



ANTARCTIC EDUCATION RESOURCES

A Guide for New Zealand Teachers

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Integrating Antarctica into Teaching Programmes

Antarctica is an interesting and relevant context for teaching New Zealand students about a wide range of topics. Subjects such as Science and Social Studies can easily be related to Antarctica, but links can also be made in many other areas of the curriculum.

At the primary level, a holistic approach can be taken, where Antarctica is used as a context to cover many learning areas (Science, Social Studies, Art, English, Music etc). Students could focus on the lives of the early explorers, or present-day scientists who work in the field. Contexts such as this provide the opportunity for meaningful and exciting learning.

At the secondary level, Antarctica can be included in teaching programmes in not only Science and Social Studies, but also in subjects such as Geography, Biology, Physics, History, Politics, English, Art, Music and many more (if you are creative!).

A huge range of resources already exist for teachers who wish to include Antarctica in their teaching programmes. These include websites, books, TV series and films, exhibitions, competitions and many others. Teachers who have been lucky enough to visit Antarctica have produced whole units of work, across a range of subject areas. It is also possible to find Antarctic resources for individual lessons, rather than focussing an entire unit on Antarctica.

The New Zealand curriculum (2007) provides the opportunity for teachers to choose relevant learning contexts for their students. Examples of how Antarctica could be integrated into teaching programmes for secondary Science and Social Studies (levels 4 and 5) are included in the tables on the next page.

How to Use This Resource

These guidelines are a starting point for teachers who wish to include Antarctica in their teaching programmes. The resource tables are not definitive lists of all Antarctic education resources, but rather a selection of useful and easily accessible resources. There will no doubt be many resources that have unknowingly been excluded from these lists, so please contact me if you are aware of any obvious omissions that should be included.

The resource tables are designed as a quick reference for teachers. Curriculum levels and subject links have been identified, with years 1-8 referred to as "primary" and years 9-13 as "secondary". Science and Social Studies have been highlighted in colour-coding to allow resources to be identified easily for these subjects.

I have tried to keep the website and book guides quite short, so as not to overwhelm those referring to them. Many of the websites listed include helpful reference pages, which list further websites, books and relevant organisations. If further references are required, the reference pages on these websites are a good place to start.

One of the most useful resources a teacher can use is an experienced colleague. A number of New Zealand teachers have been lucky enough to visit Antarctica, through various programmes supported by Antarctica NZ. All those listed on the contacts list are happy to be contacted by teachers or other interested people. They can give advice on creating and using Antarctic education resources and some may offer to visit schools and talk to students about their experiences on the ice. The contacts list is not complete – please contact me if you wish to have your details added.

Possible Curriculum Links (Levels 4 & 5)

Science

| Achievement Objective | Antarctic Learning Contexts |
|--|--|
| <p>Living World</p> <ul style="list-style-type: none"> L4: Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human induced L5: Investigate the interdependence of living things (including humans) in an ecosystem | <ul style="list-style-type: none"> Adaptations of Antarctic plants (e.g. lichens) and animals (e.g. fish, seals, penguins) to the extreme environment; effects of human impacts on Antarctic Peninsula and Sub-Antarctic Islands (penguin colonies) Southern Ocean food webs (algae, krill, fish, seals, whales etc) |
| <p>Planet Earth & Beyond</p> <ul style="list-style-type: none"> L5: Investigate the composition, structure, and features of the geosphere, hydrosphere and atmosphere <p>L5: Investigate how heat from the Sun, the Earth, and human activities is distributed around Earth by the geosphere, hydrosphere and atmosphere</p> | <ul style="list-style-type: none"> Break-up of Gondwanaland & formation of Antarctica; volcanoes (Mt Erebus etc); glaciation (weathering); weather (winds, snow, clouds, impact on global weather systems); ozone hole; global warming (Ant. Peninsula); Southern Ocean currents |

Social Studies

| Achievement Objective | Antarctic Learning Contexts |
|--|---|
| <ul style="list-style-type: none"> L4: Understand how people pass on and sustain culture and heritage for different reasons and that this has consequences for people. L4: Understand how exploration and innovation create opportunities and challenges for people, places and environments. L5: Understand how people's management of resources impacts on environmental and social sustainability. | <ul style="list-style-type: none"> Historic huts (Scott, Shackleton etc) and the NZ Antarctic Heritage Trust's role in their preservation; TAE hut at Scott Base (kept as museum) Research lives of heroic age explorers and Trans-Antarctic Expedition (challenges, outcomes of exploration) Environmental/waste management at Scott base; implications and issues surrounding mineral resources and over-fishing; affects of growing tourism |

WEBSITES



| Title/Organisation and Web Address | Description | Curriculum levels and Subjects | Printable resources? | Updated regularly? |
|---|---|---|---------------------------|--|
| ANDRILL: ARISE education website www.andrill.org/iceberg | <ul style="list-style-type: none"> • “Education resources”: - Download PDF booklet (goes with videos) - Video journals: can download in various formats, cover range of topics - Simple classroom activities (not printable, but online animations etc) - Can request hard copies of resources • Videos, photos and blogs | <ul style="list-style-type: none"> • Secondary • Science (earth science) | Some (PDF booklet) | Yes 2006- 2008 updated resources and videos |
| Antarctica www.antarctica.org.nz | <ul style="list-style-type: none"> - Site made by teachers (Chris Smaill, Fiona Cottam) after visit to Antarctica - Electronic and written resources - Good references page with written publications, organisation website links etc | <ul style="list-style-type: none"> • All levels • Science, Biology, Physics (ozone, aurora), Chemistry, History, Geography | Yes | No , but still useful |
| Antarctic Connection www.antarcticconnection.com | <ul style="list-style-type: none"> - U.S. - based website - Current news and weather information about Antarctica - Wildlife information - Most useful as reference for teachers | <ul style="list-style-type: none"> • Teacher reference, all levels • Science, Social Studies | No | Yes |
| Antarctic Heritage Trust www.heritage-antarctica.org | <ul style="list-style-type: none"> - Restoration of historic huts - Information about explorers & restoration - Virtual tours of some huts - Link to Natural History Museum: www.nhm.ac.uk/antarctica-blog (following restoration project members) | <ul style="list-style-type: none"> • Primary, Secondary • Social Studies, History | No | Yes |

| Title/Organisation and Web Address | Description | Curriculum levels and Subjects | Printable resources? | Updated regularly? |
|--|--|---|----------------------|--------------------|
| Antarctic Link Canterbury www.antarctic-link.org.nz | <ul style="list-style-type: none"> - Canterbury – based website - education links - Antarctic events information | <ul style="list-style-type: none"> • Teacher reference (any level or subject) | No | Yes |
| Antarctica NZ www.antarcticanz.govt.nz | Links to: <ul style="list-style-type: none"> - National Antarctic programmes - Organisations - Science research programmes - Tertiary study - Education website | <ul style="list-style-type: none"> • All levels • Science, Social Studies | No | Yes |
| Antarctic Research Centre www.victoria.ac.nz/antarctic | <ul style="list-style-type: none"> - Victoria University, Wellington website - Info on current research etc - Coming soon: lesson plans related to ANDRILL project | <ul style="list-style-type: none"> • Teacher reference • Science | Not yet | Yes |
| Classroom Antarctica www.classroom.antarctica.gov.au | <ul style="list-style-type: none"> - Australian Antarctic Division kids' site - Activities and lesson plans covering a wide range of content | <ul style="list-style-type: none"> • Years 6 – 9 • Science, Social Studies | Yes (PDFs) | Yes |
| Cool Antarctica www.coolantarctica.com | <ul style="list-style-type: none"> - Facts (under “schools” heading) - Not printable worksheets, but good online information source (Science: environment, animals, global warming, S.S: early explorers, transport) | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science, Social Studies | No | Yes |
| Gateway Antarctica www.anta.canterbury.ac.nz | <ul style="list-style-type: none"> - University of Canterbury department - Go to “resources” section to find range of information, some teaching resources made by graduate students - Access online Antarctic library (University) | <ul style="list-style-type: none"> • Secondary • Science, Social Studies | Yes (PDFs) | Yes |
| Information Matters Ltd www.informationmatters.co.nz | <ul style="list-style-type: none"> - Go to “support” heading on website - Links to Scott Base webcam activity (IPY-tracking movement of sun) | <ul style="list-style-type: none"> • Secondary • Science | Yes (PDF) | Yes |

| Title/Organisation and Web Address | Description | Curriculum levels and Subjects | Printable resources? | Updated regularly? |
|--|---|---|--|--------------------|
| International Antarctic Centre www.iceberg.co.nz | - “Starters and Strategies” under Education heading (at bottom of page) | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science, Social Studies | Yes (PDFs) | Yes |
| International Polar Year (IPY) www.ipy.org/ | - News, blogs, research associated with the International Polar Year (IPY) activities - “Educators” section has regularly updated teaching resources and links to websites (highly recommended) | <ul style="list-style-type: none"> • All levels • Science | No (but clear instructions for activities) | Yes |
| Kelly Tarltons www.kellytarltons.co.nz | - Online activities: “Knowledge Centre” click on info about penguins, Capt Scott etc - Teachers can email to get copy of “Ice Packs” resources - “Starters and Strategies” | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science, Social Studies | Yes (PDFs) | Yes |
| LEARNZ www.learnz.org.nz | - Schools register (\$75/year) for virtual field trips (c. 100 in total) - ANDRILL virtual field trip (drilling programme, Ross sea bed, 2007) - Includes background pages, activities, diaries, videos, recorded audio conferences between scientists & students | <ul style="list-style-type: none"> • Primary, Secondary • Science | No (but all activities can be downloaded) | Yes |
| National Geographic http://ngm.nationalgeographic.com/ngm/antarctica/ | - Interactive map of Antarctica with information on wildlife, history, geographical features - Videos, photos and articles | <ul style="list-style-type: none"> • All levels • Teacher reference also • Science, Social Studies | No | Yes |
| New Zealand Youth Steering Committee for the IPY www.ipyyouthnz.org | - Highly recommended site - Links to resources in many areas (regularly updated) - Student competitions - Photos, links to other websites | <ul style="list-style-type: none"> • All levels • Science, Social Studies, Arts | Yes | Yes |

| Title/Organisation and Web Address | Description | Curriculum levels and Subjects | Printable resources? | Updated regularly? |
|---|---|---|----------------------|----------------------------------|
| Royal Society of NZ www.rsnz.org | <ul style="list-style-type: none"> - Promote awareness of science - Good reference site for teachers to get updated info on activities, resources, competitions, written publications etc - Search “education” section - Join email list to get regular updates | <ul style="list-style-type: none"> • All levels (teacher ref.) • Science | No | Yes |
| Science Learning Hub (Waikato University) www.sciencelearn.org.nz | <p>“Icy Ecosystems” section:</p> <ul style="list-style-type: none"> - Includes New Zealand research, science ideas and concepts, teaching and learning approaches, video clips of interviews, a timeline, animations, and key vocab. <p>- IPY-CAML voyage section:</p> <ul style="list-style-type: none"> - Marine life census project in the Ross Sea (Feb-March 2008), new info updated regularly (blogs, photos etc) | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science, Social Studies | No | Yes (current & live information) |
| Scientriffic (CSIRO) http://www.csiro.au/science/PolarEyes.html | <ul style="list-style-type: none"> - Australian science magazine (kids age 7+) - online articles and information (search for “ Polar Eyes”) - includes blogs, interactive fact sections, instructions for experiments, photos, weblinks | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science | Yes | Yes |
| Virtual Antarctica www.doc.ic.ac.uk/%7Ekpt/terraquest/va | <ul style="list-style-type: none"> - Students can easily navigate around this site that includes information on science, ecology, history, ship expeditions etc | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science, Social Studies | No | No (1995- still relevant though) |
| Wired Antarctica www.wiredantarctica.com | <ul style="list-style-type: none"> - Lessons (instructions, activities) - Science info, life in the field and at stations - Games | <ul style="list-style-type: none"> • Primary (upper), Secondary (jnr) • Science, Social Studies | No (all online) | Yes |

BOOKS



| Title | Description | Curriculum levels & Subjects | Reference details |
|---|---|--|--|
| Student Books | | | |
| Antarctica: The Last Wilderness, Understanding Global Issues | <ul style="list-style-type: none"> - Hardback, clearly presented, good photos - Could be used as class text - Includes: ecosystems, weather, climate change, heroic era, mapping, treaty, science careers (U.S. focus) | <ul style="list-style-type: none"> • Primary, Secondary (jnr) • Science, Social Studies, Careers | Bezic King, Nicole (ed) (2004) Weigl Publishers Inc |
| Antarctica | <ul style="list-style-type: none"> - Hardback, large print - Mostly illustrations - Story about penguins and seals | <ul style="list-style-type: none"> • Primary • Literacy, Science | Cowcher, Helen (1990) Georgian House, Melbourne |
| Antarctic Journal: the hidden worlds of Antarctica's animals | <ul style="list-style-type: none"> - Illustrated children's story book - Information about climate, food webs and animals | <ul style="list-style-type: none"> • Primary • Literacy, Science | Hooper, Meredith (2000) Frances Lincoln Ltd, London |
| Arctic and Antarctic | <ul style="list-style-type: none"> - Hardback, thin book - Clear presentation, lots of pictures - Covers animals, aurora, environment, exploration and mining - Quite a lot on Arctic | <ul style="list-style-type: none"> • Primary (and maybe Yr 9) • Science, Social Studies | Mack, Lorrie (2006) Dorling Kindersley |
| Illustrated History of Antarctica | <ul style="list-style-type: none"> - Softback, NZ focus - Could be used as class text - Follows human history in Antarctica: whalers/sealers, the heroic age, IGY, Treaty and present day activities - Some science: fossils, weather, food chains | <ul style="list-style-type: none"> • Primary and Secondary (jnr) • Social Studies, Science | Stenson, Maria (2007) Random House, NZ |

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|---|--|---|---|
| <p>Polar Regions – Saving Our World</p> | <ul style="list-style-type: none"> - Hardback, quite large print - Environmental focus - Covers seasons, food chains, pollution, climate change, mining, sealing etc | <ul style="list-style-type: none"> • Primary (and maybe Yr 9) • Science, Social Studies | <p>Green, Jen (2001) Aladdin Books Ltd, London</p> |
| <p>Something About This Place</p> | <ul style="list-style-type: none"> - Children’s fiction - Written and illustrated by four St Bede’s high school students, after their trip to Antarctica. - Story about a 10-yr old boy who visits Scott’s hut at Cape Evans | <ul style="list-style-type: none"> • Primary • Social Studies, Literacy | <p>Mathew Finnigan, Ben Roy, James Silcock & Joseph van der Loo (2004), St Bede’s College, Chch.</p> <p>Contact: Antarctica NZ or the college for copies.</p> |
| <p>The Heart of the World - Antarctica</p> | <ul style="list-style-type: none"> - Hardback or softback - Very thorough, lots of information, nice graphics/illustrations - Covers earth science, biology, working in the field, society on ice, human history and tourism (Australian focus) | <ul style="list-style-type: none"> • Primary (upper), Secondary • Science, Social Studies | <p>Tulloch, Carol (2001) ABC Books, Sydney NSW</p> |
| <p>The Riddle of the Frozen Phantom</p> | <ul style="list-style-type: none"> - Children’s fiction - Adventure story about children who travel to Antarctica | <ul style="list-style-type: none"> • Primary • Literacy | <p>Mahy, Margaret (2001) Collins , London</p> |
| <p>The Wide White Page: writers imagine Antarctica</p> | <ul style="list-style-type: none"> - Collection of literature on Antarctica (poetry, short stories etc) - Excellent foreword by Bill Manhire, discussing Antarctic literature | <ul style="list-style-type: none"> • Secondary • English | <p>Manhire, Bill (ed) (2004) Victoria University Press</p> |

| Teacher Reference Books | | | |
|--|---|---|--|
| Antarctica: Beyond the Southern Ocean | <ul style="list-style-type: none"> - Large, hardback - Huge collection of photos - Accompanied by information on Sub-Antarctic Islands, ice (sheets, glaciers etc), human activity and wildlife. | <ul style="list-style-type: none"> • Science, Social Studies, Geography | Monteath, Colin (1996) David Bateman, NZ |
| Antarctica – the complete story | <ul style="list-style-type: none"> - Large hardback - Information is detailed and clear - Lots of great photos - Good reference book for teachers (not appropriate as student text). | <ul style="list-style-type: none"> • Science, Social Studies, Biology, Geography, History | McGonigal, David & Woodworth, Lynn (2001) Random House NZ |
| Antarctica – Lonely Planet Guide | <ul style="list-style-type: none"> - Travel reference book, but has concise and useful information Eg. History, climate, geography, wildlife | <ul style="list-style-type: none"> • Science, Social Studies, Geography, History | (2005) Lonely Planet Publications Pty Ltd |
| Antarctica – the Ross Sea region | <ul style="list-style-type: none"> - Large, hardback - Quite old, but excellent reference book - Accurate and in-depth information on topics such as: exploration, geology, climate, animals (great adaptations section), living and working in Antarctica | <ul style="list-style-type: none"> • Science, Social Studies, Biology, Geography, History | Hatherton, Trevor (ed) (1990) DSIR Publishing, Wellington |
| Antarctica – great stories from the frozen continent | <ul style="list-style-type: none"> - Large, hardback - Quite old, but has good information that hasn't dated - Covers wildlife, climate, physical landscape, history (very thorough) and living in Antarctica - Good maps and timeline section | <ul style="list-style-type: none"> • Science, Social Studies, Biology, Geography, History | (1985) Reader's Digest Services Pty Ltd |
| Antarctica: an encyclopedia from abbot ice shelf to zooplankton | <ul style="list-style-type: none"> - Large, hardback - Short, clear descriptions and photos covering a wide range of topics | <ul style="list-style-type: none"> • Science, Social Studies | Trewby, Mary (2002) |

DVDs



| Title | Description | Curriculum level and Subjects | Details |
|---------------------|--|--|---|
| Breaking the Ice | <ul style="list-style-type: none"> - Australian documentary, made for TV - Journey on icebreaker from Tasmania to Macquarie Is. then Australian stations (Casey, Davis, Mawson) looking at station life, scientists in the field, wildlife (penguins, seals, seabirds) - Historical references (mostly Australian) | <ul style="list-style-type: none"> • Secondary (jnr) • Science, Social Studies | <p>ABC: Produced 1996 (released 2005)</p> <p>166 mins (6 episodes, c. 30 mins)</p> |
| 'ICE' series | <ul style="list-style-type: none"> - TV series, hosted by Marcus Lush - History, environment, scientists in the field, Scott base, wildlife - Interesting and well-presented, relevant to NZ - Educational material for teachers (good quality) - Includes questions to guide students, activities and links to curriculum <p>Download educational PDF: http://images.tvnz.co.nz/tvz_images/tvone/programmes/ice/study%20guide%20ICE.pdf </p> | <ul style="list-style-type: none"> • Primary (upper), Secondary • Science, Social Studies | <p>TVNZ and Jam TV (2007)</p> <p>112 mins (5 episodes, each 22 mins)</p> <p>Email: info@jamtv.co.nz</p> |
| Life in the Freezer | <ul style="list-style-type: none"> - David Attenborough series - Natural history (whales, seals, penguins, seabirds), covering survival in all seasons, includes Sub-Antarctic Islands - Last episode covers human exploration - Stunning footage | <ul style="list-style-type: none"> • Primary (upper), Secondary • Science, Social Studies, Biology | <p>BBC (1993) DVD released 2002</p> <p>174 mins (6 episodes, each 30 mins)</p> |

| | | | |
|--|---|--|--|
| <p>March of the Penguins</p> | <ul style="list-style-type: none"> - Documentary about Emperor Penguin colony (follows over a whole season) - US version narrated by Morgan Freeman - Parts could be shown to illustrate animal adaptations <p>(won Academy Award for best documentary 2005)</p> | <ul style="list-style-type: none"> • Primary, Secondary • Science, Biology | <p>Written/produced by Luc Jacquet</p> <p>Distributed: Warner Independent Pictures, U.S. (2005)</p> <p>84 mins</p> |
| <p>Planet Earth series: "Ice Worlds"</p> | <ul style="list-style-type: none"> - David Attenborough documentary - Antarctic and Arctic - Amazing aerial and underwater footage, with time-lapse photography (ice formation, penguin colonies), high definition quality - Whales, emperor penguins, skuas, snow petrels <p>(Emmy-award winning – Highly recommended)</p> | <ul style="list-style-type: none"> • Primary (upper), Secondary • Science, Biology | <p>BBC (2006)</p> <p>www.bbc.co.uk/nature/animals/planetearth</p> <p>58 mins (just the Ice Worlds episode)</p> |
| <p>Wildest Antarctica (and Arctic)</p> | <ul style="list-style-type: none"> - Overview of Antarctic wildlife, & climate change - Quite alarmist about sea levels, ozone (see IPCC website for current info on these) - Good descriptions of animal adaptations (whales, penguins, seals, seabirds) - Quite slow, but good footage of wildlife - Warning: graphic footage of penguins being eaten | <ul style="list-style-type: none"> • Secondary (jnr) • Science | <p>Grainger Television Australia Pty Ltd (1998)</p> <p>107 mins</p> |

OTHER RESOURCES



| Author | Description/format | Curriculum level and Subjects | Access details/contacts |
|--|---|---|---|
| <p>Bu Windsor (Aoraki Mount Cook School)</p> | <p>“Antarctica Rocks” Geology teaching kit (box) that includes:</p> <ul style="list-style-type: none"> • <u>Module One</u>: ‘Antarctica’s Place in Time and Space’ - Plate tectonics in general and Antarctica specifically • <u>Module Two</u>: ‘Rock Recipes’ – how rocks are formed in general and specific rock types and formations in Antarctica • <u>Module Three</u>: ‘Fabulous Forms’ – weathering and erosion, volcanic forms, rock sculptures <p>Modules include: set of notes and class activities, approximately 200 independent activity cards, selection of rock types and forms, a set of photos, an interactive PowerPoint CD, puzzles, maps and assessment activities.</p> | <ul style="list-style-type: none"> • Primary, Secondary (junior) • Earth Science | <p>Copies available for loan to schools (comes in a box, with all resources listed here):</p> <ul style="list-style-type: none"> • Antarctica NZ (x2), Christchurch Email: u.ryan@antarcticnz.govt.nz • Science Alive, Christchurch Ph: 03 365 5199 Email: info@sciencealive.co.nz • Canterbury Museum, Christchurch Ph: 03 066 5000 • Uni. of Canterbury, College of Education regional campuses: <ul style="list-style-type: none"> - Timaru Ph: 03 688 8163 - Greymouth Ph: 03 768 5640 - Nelson Ph: 03 548 3106 • Uni. of Otago, Central Otago Education Centre, Alexandra Ph: 03 448 6891 Email: coec@xtra.co.nz |
| <p>Jane Ellis (Middleton Grange School)</p> | <ol style="list-style-type: none"> 1. “Men on Ice” CD – looks at domestic lives of the heroic age explorers. 2. History research assignment (AS 2.1, 2.2) | <ul style="list-style-type: none"> • Yrs 7 & 8 • Social Studies • Yr 12 • History | <ol style="list-style-type: none"> 1. Available from Antarctica NZ: www.antarcticnz.govt.nz 2. Not available electronically (contact Jane) jellis@gmail.com |
| <p>Renee Baldwin (Antarctica NZ)</p> | <p>Unit of work that includes teacher information, activity suggestions, games, worksheets. Content includes ecology, adaptations, food webs, photosynthesis, human impact and conservation.</p> | <ul style="list-style-type: none"> • Secondary (levels 4 & 5) • Science | <ul style="list-style-type: none"> - Available electronically at: www.anta.canterbury.ac.nz (in “GCAS 9 project reports”) - Hard copies at Gateway Antarctica, Chch |

EOTC (School Trips)



| Organisation | Description of event | Curriculum level and Subjects | Contact information |
|--|---|--|---|
| Kelly Tarlton's, Auckland www.kellytarltons.co.nz | School visits - \$8-\$9 per student - lesson can be included or not | <ul style="list-style-type: none"> • Primary, Secondary • Science, Social Studies | Education Supervisor: Viv Jones Ph: 09 528 1724 Fax: 09 528 5175 Email: learn@kellytarltons.co.nz |
| International Antarctic Centre, Christchurch www.iceberg.co.nz | School visits - \$7 per student | <ul style="list-style-type: none"> • Pre-school • Primary (levels 1 – 4): Science, Social Studies • Secondary (levels 5 – 8): Science, Tourism | Education Officer: Gabriela Roldan Ph: 03 353 7083 Email: education@iceberg.co.nz - Online booking form (at bottom of Education page) - Book well in advance |
| Canterbury Museum, Christchurch www.canterburymuseum.com | School visits - Free - Can provide pre- and post- visit info and tailor programmes to fit teaching needs - Download info booklets and RAMs forms | <ul style="list-style-type: none"> • All levels • Science, Social Studies | Ph: 03 366 5000 Email: education@canterburymuseum.com - Book at least 3 wks ahead |

Teacher Training & Experience



| Organisation | Description of course | Contact details |
|---------------------------|---|--|
| <p>Gateway Antarctica</p> | <p>Graduate Certificate in Antarctic Studies (GCAS)</p> <ul style="list-style-type: none"> - Applications open to anyone with a degree, all disciplines - Full-time, intensive, summer course at University of Canterbury - Multi-disciplinary look at Antarctica, including lectures covering a wide range of issues, research assignments, and a two week trip to Antarctica (field work) | <p>www.anta.canterbury.ac.nz</p> <p>Online information and application details. (includes photos and projects from past students)</p> |
| <p>Royal Society NZ</p> | <p>Teacher Fellowships</p> <p>RSNZ offer a range of government-funded fellowships for teachers who wish to further their professional knowledge. This could include research associated with Antarctica. Application criteria vary, depending on the type of fellowship (details can be found on their website).</p> | <p>www.rsnz.org/awards/teacher_fellowships</p> <p>Email: Jessie.McKenzie@rsnz.org</p> |
| <p>ANDRILL</p> | <p>ARISE (ANDRILL Research Immersion for Science Educators)</p> <ul style="list-style-type: none"> - Unfortunately this programme has already taken place (2006 – 2008), but ANDRILL may offer future opportunities for teachers? - Six teachers (from NZ, U.S, Germany, Italy) spent time with the ANDRILL team in Antarctica and produced a range of interactive resources for students (blogs, videos, photos, class materials). | <p>www.andrill.org/education/arise</p> |

CONTACTS LIST - Teachers who have been to Antarctica

| Name | Contact Details | Position | Date(s) to ice | Resources |
|------------------------|--|--|----------------|--|
| AUCKLAND | | | | |
| Chris Smaill | University of Auckland (09) 373 7599 ext 83012 Email: c.smaill@auckland.ac.nz | Dept. of Electrical and Computer Engineering | 01-02 | www.antarctica.org.nz Worksheets covering a range of topics (Science, Social Studies, Maths, English) |
| WELLINGTON | | | | |
| Rebecca Logan | Wellington East Girls' College Email: beckslogan@gmail.com | Science | 07-08 | Antarctic education resources – Teachers' Guide (this resource). |
| Julian Thomson | GNS (Lower Hutt) Email: j.thomson@gns.cri.nz | Education and Outreach | 05-06 | Presentations for schools – contact Julian to arrange talks (ANDRILL, Antarctic Science etc) |
| Maryanne Ahern | TKI (Ministry of Education site) Email: H: maryanne.ahern@xtra.co.nz W: maryanne.ahern@tki.org.nz | Community Facilitator | | Former teacher, has visited Sub Antarctic Islands. |
| N. ISLAND other | | | | |
| Helen Ahern | Selwyn Ridge School, Tauranga Email: helenahern02@yahoo.co.uk | Teacher | | Has visited Sub Antarctic Islands. |
| CHRISTCHURCH | | | | |
| Jane Ellis | Middleton Grange School Email: jellis@gmail.com | TIC History | 02-03 & 06-07 | Yr 8 S.S (Men on Ice DVD), Yr 12 History research assignment (see "Other Resources" table). |
| Genevieve Murrell | Christchurch Girls' High School Email: genevievemurrell@hotmail.com | HOD Geography and Outdoor Education | 02-03 | Yr 12 Geography Natural Landscapes (Booklet and CD). Will be available at: www.anta.canterbury.ac.nz (from May 2008) |

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| Ruth Guy | Ph: 027 204 1194 Email: ruthguy@xtra.co.nz | Science | 04-05 | Adaptations of Antarctic fish powerpoint (Yrs 10, 11 Science). Contact Ruth (not available electronically) |
| Darren Atkin | LEARNZ, Heurisko Ltd Email: darren@learnz.org.nz | Secondary LEARNZ teacher | Oct-Nov 07 | Virtual field trip to ANDRILL programme (see WEBSITE resource table above: LEARNZ) |
| Renee Baldwin | Antarctica NZ Email: r.baldwin@antarcticanz.govt.nz | Environmental Officer | 06-07 | Science resources for levels 4-5 (worksheets, activities, teacher guidelines and references) Available at: www.anta.canterbury.ac.nz |
| S.ISLAND other | | | | |
| Bu Windsor | Mt Cook school (primary) Ph (W): 03 435 1835 Email: aorakimcs@xtra.co.nz | Principal | 02-03 | “Antarctica Rocks” geology kits for primary, jnr secondary Science (see “Other Resources” table) |

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