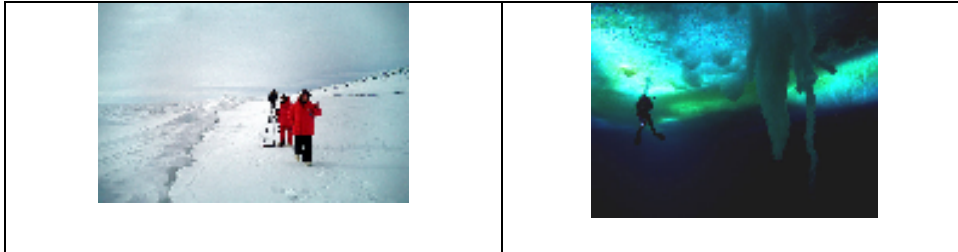


Encounters at the End of the World

Notes for Geography teachers



“Encounters at the End of the World” is the latest film by acclaimed German director Werner Herzog, who released his first film in 1962. It was produced in association with the Discovery Channel, and was nominated for an Oscar in 2009.

The film opens with spectacular images, shot beneath the ice. It was these images that attracted the director to the continent. The film follows his arrival, as part of an artists and writers project in 2006, by military plane in Antarctica: on the ice runway at McMurdo sound. He interviews people who work on the base: the scientists with their various specialisms: glaciers and icebergs, Weddell seals, languages, the volcano of Erebus or microscopic marine creatures.

He also interviews people with ‘ordinary’ jobs, in this far from ordinary place.

In addition to the stunning visuals, such as the descent into an ice cave formed by the release of volcanic gases, there are some remarkable scenes where sound is the landscape, including a scene where a group of scientists lies prone on the ice, listening to the sound of the seals beneath them.

There is a visit to Ross Island, and the edge of the Trans Antarctic mountains, with remarkable images of the life that thrives beneath the ice, Sir Ernest Shackleton’s hut, and the active volcano of Mt. Erebus.

The film is as much about the variety and work of the people that Herzog meets as the landscape of the continent. As he says: “behind every door there is someone with a special story to tell”.

A cast of scientists and dreamers populates the film, and provides a range of short narratives, interspersed with vintage images. There are also images of the impact that humans are having in this remote place.

I viewed a preview DVD of the film, and would say that this is probably more suitable for older secondary rather than younger students, due to the scientific language used, and the ‘talking heads’ style sections which would probably not sustain the interest of the younger age group (although I may be doing them a disservice)

It would also be more useful to view sections of the film rather than view it in one sitting due to the episodic structure. Sections of note for geographers would be the Erebus section of the film, and the travels outside of McMurdo.

This is not an explicitly 'geographical' film, but the exploration of the relationship between people and the environment, the idea of sustainability and the scientific endeavour which is taking place in this remote location would be familiar to geographers.

Antarctica is a location which many schools will explore with the changes to the KS3 curriculum offering the opportunity for work on Extreme Environments. A similar focus can also be found in the recently updated KS4 (GCSE) and KS5 ('A' level) exam specifications.

Some ideas for using the film with students

- A range of educational screenings are being organised: keep an eye on the local press. You might want to contact your local cinema and arrange for a matinee screening.
- Keep a record of the places outside of Antarctica which are mentioned during the interviews with the scientists – how is this remote continent 'connected' with the rest of the world ?
- Earlier this month, there was another major change in the Antarctic continent with the break up of a large ice mass: the Wilkins Ice Shelf, which is breaking free from the islands it is currently connected to – it would be useful to follow developments such as this, or perhaps to track an iceberg as it breaks free
- Collect images and impressions of the film that you get from reviews, student comments etc. and put them into WORDLE (<http://wordle.net>) to produce a word tag cloud which can help you identify the impressions that people have of the film. Turn these into display materials.

Notes and Activities on specific scenes.

Could include some of the images from the press pack: screen shots of the people who feature in the film.

The Arrival

- ✓ How would you occupy yourself on the plane journey into Antarctica – what questions would go through your head about the geography of the continent that you were about to visit ?

Link with Shackleton's expedition, and view of Scott's hut.

- ✓ How did the early explorer's experience of Antarctica compare with those of today's scientists ?
- ✓ When is the 'Austral summer' – how does it compare with the summer that we have in the UK ?

'Ivan' the Terra Bus

- ✓ How is the bus designed to cope with the terrain over which it travels ?

Douglas MacAyeal is a Glaciologist

- ✓ Douglas studies the Iceberg B15 – what can you find out about this particular ice berg and its scale – the figures for the amount of water it contains are huge – would it be possible to use some of this water to overcome water supply problems in other parts of the world ?

- ✓ Write a letter of application to The National Science Foundation - You are hoping to spend a month of the Austral Summer in Antarctica. What particular skills do you think you have that would be useful in McMurdo base ?

<http://www.nsf.gov/index.jsp> - for more information on the National Science Foundation

Stefan Pashov talks about the meeting of people as being inevitable because “we all meet here where all the lines of the map converge”. He is describing lines of longitude – explore the way in which the world has been divided up over the years.

“There is no point south of here” – Stefan Pashov

- ✓ McMurdo Base is climate controlled , it has a bowling alley and even a cash point. Using the website:
http://www.coolantarctica.com/Community/mcmurdo/mcmurdo_base_antarctica.htm
research the other facilities which are designed to make the scientists comfortable during their time on the continent.

Survival Course

Before anyone is allowed to leave the base, have to attend a 2 day survival school. How would Bear Grylls or Ray Mears cope in such an environment ?

- ✓ What situations should form part of the training course ?
- ✓ Watch section 20'00 to 23'00: what do we learn about the extremes of the climate in Antarctica in this particular section ?
- ✓ How difficult will navigation be in Antarctica, without landmarks ?
- ✓ How useful do you think a magnetic compass would be so close to the South Pole ? How do people find their way around in Antarctica ?

Olav Oftedal studies Weddell Seals

- ✓ Why are the scientists studying the seals ?
- ✓ The ice in central Antarctica is 9000 ft thick. Use the ‘RULER’ tool in Google Earth to discover how far that is compared to the location you are at the moment. Find some places which are 9000ft away from where you are sat right now. Is that a long way ? Does that help you visualise the thickness of the ice ?

Diver : Samuel Bowser

- ✓ The water beneath the ice is only two degrees below freezing: did that surprise you ?
- ✓ If the water has a temperature below freezing, why is it not frozen ?

The scientists watch disaster movies.

- ✓ What sort of movies do you think Antarctica would make a good location for ? Try to find out which other movies have been based in the continent (or in Polar regions in general)

Many of the scientists play musical instruments

Live Earth was a series of fund-raising concerts, held on the auspicious date of 07/07/07 to highlight the issue of climate change. The concert in London was held at Wembley Stadium.

http://liveearth.org/070707_liveearth/

One of the concerts took place in Antarctica ! It featured a band made up of scientists called Nunatak

- ✓ What is a nunatak ? (it is a feature found in Antarctica)

<http://bandweblogs.com/blog/2007/06/15/antarctica-live-earth-nunatak-the-band-of-scientists/>

“If you take everyone that’s not tied down, they all fall down to the bottom of the planet”

William Jirsa

- ✓ William Jirsa is a linguist, and talks about the death of languages. Find out about some other threatened languages, and research a language that has recently ‘died out’.

“It feels sad that the South Pole or Mt. Everest were not left in peace in their dignity...”

- ✓ What do you think of this statement. Do you agree or disagree ? Why ?
- ✓ Should people leave these extreme places of the earth untouched ?

David Ainley : Cape Royd’s penguins

There is an affecting scene with a penguin walking away from where he should be. The scientists are not allowed to interfere with the penguin, and have to let it walk to what will be certain death.

- ✓ Read the code which people who visit Antarctica have to abide by. Explain why at least 3 of the pieces of information are necessary to protect the environment from further damage:

http://www.antarctica.ac.uk/staff/antarctic_visitors/handbook/index.php

Mount Erebus: active volcano

- ✓ Why do scientists visit the bleak plateau to study Erebus rather than studying other volcanoes which are easier to reach ?
- ✓ William McIntosh talks about the safety aspects of working with volcanoes, particularly the fact that the lava lake could explode at any time. One piece of advice is to keep your eyes open, don’t turn your back on the crater – put together a safety code which has some further advice on dealing with other risks associated with volcanoes

Clive Oppenheimer : Vulcanologist from Cambridge University

- ✓ How do volcanoes affect the earth’s climate ?
- ✓ Which other significant eruptions have had a cooling effect on the climate ?
- ✓ What technical and other problems does the environment pose for the people who work near the volcano ?

Other Antarctica resources

The film's website: <http://encountersfilm.co.uk> has a range of resources including images, and the film's trailer.

Consider the impacts of tourism in the continent. There is plenty of debate over whether people should be allowed to visit the continent in such large numbers. Research the viewpoints on this on newspaper websites and some of the links below.

The impressive Discovering Antarctica website developed by the Royal Geographical Society has a range of complementary activities and resources: <http://www.discoveringantarctica.org.uk> which would be very helpful to develop some of the themes in the film, including the role of science, and the technology that is used to keep people working on the continent comfortable.

Google Earth file: Shackleton's journey has been recreated as an excellent KMZ file, which can be downloaded and used in conjunction with Google Earth to visit key locations during the classic voyage:

http://bbs.keyhole.com/ubb/ubbthreads.php?ubb=showthreaded&Number=151193&site_id=1#import

<http://www.coolantarctica.com/> has a range of resources, and includes an image of 'Ivan the Terror Bus'

Scott's Hut: there was a recent campaign to raise money to renovate the hut, which has been buffeted by the Antarctic weather for a century – is this money well spent? Why is it important that places like this are protected? <http://www.ukaht.org/index.htm>



The website of the British Antarctic Survey contains more information about working in, or visiting the frozen continent: <http://www.antarctica.ac.uk>

The Fuchs Foundation is involved in facilitating teacher visits to Antarctica. There is a range of resources: <http://www.fuchsfoundation.org/page/20/lesson-plans--work-sheet.htm>

An example of how a teacher might approach Antarctica as a case study. Visit Tony Cassidy's website to see how he used Antarctica as a context with his GCSE Pilot Geography groups:

<http://www.radicalgeography.co.uk/extremeenvironments.html>

<http://pilotgcseradicalgeography.co.uk/ee/antarctica/>

Recent visitors to Antarctica were the EBase 2041 team: view the videos that they created, as well as learn a lot more about their journey to the continent at <http://ebase.2041.com/2009/>

Check the short videos under the classifications that they have been labelled. Connect the film to your exam specification: Extreme Environment is one issue that crops up on many of the specifications.

A Different View



The GA's manifesto for Geography: 'a different view' was launched at the GA's conference on 17th of April 2009.

Visit the website <http://www.geography.org.uk/adifferentview> to see the resources that accompany the document, which is being sent to all schools in the UK.

There are images of Antarctica here, and lesson ideas for using images.

Werner Herzog certainly provides 'a different view' of Antarctica

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Contact me if you have used the film with your students and developed additional ideas

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**IN CINEMAS NATIONWIDE APRIL 24TH
FROM THE DIRECTOR OF GRIZZLY MAN & RESCUE DAWN
FOR MORE INFORMATION PLEASE VISIT
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