



As Cold as Ice

Prior Knowledge: (Learning Outcomes previously covered that support the learning)

1.4 assess a soil type in a local area in relation to composition and vegetation

2.2 evaluate the environmental, economic, and social consequences of rock exploitation and energy sources

Learning Outcomes: (Across the strands)

1.5 explain how the processes of erosion, deposition and transportation shape our fluvial, marine, and glacial landscapes

2.6 examine the causes and implications of climate change

2.9 assess the interrelationships between the physical world, tourism, and transport

1.10 investigate a range of physical processes active in a chosen location and the connections between them

Action verbs:

- **Explain:** give a detailed account, including reasons or causes
- **Examine:** consider an argument or concept in a way that uncovers the assumptions and relationships of the issue
- **Assess:** judge, evaluate or estimate the nature, ability, or quality of something
- **Investigate:** observe, study, or make a detailed and systematic examination in order to establish facts and reach new conclusions

By the end of the unit students will know and be able to:

- Outline a brief history of glaciation in Ireland
- Define what a glacier / ice-sheet is and explain how glaciers are formed
- Describe the global distribution of ice and identify places where glaciers are found
- Explain the processes of glacial erosion, transportation, and deposition and explain how these processes shape the landscape (features of erosion & deposition)
- Identify features of glacial erosion and deposition on OS maps, aerial photographs and satellite images
- Identify the factors that attract tourists to glaciated landscapes
- Name and locate tourist attractions in a glaciated landscape using maps and photographs
- Assess the relationship between the glaciated landscape, tourism, and transport
- Explain how melting glaciers impact people living in Ireland or other countries and what the future implications of melting glaciers are?
- Consider links between climate change and melting ice caps/sheet/glaciers



Elements: How the student will experience the learning outcomes (learning experiences)

Patterns

- Location of global ice sheets and glaciers
- The route a glacier takes from upland to lowland
- Landforms of glacial erosion in upland areas
- Landforms of glacial deposition in lowland areas
- Areas affected by melting ice
- Glaciated landscape and transport
- Glaciated landscapes and tourism

Processes

- How ice sheets and glaciers are formed
- How ice moves
- Erosion (plucking, abrasion, freeze thaw action)
- Transportation and deposition of material
- Global warming and retreating ice sheets and glaciers

System

- How ice is formed
- How glacial processes shape the landscape
- Human activities and their interactions with the glacial landscape

Scale

- Local, national and global
- Ice sheets around the world today

Geographical Skills

- Identify where global ice sheets are on a world map and areas affected by climate change and melting ice
- Analyse maps, photographs, satellite imagery of glacial landscapes and identify landforms and patterns
- Draw and label diagrams of glacial landforms
- Draw and label a sketch map of Achill’s glaciated landscape, transport network and tourist attractions
- Gather data from a wide range of sources e.g. climate and weather data to show climate change or data on tourism in Achill.
- Organise and interpret data to establish facts and reach new conclusions e.g. tourism in Achill, climate change etc.
- Present geographical information clearly and concisely to show their understanding

Sustainability

Economic:

- Sustainability of tourism e.g. seasonal nature of tourism in Achill
- Tourism in glaciated areas e.g. skiing, Alps, glaciers in New Zealand etc.

Environment:

- Exploitation of the natural environment
- Impact of melting ice

Social:

- Supporting local communities e.g., Ski Resorts in the Alps & National Parks in Ireland (improved infrastructure, health, retail etc. as a result of tourism)

Geoliteracy: To help students become geoliterate they need to recognise and understand interconnections, interactions, and implications in the physical and human world

Interactions

- The interaction between glacial processes of erosion, transportation and deposition and the effect this has on the landscape

Interconnections

- Glacial landscapes and transport networks
- Glaciation and tourism
- Human behaviour, climate change and melting ice

Implications

Social:

- Outmigration due to unemployment (ski



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| <ul style="list-style-type: none"> • How people interact with a glaciated landscape • The glaciated landscape and tourism • Glaciation, climate change and people | <ul style="list-style-type: none"> • The effects that glaciated areas have on the location of settlements | <p>resorts/seasonality of tourism?)</p> <ul style="list-style-type: none"> • Loss of community services <p>Economic:</p> <ul style="list-style-type: none"> • Employment opportunities • Seasonal employment • Improved infrastructure because of tourism (glaciated landscape) <p>Environmental:</p> <ul style="list-style-type: none"> • Climate Change • Loss of habitats and biodiversity • Tourism and degradation of the physical landscape |
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| Checking in on learning: | |
| Ongoing Formative Assessment | Possible examples |
| Types of assessment | Evidence of learning |
| | Role of the student in assessment |
| <p>Department Resources:</p> <ul style="list-style-type: none"> • https://achilltourism.com/ • https://timeforgeography.co.uk/videos-list/glaciation/corries/ • https://timeforgeography.co.uk/videos-list/glaciation/Aretes/ • https://timeforgeography.co.uk/videos-list/glaciation/Pyramid-peaks/ • https://timeforgeography.co.uk/videos-list/glaciation/formation-of-U-shaped-valleys/ • https://timeforgeography.co.uk/videos-list/glaciation/formation-drumlins/ | Individual notes: |



- <https://timeforgeography.co.uk/videos-list/glaciation/glacial-deposits-types-moraine/>
- <https://timeforgeography.co.uk/videos-list/glaciation/antarctica-ice-melt-global-sea-level/>

Links to other programmes e.g. L1LP/L2LP/JCSP

- <https://www.jct.ie/geography/resources>
- http://www.jcsp.ie/resource_category/view/1308
- [Statements - JCSP](#)

Reflection: (Reflection occurs during and after a unit of learning, both as an individual teacher and with your Geography Department. This will support future planning.)

What worked well?

What can be improved?

How can it be improved?