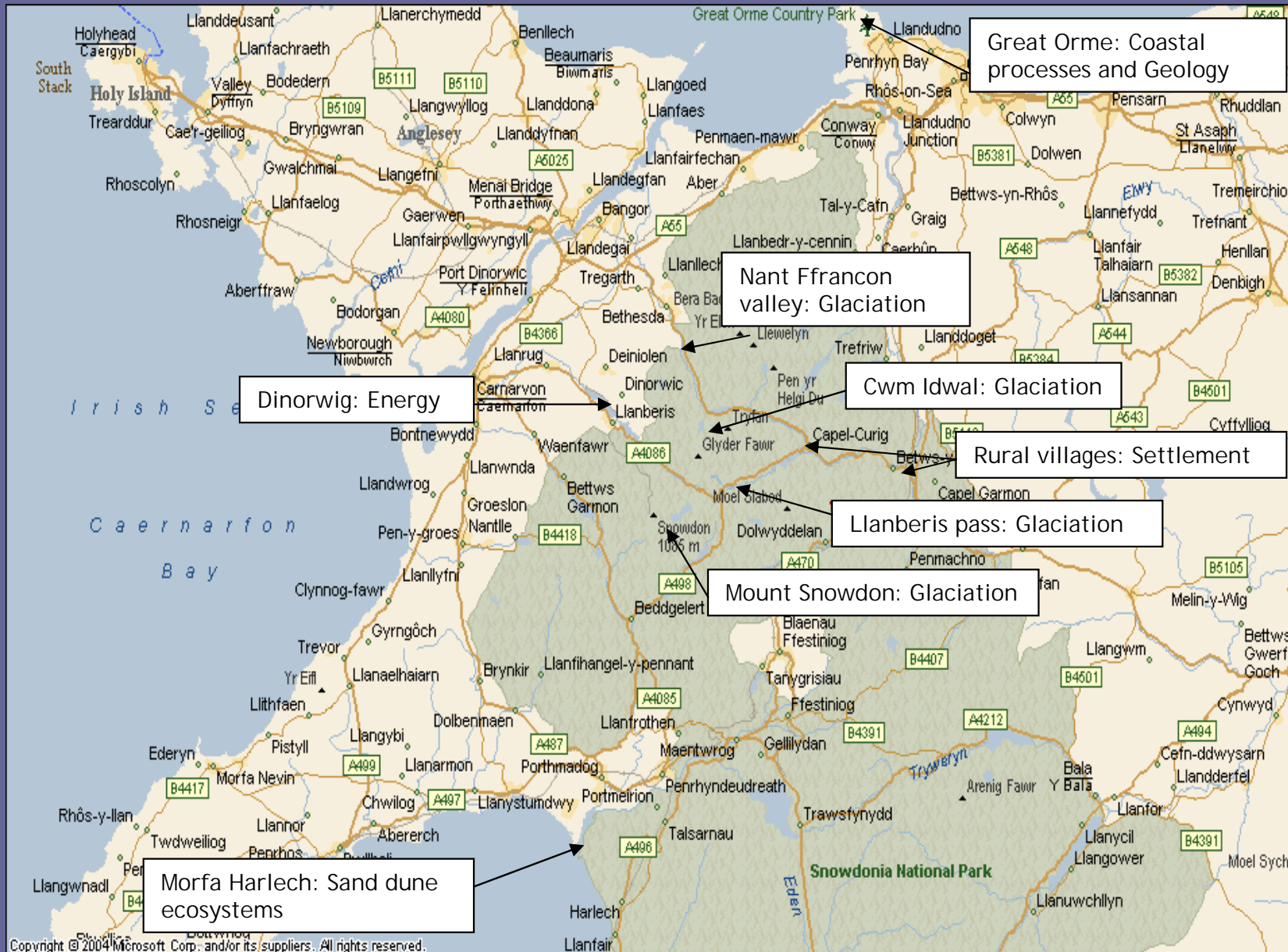


STUDY LOCATIONS



SNOWDONIA STUDY VISIT



PRE-VISIT PREPARATION

SUMMARY OF STUDY THEMES

LOCATION	STUDY THEMES
<ul style="list-style-type: none">• Cwm Idwal	<ul style="list-style-type: none">• Glacial processes• Erosional and depositional landforms; Corrie, Corrie lake, Recessional moraine, Scree• Glacial material; Till fabric analysis
<ul style="list-style-type: none">• Nant Ffrancon valley	<ul style="list-style-type: none">• Glacial processes• Glacial landforms; Corries, Rock steps, Glacial trough, Hanging valley, Waterfalls, Roche moutonee, Terminal moraine, Scree•
<ul style="list-style-type: none">• Llanberis Pass	<ul style="list-style-type: none">• Glacial processes• Glacial landforms; Trough, Rock basin, Trough lakes, Roche moutonee, Rockfall
<ul style="list-style-type: none">• Snowdon	<ul style="list-style-type: none">• Panorama of glacial landscape• Glacial landforms; Pyramidal peak, Arêtes, Corries, Corrie lakes, Glacial troughs, Outwash plains
<ul style="list-style-type: none">• Dinorwig	<ul style="list-style-type: none">• Hydro-electric power generation• Links to Industry and Opportunities in Glacial areas
<ul style="list-style-type: none">• The Great Orme	<ul style="list-style-type: none">• Geology - limestone• Coasts - Tombolo case study
<ul style="list-style-type: none">• Morfa Harlech	<ul style="list-style-type: none">• Biogeography - Psammosere (sand dune ecosystems)
<ul style="list-style-type: none">• Selected villages in Snowdonia or on Anglesey	<ul style="list-style-type: none">• Rural Service provision (Settlement)

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PRE-VISIT PREPARATION

SITE SPECIFIC EQUIPMENT LIST

LOCATION	EQUIPMENT REQUIRED (Based on group size of 10)	TARGET LEVEL
<ul style="list-style-type: none"> Cwm Idwal 	<ul style="list-style-type: none"> Pencil Clipboards, activity sheets (10) Compass (3) 30cm ruler (3) 	AS/A2 GCSE (excluding till fabric analysis)
<ul style="list-style-type: none"> Nant Ffrancon valley 	<ul style="list-style-type: none"> Pencil Clipboards, activity sheets (10) Ranging poles (2) Clinometer (1) Measuring tape (1) Compass (1) 	GCSE/AS/A2
<ul style="list-style-type: none"> Snowdonia region 	<ul style="list-style-type: none"> Pencil Activity sheets (10) OS map Sheet 115: Caernarfon and Bangor(5) 	AS/A2
<ul style="list-style-type: none"> Snowdon 	<ul style="list-style-type: none"> Pencil Thermometers (2) Compass (1) Data record sheet (10) 	GCSE/AS/A2
<ul style="list-style-type: none"> Dinorwig 	<ul style="list-style-type: none"> Pencil Activity sheets (10) 	GCSE/AS/A2
<ul style="list-style-type: none"> The Great Orme 	<ul style="list-style-type: none"> Pencil Activity sheets (10) 	GCSE/AS/A2
<ul style="list-style-type: none"> Morfa Harlech 	<ul style="list-style-type: none"> String (100m) and pegs (4) Ranging poles (4) Measuring tapes (2) Clinometers (2) Quadrats (2) Whirling hygrometer (1) Anemometer (1) Soil pH meter (1) Activity/Data collection sheets (10) Pencil 	GCSE/AS/A2
<ul style="list-style-type: none"> Selected villages in Snowdonia or on Anglesey 	<ul style="list-style-type: none"> Activity sheet Pencil Point compass (drawing) Ruler Map of region (1 per person) 	AS/A2

PRE-VISIT PREPARATION

FIELDWORK EQUIPMENT LIST

The equipment required will vary depending on group size and selected activities. Much of the fieldwork is based on observation rather than quantitative measurement. Below is a list of the equipment that would be required if students were to carry out all the suggested fieldwork activities

- 🌐 Laptop and digital projector
- 🌐 OS maps of Caernarfon and Bangor
- 🌐 Ranging poles
- 🌐 Clinometers
- 🌐 Measuring tapes - 30m
- 🌐 30cm rulers
- 🌐 Protractors
- 🌐 Metre rulers
- 🌐 Compasses
- 🌐 Thermometers
- 🌐 Soil thermometer
- 🌐 Hand trowel
- 🌐 Soil pH meter or barium sulphate test kit
- 🌐 Graduated oil sieves
- 🌐 Clipboards
- 🌐 Plain and Graph paper
- 🌐 Pen, pencil, eraser
- 🌐 Activity and data record sheets
- 🌐 Appropriate clothing (refer to student kit list)
- 🌐 Two-way radios (mobile phones do not receive a signal at some sites)

NB the number of items should be reviewed according to group size.

Recommended supplier of fieldwork equipment:

Geopacks; The Geography Specialists
Unit 4A
Hatherleigh Industrial Estate
Hilsworthy Road
Hatherleigh
Devon
EX20 3LP

Tel: 08705 133 168

Fax: 08701 200 006

Email: service@geopacks.com

INFORMATION SHEET

CWM IDWAL

Characteristics

Cwm Idwal demonstrates the classic characteristics of a corrie (cirque). The back of the corrie is the axis of a syncline (downfold) where past ice flowed down into Cwm Idwal from the surrounding Glyder plateau.

The corrie extends to a depth of 450m below the surrounding plateau. It lies at 370m above sea level making it one of the lowest corries in the area. It is also one of the largest with an enclosed area of 1.9km². The corrie floor extends almost 1km and is occupied by Llyn Idwal, a relatively shallow lake which is 13m at its deepest point and which is dammed by moraine to the north.

Formation

Evidence suggests that ice spilled over from the valley behind Cwm Idwal's backwall, The Llanberis Pass. Ice that crosses between valleys is called diffluent ice. The erosional action of this ice is evident in the breach zone where severe abrasion has occurred and where till has been found to contain erratics from East Snowdonia. This diffluent ice helps to account for the fact that Cwm Idwal is lower and larger than the adjacent Glyderau corries. It was eroded by glacial ice at least 18,000 years BP in the late Devensian period whereas the surrounding landscape was carved more recently.

Geology

The 'Idwal slabs' from which the corrie has been excavated date back 400-600 million years. Sedimentary 'Grey Wacky' and igneous 'Rhyolite' are the dominant rock types. A 'Tuff' formed from compacted volcanic ash is also present alongside Slate. The rocks dip steeply around a syncline. Twill du - the devil's kitchen - sees a gap in the backwall where glacial activity exploited a geological weakness. A debris fan has subsequently developed

The Idwal moraines

The most recent ice activity in Cwm Idwal occurred in the Loch Lomond re-advance between 11,000-10,000 BP. As the ice retreated, moraine was deposited within the corrie. Eight distinct moraines have been identified and are referred to as M1-M8. They are typical of ice deposits with very little sorting of sediment by size.



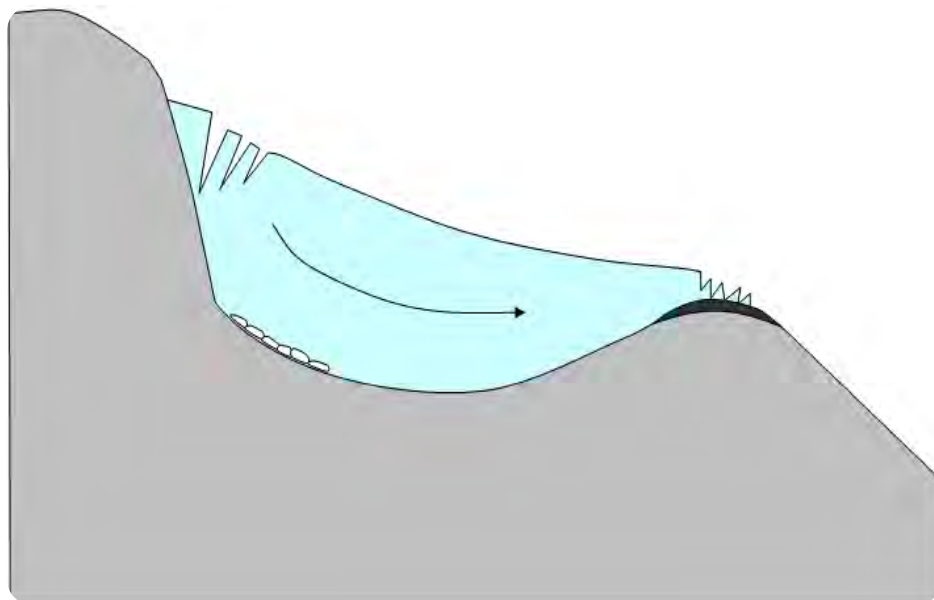
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ACTIVITY SHEET

CWM IDWAL (1)

🌐 Annotate the diagram below to explain the formation of a corrie
TIP: Examiners like case study material. Try to add detail that is specific to this particular corrie e.g. dimensions, directions, timeframes.



Extended writing task:

With reference to a specific landform (a corrie), explain the role that glacial erosion has played in its creation.