Your notes

GCSE Geography: revision notes

Glacial landscapes

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Ice in the past

- During the last glacial period, ice sheets covered much of the UK, especially Scotland, northern England and Wales. The ice melted about 12,000 years ago, leaving glacial landforms behind.

Processes

- Freeze–thaw weathering: water in cracks freezes and expands, breaking pieces off the rock.
- Erosion: **plucking** (ice freezes onto rock and pulls pieces away as it moves) and abrasion (rocks frozen into the base of the glacier scrape the bedrock like sandpaper).
- Movement: rotational slip (ice moves in a curved motion in a hollow) and bulldozing (the ice pushes debris in front of it).
- Transportation and deposition: glaciers carry rock debris, called **moraine**, and drop it when the ice melts. Till is unsorted material dropped by the ice; outwash is sand and gravel sorted and dropped by meltwater.

Landforms

- Erosion: **corries** (armchair-shaped hollows, often holding a lake called a tarn), **arêtes** (knife-edged ridges between two **corries**), pyramidal peaks (three or more corries back to back), glacial troughs (U-shaped valleys), truncated spurs, hanging valleys (often with waterfalls) and ribbon lakes (long, narrow lakes in troughs).
- Transportation and deposition: **erratics** (boulders carried far from where they came from), **drumlins** (egg-shaped hills of till), and **moraines**: lateral (along the sides of the glacier), medial (in the middle, where two glaciers meet), terminal (at the snout) and ground moraine (spread across the valley floor).

Case study: the Lake District

- Helvellyn: Red Tarn lies in a **corrie**, with the **arêtes** Striding Edge and Swirral Edge on either side. Ullswater and Windermere are **ribbon lakes** in glacial troughs.
- Land use: sheep farming on the fells, forestry, slate quarrying, tourism and conservation. The Lake District is a national park and a World Heritage Site.
- Tourism brings money and jobs, but also footpath erosion, traffic congestion, and high house prices caused by second homes.
- Management: the Fix the Fells project repairs eroded paths; car parks, park-and-ride and bus services reduce traffic; the national park controls where new development can go.

Key terms

Corrie	An armchair-shaped hollow on a mountainside, carved by ice.
Arête	A knife-edged ridge between two corries.
Pyramidal peak	A pointed peak formed where three or more corries meet.
Glacial trough	A steep-sided, flat-bottomed U-shaped valley carved by a glacier.
Hanging valley	A tributary valley left high above a glacial trough.
Ribbon lake	A long, narrow lake in a glacial trough.
Plucking	Ice freezing onto rock and pulling pieces away.
Moraine	Rock debris carried and deposited by a glacier.
Drumlin	An egg-shaped hill of till.
Erratic	A boulder carried by ice far from where it came from.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is plucking?
2. What is a corrie?
3. What is an arête?
4. What shape is a glacial trough?
5. What is a hanging valley?
6. What is an erratic?
7. What is a drumlin?
8. Which moraine forms at the snout of a glacier?

Answers

1. Ice freezing onto rock and pulling pieces away

Your notes

2. An armchair-shaped hollow on a mountainside
3. A knife-edged ridge between two corries
4. A U shape
5. A tributary valley left high above the main glacial trough
6. A boulder carried by ice far from where it came from
7. An egg-shaped hill of till
8. Terminal moraine

What to do next

Practise 12 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

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