

Lessons from the ice

A virtual field trip to Antarctica brought the frozen continent closer to students. WAYNE ERB reports



Darren Atkin, far left and scientists from an Antarctic laboratory prepare for an audio conference. Photo: Heurisko Ltd.

Inspired by virtual Antarctic adventures, Edgcombe primary school students build a replica of Ernest Shackleton's hut in their classroom. As they sit inside and shelter from imaginary storms, over 4000km away the man who inspired them, teacher Darren Atkin, hunkers down in Scott Base as a real blizzard rages outside.

He hears the intercom buzz repeated warnings against leaving the building – a scheduled flight home to Christchurch is now

out of the question. As it transpires, Darren will be stuck for a few days yet, time aplenty to reflect on his brief time as probably the world's most southerly teacher.

Though the blizzard has shut down transportation, the phone lines remain open and as Darren waits for a break in the weather he recounts to *Education Gazette* his journey to the frozen continent, a trip that was relayed live to dozens of Kiwi classrooms.

"It has been a great time down here," he says emphatically of his sojourn on the ice leading a LEARNZ virtual field trip for some 3500 primary and secondary students.

A science teacher from Rangiora High School, Darren has worked for the past two terms on the LEARNZ programme run by Heurisko Ltd with funding from the Ministry of Education's Learning Experiences Outside the Classroom (LEOTC) programme.

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Notices should be no longer than 70 words, while extensive listings should be limited to descriptions that are a single, brief sentence in length.

**Avoid disappointment
– stick to the word limits.**



LEARNZ Teacher Darren Atkin at the Andrill drilling rig which was a focus for the field trip. Photo: Heurisko Ltd.

A variety of learning experiences

LEARNZ virtual field trips allow students to see and hear about places they may not visit otherwise, but there are also many LEOTC providers closer to home.

They range from art galleries and museums to wildlife centres and historic sites. The full range can be found on a map downloadable from the LEOTC pages on the TKI website.

Schools and LETOC providers are encouraged to make use of the Learning Stories section of the same site. This provides templates for making online articles that showcase how the LEOTC process has worked as an effective curriculum support tool for teaching and learning.

www.tki.org.nz/r/leotc/



Teacher in a strange land

In Antarctica, the sun will now not set again until February so perpetual daylight marked Darren's journey to the ice.

By his return, his sense of the novel had gone full circle, as he writes in his final diary entry: "When I get back to Christchurch there is something strange waiting for me, something I haven't seen for over two weeks. No, I don't mean my family, I mean night time."

His diary entries and videos let students experience the journey starting from the flight south. They were with him for his arrival in Antarctica, a surreal experience as he recounts: "You come out the door and there's blue sky, sunshine and blinding white light; and that is magic for everyone. You think 'this isn't real, this is a movie';" he says.

They also joined Darren on survival training, including a night out in a snow cave, emerging the next morning to feel just how cold -60°C wind-chill really is. "That was unbelievably cold. I lifted my goggles up to have a look and my eye lashes froze together."

One student asked Darren to describe the cold. It was a straightforward question but it got him thinking. The sound of snow in the very dry environment gave him the answer.

"Sometimes it's hard to put into words, but that is the sound of the cold for me, that squeak, squeak, squeak as you walk across the snow."

Visiting Antarctica is a dream for many, but thanks to Darren a lot of school students have now had a taste.

Back in the classroom

If feedback from Edgumbe School is a guide, the Antarctic field trip has been a great launch pad for classroom teachers to get students learning in a variety of subject areas.

Edgumbe deputy principal Kim Beattie says five classes took part in the field trip as part of their 'beyond our world' theme for term 4 that blended learning in technology, science and social studies.

"We found the children were fully engaged the whole time," she says. "It was really exciting for them to speak to someone down there. It's much better than just reading about it in a book."

Edgumbe students did online activities linked to the curriculum, and posed questions to scientists and technicians during audio-conferences.

Before the field trip, teachers talked about Antarctica with students to establish their prior knowledge and what they wanted to find out. After the field trip, learning continued with a look at the science of climate change, art activities and drama (students playing the roles of scientists and explorers).



Edgumbe School students talk to Antarctic scientists during a live audio conference.

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The concept is to help students look beyond themselves and their local area through field trips run over the internet.

Darren's Antarctic project was typical of such virtual field trips. He met experts in the field and brought their stories to students through daily videos, photos and diary entries, email and live audio or video conferences.

"Students are thinking 'wow, we are speaking to experts in Antarctica' and I am thinking 'wow, I am linking these experts to some school students in New Zealand'. I am just as excited as they are."

Antarctica is certainly rich in science learning and excitement – making that real for students clustered around computers back in New Zealand was the work of Darren and classroom teachers around the country.

During audio conferences, students asked questions of Darren and guest experts. The enjoyment and wonder of going live between a classroom and isolated locations in Antarctica was mutual, he says.

"Students are thinking 'wow, we are speaking to experts in Antarctica' and I am thinking 'wow, I am linking these experts to some school students in New Zealand'. I am just as excited as they are."

With just a few days on location and a steady timetable of live conferences and video-taping, quickly building relationships with the interviewees was an important part of the job, he says.

And though the weather was kind right up till the end of Darren's trip, there was the occasional glitch that required quick thinking – video conference gear malfunctioning just before a live session, or a live segment on the Andriil drilling project coinciding with an unexpected break in the work when the drill hit sand.

While he went south well-prepared with knowledge, Darren says the field trip provided an enjoyable element of learning together with students.

"For me as a science teacher, linking people using science in the real world with students to see the way this science knowledge is used to solve problems, that was really great."

Related weblinks:

www.learnz.org.nz

www.andrill.org

www.sciencelearn.org.nz

This Ministry of Research, Science and Technology website has a detailed unit on Antarctica with teaching resources.

In February and March 2008, the website will host reports from the NIWA research vessel Tangaroa when it is in Antarctic waters. Scientists on board will study the biodiversity and ecology of the marine environment. Reports aligned to the science curriculum for years 9 and 10 will include a daily blog, images, sound and videos. Students can ask questions of scientists and crew, and teaching resources are included.

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