



Glaciers – Gone for Good?

What would happen if the world's glaciers melted?

How would you feel if you lived on Greenland and found you now had more arable land to farm?

Or you may find yourself living on the high plateau of Tibet, a place where glacial melt is your only source of fresh water. How would you feel if the glaciers high up in the mountains disappeared?

Two very different communities and two very different consequences from a single global event.

Motivate your class to learn independently and discover the social and economic impact of this extreme climatic event. Pupils can communicate their research in a creative way by producing a newspaper report imagining the consequences of glacier ice melt in the future. This will allow them to demonstrate their knowledge of science and how it can affect our every day lives, focusing specifically on the Greenlandic and Tibetan people.

This activity combines independent research on a topical scientific issue with literacy skills, making this a great cross-curricular activity for pupils.

At a glance you will need:

- Access to the internet or suitable books
- Dictaphone/webcam or video recorder (optional)

Workshop	Title	Pre/Post	Suggested CfE Stage
Glaciation – The Coolest Workshop in Scotland	Glaciers – Gone for Good?	Post	Third/Fourth

Learning Intention

We are learning about the consequences of climate change within a particular country.
 We are learning to use scientific language in an accurate way.
 We are learning to research a specific topic.



Task

We are going to research the consequences of glacier melt and apply our knowledge to determine how this will affect the people living in either Greenland or Tibet.

We will present our research by creating a newspaper article where we imagine a time in the future when the world's glaciers have melted.

Success Criteria

- Pupils will gain an appreciation of the skills involved in investigating and writing up an article in a journalistic style.
- Pupils will learn to apply different skills and activities to enhance learning.

Evidence ideas:

- Peer and self assessment can be introduced with an extension of this activity through recording pupils reading the news in true journalist style.
- This activity can be extended by introducing peer and self assessment. Why not try recording pupils, while they read out the news.
- This activity could be extended into drama with pupils role playing the part of roving reporters, 'interviewing' those affected by the loss of glaciers. This can be recorded using web-cams, video recorders or even Dictaphones, providing a great opportunity for self and peer review using the 'two stars and a wish' format.
- Selected articles could be displayed on a wall space.

CfE Capacities

Successful Learners:

- with enthusiasm and motivation for learning resulting from directing their own research
- challenged to make reasoned evaluations based on the strength of evidence available.
- able to use literacy and communication skills, technology for learning and creative thinking.

Confident Individuals:

- encouraged to develop their scientific knowledge and communicate their belief on debatable issues.

Responsible Citizens:

- developing pupil's awareness around the issues relating to the impact of science in society.
- able to evaluate environmental issues based on their knowledge, understanding and analysis of evidence.

Effective Contributors:

- able to apply critical thinking in new contexts and communicate in different ways.

CfE Outcomes

Science – Topical Science

Having selected scientific themes of topical interest, I can critically analyse the issues, and use relevant information to develop an informed argument. SCN 4-20b

Social Studies – People, place and environment

I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally-responsible way. SOC 2-08a

I can explain how the physical environment influences the ways in which people use land by comparing my local area with a contrasting area. SOC 2-13a



I can identify the possible consequences of an environmental issue and make informed suggestions about ways to manage the impact. SOC 3-08a

By comparing settlement and economic activity in two contrasting landscapes, I can reach conclusions about how landscapes influence human activity. I can explain my findings clearly to others. SOC 3-13a

I can develop my understanding of the interaction between humans and the environment by describing and assessing the impact of human activity on an area. SOC 4-10a

I can identify threats facing the main climate zones, including climate change, and analyse how these threats impact on the way of life. SOC 4-12a

Science – Planet Earth (Processes of the planet)

Can lead to:

I can explain some of the processes which contribute to climate change and discuss the possible impact of atmospheric change on the survival of living things. SCN 3-05b

Literacy and English – Writing (Enjoyment and choice)

I enjoy creating texts of my choice and I regularly select subject, purpose, format and resources to suit the needs of my audience. LIT 1-20a / LIT 2-20a

I enjoy creating texts of my choice and I am developing my own style. I can regularly select subject, purpose, format and resources to suit the needs of my audience. LIT 3-20a / LIT 4-20a

Literacy and English – Writing (Tools for writing)

As appropriate to my purpose and type of text, I can punctuate and structure different types of sentences with sufficient accuracy, and arrange these to make meaning clear, showing straightforward relationships between paragraphs. LIT 3-22a / LIT 4-22a

I can consider the impact that layout and presentation will have on my reader, selecting and using a variety of features appropriate to purpose and audience. LIT 3-24a

Literacy and English – Writing (Organising and using information)

I can use notes and other types of writing to generate and develop ideas, retain and recall information, explore problems, make decisions, generate and develop ideas or create original text. I recognise when it is appropriate to quote from sources and when I should put points into my own words. I can acknowledge my sources appropriately. LIT 3-25a

Literacy and English – Writing (Creating texts)

I am learning to use language and style in a way which engages and/or influences my reader. ENG 2-27a

I can engage and/or influence readers through my use of language, style and tone as appropriate to genre. ENG 3-27a / ENG 4-27a

I can convey information, describe events, explain processes or combine ideas in different ways. LIT 2-28a

I can convey information, describe events, explain processes or concepts, and combine ideas in different ways. LIT 3-28a

I can convey information and describe events, explain processes or concepts, providing substantiating evidence, and synthesise ideas or opinions in different ways. LIT 4-28a

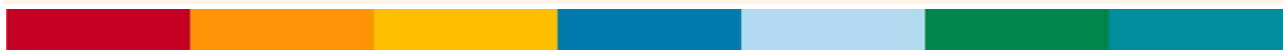
Description

Pupils will research the effects of glacial ice melt on a particular country; we have provided some great web-sites below to get you and your pupils started with the research.

Once pupils have completed their research they will be able to document the effects of future glacial melt creatively through writing a newspaper article.

Each newspaper article should give:

1. An introduction to climate change.
2. An overview of the science behind glacial ice melt.



3. The socio-economic impact on local people.
4. A reflection on any positives and/or negative impacts of environmental change.

Each newspaper article should have:

1. An appropriate layout and format including headlines, pictures and columns.
2. Diagrams and/or pictures.

As an extension to this activity you may want to split the class to reflect newspaper articles written in the style of broadsheet or tabloid.

This activity could be extended into drama with pupils role playing the part of roving reporters, 'interviewing' those affected by the loss of glaciers. This can be recorded using either web-cams, video recorders or even Dictaphones. This can provide a great opportunity for self and peer review with peer review using the 'two stars and a wish' format.

Web Resources

Greenland:

- <http://news.bbc.co.uk/1/hi/world/europe/3922579.stm>
- <http://www.msnbc.msn.com/id/11385475/>
- <http://news.nationalgeographic.com/news/2006/09/060920-greenland-ice.html>
- <http://www.digitaljournal.com/article/263787>
- <http://news.bbc.co.uk/1/hi/world/americas/6993612.stm>

Tibet:

- http://timesofindia.indiatimes.com/Earth/Asia_in_water_crisis/articleshow/3996496.cms
- <http://www.alertnet.org/thenews/newsdesk/N16295929.htm>
- <http://www.independent.co.uk/environment/climate-change/global-warming-tibets-lofty-glaciers-melt-away-424651.html>
- <http://www.sciencedaily.com/releases/2007/07/070720163907.htm>

Sweden:

- <http://www.news.com.au/dailytelegraph/story/0,22049,20727319-5006506,00.html>
- <http://www.nutek.se/content/1/c4/39/97/04Gossling.pdf>
- <http://www.sciencedaily.com/releases/2008/12/081204133853.htm>

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