

7.1 - Rocks, soils, weathering and glaciation

Geology is the study of rocks. Rocks are created in a number of ways, under the ocean by dead and decaying sea life, within the crust through the crystallisation of magma. Rocks are broken down by a range of weathering processes, and can form into soils, as part of the rock cycle. Glaciers are created as snow is compacted and the ice carves out rock, forming all kinds of glacial features e.g. corries and hanging valleys.

Keywords

Physical Geography, Ice age, glacier, ice sheet, tundra, moraine, plucking, corrie/cwm, freeze-thaw, erosion, biological, physical, chemical, soils, humus, topsoil, subsoil, bedrock, igneous, sedimentary, metamorphic, magma, compaction

Soils - There are 3 types of soil, clay soil, sandy soil and loam soil. Soil is a mixture of tiny particles of **rock, dead plants and animals, air and water**. Different soils have different properties depending on their composition.

Glaciation -

Ice ages are extremely cold periods, in which glaciers and ice sheets covered the majority of the land in the northern and southern hemispheres.

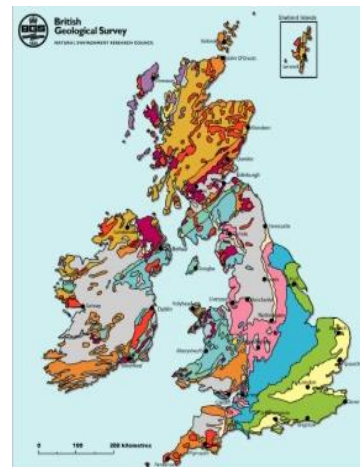
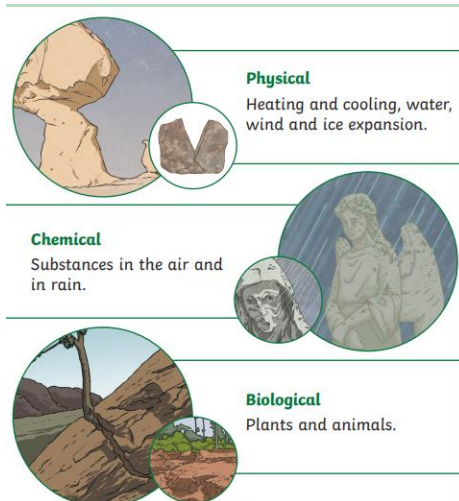


U-shaped alleys created by the erosional action of a moving glacier.














- Around 110,000 years ago Earth got colder and a new Ice Age began.
- An ice sheet spread over much of northern Europe and most of the British Isles.
- In areas the ice sheet didn't cover the ground was still frozen and only melted in the summer.
- The Ice Age ended around 10,000 years ago.

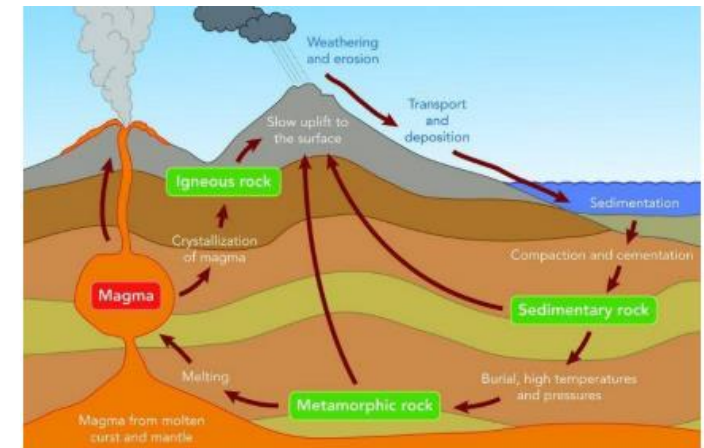
Weathering - The action of freezing water, the wind, the dissolved chemicals in rainwater and plants and animals all contribute to breaking down rocks that are exposed as a result of erosion.



Types of Rock - Rocks are created by physical changes, including melting, cooling, compacting, eroding, deforming.

Igneous	Sedimentary	Metamorphic
Obsidian 	Chalk 	Marble 
Granite 	Limestone 	Gneiss 
Pumice 	Sandstone 	Quartzite 
Basalt 	Shale 	Slate 

The Rock Cycle



The Rock Cycle explains how and where rocks are made.

- Igneous rocks can become sedimentary rocks when they break down into small fragments that become sediment.
- Igneous and sedimentary rock can become metamorphic rock if they are heated and put under great pressure.