hours with our daylight hours.

Groupings

This will be a whole class activity, which will be explicitly taught. Students will then have the opportunity to work individually or in small groups for a practical task.

Anticipated outcomes

Students will:

- understand the concept day / night and the seasons;
- understand that Earth is constantly rotating;
- understand that Earth is tilted;
- apply knowledge to different situations;
- conduct research;
- make comparisons;
- work collaboratively; and
- participate in class discussions/activities.

Resources

Polystyrene sphere or ball about tennis ball in size, representing Earth.

Small table lamp with shade removed, representing the sun.

Writing materials

Task engagement

Students will be motivated by the practical demonstrations of these concepts. Students will also be able to compare Antarctica to their own lives.

Lesson content and teaching strategies

Introduction

- State expectations.
- Ensure that students know that the Earth is divided into hemispheres. Have students locate Antarctica on the world globe.
- Ask students to identify the hemisphere in which Antarctica is found.

Main body

- Ask students if they know how we have day and night. This may lead into a discussion about this concept. Ask questions such as: How long does it take the earth to do one rotation?
- Explicitly teach students about this concept using the world globe and torch to demonstrate. Students may like to have a go at this. Students should come to understand that the Earth is constantly rotating.
- Ask students if they know why we have four seasons. Ask questions such as: What does the Earth orbit around? How long does it take to do one orbit? Is the Earth tilted?
- Demonstrate this concept, (see appendix B for diagram and explanation).
- Once students are familiar with this concept, repeat the orbit around the sun (following Appendix B). Ask students to pay particular attention to Antarctica's position as Earth is moving around the sun.
- What do you observe? How does this relate to day and night? How does Antarctica differ from Australia in terms of day and night, and the seasons? Students should come to understand that Antarctica receives 24 hours of daylight in the southern hemisphere's summer.
- Have students record this information in their workbooks, drawing a diagram to explain the seasons.
- Over the next week, ask students to record daily how many hours of daylight they receive where they live. Students should compare the amount of daylight they receive compared with Antarctica. Students should also make note of the season.

Conclusion

- Reinforce the concepts covered – day and night occur due to the Earth's rotation, and the seasons occur because of the Earth's tilt.
- Select one student to revise these concepts with the rest of the class.

Extension activity

- Ask students to create a graph showing the amount of daylight hours they receive compared to the daylight hours Antarctica receives.
- Invite students to create a table predicting the amount of daylight hours Antarctica receives in the summer compared to Australia.

Assessment

- Collect and assess student work books.

Evaluation

Future teaching suggestions

Lesson plan: Investigating the albedo effect

Purpose

This lesson aims to have students learn about the albedo effect by conducting a practical science experiment.

Groupings

Students will work in pairs or groups of three to complete this activity.

Anticipated outcomes

Students will:

- understand the Antarctic climate and environment;
- cooperate within small groups;
- analyse results and make comparisons; and
- participate in a class discussion of findings.

Resources

black (or similar dark colour) cardboard / paper
white cardboard / paper
scissors
tape
thermometers

Task engagement

It is expected students will be engaged due to the practical manner of the activity. By working in small groups (ideally pairs) each student will have a specific task to carry out, reducing the risk of students becoming bored or losing interest.

Lesson content and teaching strategies

Introduction

- Explain the experiment to the students. A handout could be given which details instructions. Ask if there are any questions.

Main body

- Students, working in pairs, make two pouches, one using black cardboard, the other using white cardboard.
- Place the pouches in the sunlight and test for temperature. Record the results using the thermometers. Carry out this part of the lesson within a sunny area of the classroom or outside in the playground.
- Have students observe, compare and record the changes in temperature.

Conclusion

- Discuss, as a class, why the two pouches may have given different temperature readings.
- Discuss how we can relate the white pouch to the Earth's surface in Antarctica, and the dark pouch to the Earth's surface at our school or our house.
- Introduce the term albedo and explain how this affects temperature at the South Pole.
- Have students complete a short report on the activity.

Extension activities

- Draw a graph of the results from the experiment.

Assessment

- Collect and assess reports.

Evaluation

Future teaching suggestions



Photo © Antarctic Tasmania

Lesson plan: Australian Antarctic Division website navigation

Purpose

This lesson aims to develop students' knowledge and use of the internet. Students will become familiar with the Australian Antarctic Division website, and navigation around it.

Groupings

Students will be divided into teams, according to the four Australian Antarctic stations. Students will then be required to work in pairs with somebody from their team.

Anticipated outcomes

Students will:

- navigate a website;
- use resources;
- extract relevant information;
- collate data; and
- work cooperatively.

Resources

Computers (connected to the internet)

Worksheet (see Appendix C)

Task engagement

Students will undertake this activity in the library / computer room. Students will be engaged in this task by having the opportunity to use the internet as a resource.

Lesson content and teaching strategies

Introduction

- State expectations.
- Explain that students will use the internet to collect information about their Australian Antarctic Station.
- Distribute worksheets.

Main body

- Show students how to access the site and navigate their way around the links provided on the Australian Antarctic Division website.
- Outline each question on the worksheet, detailing the information students are to include. Reinforce the need to justify some of their answers.

- Demonstrate how students can find the answer to a sample question, before setting them to work in pairs. Computer rules may need to be revised at this point.
- Allow approximately thirty minutes to complete the work sheet.

Conclusion

- Have students return to their teams (Antarctic stations) and compare their results.
- Students should collate data and add to their profile on their Australian Antarctic station.
- Ask students to share their results with the rest of the class.

Extension activity

- Ask students to prepare an oral / PowerPoint presentation about their Antarctic station, or to present a poster containing information about their station.
- Have students complete the activity sheet: How to dress for penguin research. (Appendix D)

Assessment

- Collect and assess work sheets. Have students use this information to develop a profile of their station.

Evaluation

Future teaching suggestions



Lesson plan: Antarctic simulation activity

Purpose

The purpose of this lesson is for students to apply their knowledge about life in the Antarctic to a simulated real-life situation. Students will use a range of drama strategies to investigate issues arising from life in the Antarctic.

Groupings

This lesson requires students to work together as a whole class group and also within their teams.

Anticipated outcomes

Students will:

- build character and act in role;
- apply knowledge to relevant situations;
- explore issues arising in the Antarctic; and
- cooperate within a large group.

Resources

Large area, such as a general purpose room / activities room
Character cards

Task engagement

It is expected students will become engaged due to the nature of the drama activity, providing a direct, intimate and authentic experience.

Lesson content and teaching strategies

Introduction

- State expectations.
- Set the pretext for the drama using a strategy called teacher-in-role. The teacher becomes a character (in this case, Davis Camp manager) who informs the students about an imagined scenario.
- This drama involves a serious accident in the Antarctic region, with the following statement to provide a guide. Some improvisation is encouraged.
- Thank you for coming, especially those of you who have come all the way from Macquarie Island. This morning we received some terrible news about the Mawson supply ship. The ship has hit an iceberg and is leaking fuel into the ocean. A blizzard at Mawson base camp means they are unable to assist, but they are also running short on supplies. Hopefully you have some ideas about how we can fix this.
- Encourage students to ask questions before the next activity.

Main body

Character Building

- Ask students to form two circles, one inside the other. Give each a character card. The students in the inner circle turn around to find a partner in the outer circle. Working in pairs they question each other to build the character.
- The students must then report back on what they have learnt about their partner's character.

Future Implications

- In their teams students think about what might happen in one year's time as a result of the above events. They must then create a frozen image of the scenario.
- The rest of the class has to guess what is happening within the frozen image. To help with this process, or to see if the guess is correct, the teacher claps. That is a signal for the students to act out the scene for around thirty seconds. A second clap is a signal to freeze in position again to enable discussion.

Conclusion

- Students make an entry in their learning journals, reflecting on the work they have done in the lesson.

Assessment

- As well as looking at participation throughout the lesson, teachers may also use the learning journal entry as an assessment tool.

Evaluation

Future teaching suggestions



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Glossary

<i>Antarctica</i>	the region, in the southern hemisphere, around the South Pole
<i>albedo</i>	the albedo of an object is the extent to which it reflects light. The albedo is an important concept, particularly in climatology and astronomy. In climatology it is sometimes shown as a percentage. In general, the albedo depends on the direction and directional distribution of incoming radiation
<i>Aurora Australis</i>	(also known as <i>the southern lights</i>) lights in the atmosphere seen radiating from the South Polar Region.
<i>crevasse</i>	a deep, open chasm, especially in a glacier.
<i>expedition</i>	a journey made with a definite purpose, such as to gather scientific evidence.
<i>expeditioner</i>	a person who takes part in an expedition.
<i>researcher</i>	a person who carries out an investigation to discover or prove information.
<i>South Pole</i>	the southernmost point on the Earth's axis.
<i>southern hemisphere</i>	the half of the Earth lying south of the equator.
<i>wind chill</i>	serious chilling effect as a result of exposure to low temperature and wind.

Unit evaluation

An evaluation of this sequence of learning will be carried out in a number of ways. Each lesson will be individually evaluated on its completion, with suggestions for teaching in the future and any possible improvements that should be made. In doing so, a number of factors should be examined.

One area of major importance is student engagement. This should be evaluated through a review of student participation and interest throughout the unit. It may also prove useful to reflect on student behaviour throughout the duration of this sequence, as disruptive behaviour is often minimised when students are engaged.

Another area of importance when evaluating such a unit is the level of understanding students have achieved. One way this may be demonstrated is in written work throughout the unit, as students will be required to demonstrate their understanding by interpreting much of the information they have learnt. Class discussions, drama activities and debates will also be judged on their success, not only by class participation, but also through reflection in learning journals and reports.

Students also have the opportunity to evaluate the unit themselves using a rubric (see Appendix E) and also by completing a survey on the unit content and teaching (see Appendix F). The analysis of these documents will further assist in the evaluation of the unit by specifically examining student attitudes and involvement.

Teacher and student resources

Books

Bains, John. 1997. *Antarctica*. Wayland Publishers: England.

Brasch, Nicolas. 2001. *Antarctica: Australia's Neighbours*. Heinemann: Port Melbourne.

Harvey, Bev & Briggs-Pattison, Sue. N.d. *Antarctica*. Blake Education.

Hook, Cheryl. 2000. *The Antarctic*. Macmillan Education: South Yarra.

Loves, June. 1998. *Discovering Antarctica: People*. Macmillan Education: South Yarra.

Nicholson, John. 1994. *The Cruellest Place on Earth*. Allen & Urwin: St. Leonards.

Tulloch, Coral. 2001. *Antarctica: The Last Great Wilderness*. Reed Educational & Professional Publishing: Port Melbourne.

Weller, D. & Hart, M. 1996. *Art & Antarctica* Dragon's World: London.

Videos

Rand McNally. *Exploring Antarctica*. Golden Press Video.

Websites

Australian Antarctic Division

<http://www.aad.gov.au>

Classroom Antarctica

<http://www.classroomantarctica.aad.gov.au>

Education World

http://www.education-world.com/a_lesson/lesson042.shtml

Enchanted Learning - Zoom School

<http://www.enchantedlearning.com/school/Antarctica/>

La Sonrisa Production

<http://www.sonrisa.com/teacher.htm>

SIPEX voyage website:

<http://www.acecrc.sipex.aq>

Tramline 'Virtual Field Trips'

<http://www.field-trips.org/sci/antarctic/index.htm>

WorldAtlas.com

<http://www.worldatlas.com/aatlas/world.html>

Vocabulary List

Antarctica	stations	Southern Ocean
impact	albedo	axis
continent	researcher	Aurora Australis
human	Macquarie	desert
Mawson	ice shelf	wind chill
Casey	Antarctic	expeditioner
Davis	crevasse	temperature
ice	shelter	cold
climate	South Pole	glacier
wind	snow	seasons
iceberg	Earth	thermometer
tilt	day	night
freezing	island	scientific
hemisphere	water	wilderness
polar	high	dry
isolated	orbit	natural

Appendix B: The seasons

Pass a 15 cm length of wire or wooden skewer through the ball to represent the Earth's axis. Mark an equator on the ball.

Draw a circle about 40 cm in diameter on a piece of light card, to represent the Earth's orbit. Mark A, B, C and D at the quarter points. Place the card flat on a desk or table.

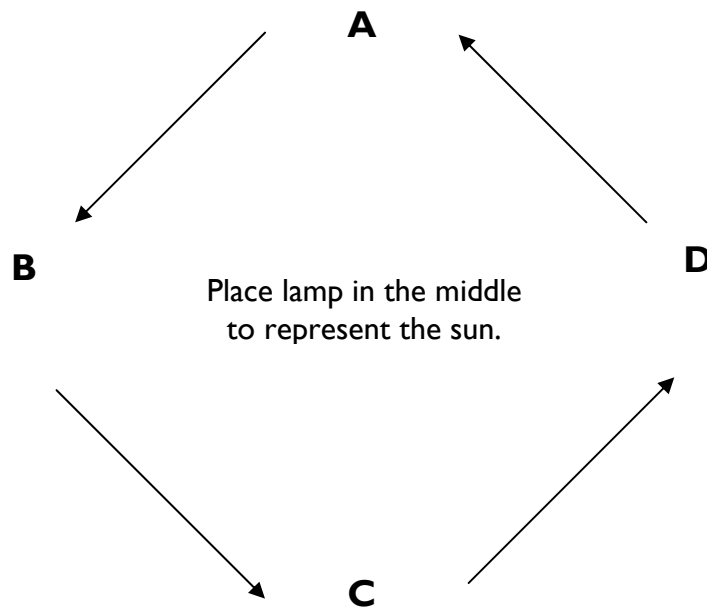
Place a small lamp without its shade in the centre of the circle. Darken the room and turn on the lamp.

Carefully move the ball representing Earth from A to D, maintaining the tilt at about 23 degrees from the vertical..

At each point observe:

- which part of the Earth is always illuminated;
- where the direct rays from 'the sun' appear to strike the earth; and
- which hemisphere is receiving slanting rays from 'the sun'.

Discuss the relevance of these observations to life on Earth.



Repeat the experiment with the Earth's axis perpendicular to the table top. What would happen if the Earth's axis were not inclined?

Australian Antarctic Division website navigation

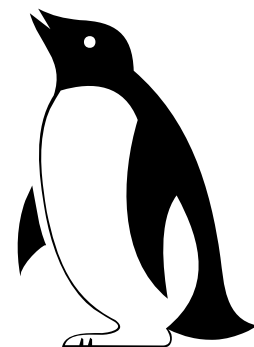
For this activity you will need to go to <http://www.aad.gov.au>

Use an atlas to locate and copy a map of Antarctica. Alternately use *WorldAtlas.com* (<http://www.worldatlas.com/aatlas/world.htm>) to find an image of the continent.

1. Locate your Australian Antarctic station on the map.
2. How far is your station from Australia?
3. List three environmental features of your station.
4. What is the main use of your station?
5. What type of accommodation is available to expeditioners at your station?
6. What is the current air temperature at your base?
7. What does the live webcam show happening at your base?
8. Read one entry of your station's *Weekly Diary*. List the date it was written and an event from the entry.
9. Go to the *Fact File* for your station. List five facts.
10. Go to '*What is happening around ... (your station)*'. List three things that are happening.
11. List any other information about your station.

How to dress for penguin research!

- You are a researcher working in the Antarctic. You are about to go out on the ice observing penguins. Which of the items of clothing that you have at home are you going to wear? What is this clothing made of? Why have you chosen these items?
- How would you get to Antarctica? How long do you think it would take to get there? What time of year would you go there? Why?
- Make a scientist out of pipe cleaners.
- Attach them to the bulb (bottom, probably red part) of a thermometer with a rubber band.
- Fill one side of a large plastic container with ice. Place your scientist in the half of the container that does not have any ice. What temperature are they at? (Discuss how long the 'scientist' needs to be left before the temperature is recorded)
- Now place your scientist on the ice. Record the temperature.
- Try 'dressing' your scientist in different types of clothing (eg cotton, wool, polar fleece). Record their temperature each time. Make sure that the 'clothing' covers the bulb of the thermometer or you will not get accurate results.
- Now test what happens if your scientist got wet – does this affect their temperature?
- Now it has become windy! Repeat the above with your tray in front of a fan and record the temperature of the scientist in each case.
- Display your results as a graph. Or, write a report.
- In Science we often have to use models because we can not always carry out the experiment that we want to (eg we can't go to Antarctica for the afternoon!). In what ways is the model that you have used unrealistic?



Students could go on to research:

- What is hypothermia?
- What is meant by 'wind chill factor'?
- How do scientists actually dress in Antarctica?
- In what sort of situations might they (the students) be susceptible to hypothermia themselves?



My name:

My team members were:



Appendix E: Rubric

	1	2	3	4
Bookwork	I didn't complete things properly or carefully.	I completed some of the activities in a rushed or careless way.	I didn't proofread well or my work wasn't quite as thoughtful as it could have been.	I thoughtfully completed all work, using correct spelling, grammar and punctuation.
Teamwork	We all think that we need to work on listening, decision-making and encouraging.	At least two of us feel that we had problems listening, making decisions, or encouraging. <i>Or</i> most of us feel that we need to work on two of the things above.	Nearly all of us felt we included everyone, listened to other people's ideas, worked together to make decisions and encouraged and helped each other. Or we all felt that we did nearly all of this, but need to work on one area.	We <i>all</i> felt that we included everyone, listened to other people's ideas, worked together to make decisions and encouraged and helped each other.
Organisation	Two or more of my tasks are unfinished, and I usually didn't have all the necessary equipment.	I completed all but one of the set tasks (including homework), but sometimes didn't have all the necessary equipment.	I completed all the set tasks including homework, but sometimes didn't have all the necessary equipment.	I completed all the set tasks (including homework) and made sure I had all the equipment I needed to do this.
Understanding	I didn't use active listening skills or ask questions when I needed to. I think I need to do more work on my understanding of life in the Antarctic	I was occasionally an active listener who asked questions, but think I could have a better understanding of life in the Antarctic.	I listened actively most of the time, asked questions most of the time and feel happy with my understanding of life in the Antarctic.	I listened actively, asked questions when I needed to and feel happy with my understanding about life in the Antarctic.
Comments about my participation in this unit:				
Comments about our teamwork:				

Student survey

Please give as much detail as you can.

My name:

What I found out about Antarctica

What I feel about Antarctica

What I enjoyed most about this unit

What I didn't like about this unit

What I still want to find out about