

# AQA Geography A-level

## Glacial Systems and Landscapes

### Definition Flashcards

# Ablation

# Ablation

The loss of mass from the glacier, e.g. meltwater, avalanches, sublimation, evaporation.

# Abrasion

# Abrasion

Small rocks within the base of the glacier rub against the bedrock.

# Accumulation

# Accumulation

The addition of mass to the glacier,  
usually as snow.

# Active Layer

## Active Layer

The top layer of soil, above permafrost, which thaws annually in summer.

# Alpine Regions

# Alpine Regions

Areas of low temperature in high altitude, mountainous regions.

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# Arêtes

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# Arêtes

A ridge formed between two corries.

# Basal Ice Melting

## Basal Ice Melting

The weight of a temperate glacier causes meltwater, which will then erode the bedrock through fluvial erosion.

# Basal Sliding

# Basal Sliding

Glaciers sliding over bedrock, due to meltwater between the two surfaces.

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# Blockfields

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# Blockfields

Rock-strewn landscape caused by  
extensive frost action.

# Cold-Based Glacier

## Cold-Based Glacier

(Also called Polar Glaciers) The glacier's temperature remains below zero degrees, so the base of the glacier remains frozen and moves very little.

# Compressional Flow

## Compressional Flow

Ice builds up and thickens due to friction as a glacier travels upwards along a shallow gradient.

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# Corries

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## Corries

A round hollow in the side of a hill, widened from an initial smaller hollow by a glacier within the hollow.

# Crushing

# Crushing

The weight of the glacier causes fracturing in the bedrock.

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# Drumlins

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## Drumlins

When a glacier hits an obstacle that cannot be eroded, deposition from underneath the glacier builds up behind the obstacle.

# Environmental Fragility

# Environmental Fragility

An environment is vulnerable or at risk, with low resilience or ability to adapt to changes.

# Erratics

## Erratics

Boulders transported and deposited by a glacier. The type of rock that forms the erratic will usually differ from the rock types in the surrounding landscape.

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# Esker

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# Esker

A long, winding ridge of glacial deposition.

# Extensional Flow

## Extensional Flow

Ice thins out, creating crevasses, due to an increase in the glacier's velocity down a shallow gradient.

# Fluvial Erosion

## Fluvial Erosion

Water within the glacier erodes the base of the glacier over time through:  
hydraulic action, attrition, corrosion.

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# Frost Heave

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## Frost Heave

The freezing and expansion of water beneath the ground, resulting in floor uplift.

# Glacial Budget

# Glacial Budget

The difference between accumulation and ablation for a glacier.

# Glacial Period

# Glacial Period

A period of time of colder average global temperatures causing the growth of ice cover, glacial advances and sea levels to fall.

# Glacial Trough

## Glacial Trough

A U-shaped valley formed from a v-shaped river valley that becomes filled and eroded over time by a glacier.

# Hanging Valleys

## Hanging Valleys

A valley with a wall at one end, due to the glacier that filled the valley previously being low energy.

# Holocene Epoch

# Holocene Epoch

Our current glacial period of limited ice cover, lasting over 10,000 years.

# Ice Wedge

## Ice Wedge

Water infiltrates small cracks in the permafrost and expands on freezing repeatedly.

# Interglacial Period

## Interglacial Period

A period of time of warmer average global temperatures, resulting in reduced ice cover, glacial retreat and sea levels to rise.

# Internal Deformation

# Internal Deformation

Glacial movement caused by the weight of the glacier above deforming the ice.

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# Kames

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# Kames

Piles of material, sorted due to the differing weight of sediment, left on the valley floor after a glacier melts.

# Milankovitch Cycles

# Milankovitch Cycles

Changes to the tilt and shape of the orbit will affect the average temperature of the Earth.

# Meltwater Channels

# Meltwater Channels

Streams of meltwater (melted glacier)  
formed by higher temperatures.

# Moraines

# Moraines

Deposits of eroded material that has been transported by a glacier. Moraines may be lateral, medial, ground, recessional or terminal.

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# Nivation

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# Nivation

Erosional processes involving snow and ice.

# Orbital Eccentricity

# Orbital Eccentricity

How far a planet's orbit is from being a perfect circle.

# Outwash Plain

## Outwash Plain

Material is washed out and deposited due to large volumes of meltwater as a glacier recedes.

# Patterned Ground

## Patterned Ground

Patterned ground is formed through the frost heave of stones in and underneath the active layer.

# Periglacial

# Periglacial

Landscapes found at the edge of glacier, polar and alpine regions. Permafrost occurs, with low precipitation and only highly adapted plant species survive.

# Permafrost

# Permafrost

Permanently frozen soils throughout the year.

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# Pingos

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# Pingos

A mound produced as ground is forced upwards through frost heave.

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# Plucking

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## Plucking

Rocks on the bedrock are frozen within the glacier. As the glacier moves, the rocks are pulled from the bedrock and moved.

# Polar Regions

# Polar Regions

Areas of maximum ice sheets and limited vegetation, often located at high latitudes on Earth.

# Roches Moutonnées

# Roches Moutonnées

Rock shaped by a glacier flowing over it  
and eroding it.

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# Solifluction

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# Solifluction

The movement of waterlogged soil,  
trapped between the active layer and  
permafrost.

# Solifluction Lobes

## Solifluction Lobes

As the active layer thaws, soil falls down the hillside in tongue-shaped lobes.

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# Terracettes

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## Terracettes

Ridges running parallel across a hillside, believed to be created by vegetation trapping sediment falling loose down the hillside, created through frost heave.

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# Thermokarst

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# Thermokarst

Marshy, boggy wetlands caused when permafrost melts.

# Till Plains

## Till Plains

An ice sheet detaches from the main glacier and melts, releasing all loose till and sediment across the bedrock.

# Warm-Based Glacier

## Warm-Based Glacier

(Also called Temperate Glaciers) Faster travelling glaciers due to basal meltwater trapped underneath the glacier, acting as lubrication to allow the glacier to move.