Edexcel Geography A-level

Glaciated Landscapes & Change

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.

Arêtes

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.

Blockfields

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.

Corries

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.

Drumlins

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.

Esker

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.

Frost Heave

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.

Kames

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.

Nivation

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.

Pingos

Pingos

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

Plucking

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.

Solifluction

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.

Terracettes

Terracettes

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

Thermokarst

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.