

Earth Science

in the NI Primary Curriculum

Earth Science lessons

GLOSSARY

Where a word is underlined it means it is defined elsewhere within the glossary.

Acid rain	Acid rain is rain or any other form of precipitation from the atmosphere containing higher than normal amounts of nitric and sulphuric acids. It is harmful to most forms of life.
Active (volcano)	Despite some ambiguity an active <u>volcano</u> is considered to be one which has erupted in the last 10 000 years.
Armour blocks	Armour blocks are interlocking blocks of reinforced concrete designed to protect shores, harbour walls, <u>seawalls</u> , <u>breakwaters</u> and other coastal structures from the direct impact of incoming waves.
Ash	Volcanic ash consists of small dust-like fragments of broken rock less than 2 mm in diameter. It is normally associated with violent volcanic eruptions.
Basalt	A dark-coloured volcanic rock which is fine grained because of cooling quickly on the surface.
Beach feed	The process of dumping or pumping sand from elsewhere onto an eroding shoreline to create a new beach or to widen the existing beach.
Biomass	Biomass is a collective term for all plant and animal material. It can be converted into energy by direct combustion or through conversion into bio fuel.
Breakwater walls	A breakwater structure, usually of concrete or large boulders, designed to absorb the energy of the waves to protect the shore from <u>erosion</u> .
Chalk	A limestone <u>sedimentary</u> rock which is usually very white and consists of calcium carbonate or CaCO ₃ . It is now usually referred to as white limestone.
Coal	A carbon-rich sedimentary rock which consists of altered and/or decomposed plant remains.
Coarse grained	Description of a rock which consists of grains or crystals which are larger than sand.
Coastal erosion	The wearing away of the coasts by wave and current action: wind can also be involved in the movement of sand.
Concrete	A mixture of sand and small stones which are bound together by using cement – calcium carbonate and other chemicals – which after wetting sets into a hard binding material.
Core	The innermost part of the Earth and consisting of a solid central region and surrounded by a liquid zone. The predominant elements are iron and nickel.
Crater	A circular depression usually found at the top of a volcanic vent from which erupts magma and gases.

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Crust	The outermost relatively thin layer of the earth: it only accounts for 0.1% the Earth's total volume. Its thickness averages 7 km in the ocean floors and 35 km in the continental areas.
Crystalline	A rock texture with characteristics of crystals such as clearness or transparency but normally without individual crystals being seen.
Deposition	Deposition is the process where carried eroded material is dropped by the carrying agent – wind, rivers, ice etc.
Dormant (volcano)	A dormant <u>volcano</u> is one that has not erupted in the past 10 000 years but which is expected to erupt again.
Earthquake	A series of shock waves due to the sudden movement and breaking of rocks within the crust of the Earth.
Erosion	The wearing away of any part of the Earth's surface by natural agencies – water, ice, wind etc.
Eruption	The actual physical process of <u>magma</u> being brought to and dispersed on the surface of the Earth.
Exfoliation	The separation, by weathering, of successive thin onion-like shells from the bare surfaces of rocks like <u>basalt</u> .
Extinct (volcano)	An extinct volcano is one that is not expected to ever erupt again.
Extrusive Extrusions	An igneous rock, like basalt, which flows out on the surface of the Earth.
Fault	A fracture in a body of rocks and where there is relative movement and displacement on either side of it.
Fine grained	Description of a rock which consist mainly of very fine grains of sand, mud or very small crystals.
Fossils	The remains of former living creatures or plants which have been buried and preserved by natural processes.
Fossil fuel	Fuels such as gas, coal and oil that were formed underground from plant and animal remains deposited millions of years ago.
Fracking	Fracking, or hydraulic fracturing, is the process of using pressurised liquids to release and extract natural gas from shale rock layers deep within the earth.
Gabions Italian: gabbione meaning big cage	A gabion is a cage, cylinder, or box filled with rocks, concrete or other materials and used to resist erosion or prevent earth and soil from moving down slopes.
Glacier	A body of ice, usually in a valley, and where the ice moves downwards because of gravity.

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Glass (volcanic)	Natural glass produced by the cooling of molten lava too quickly to permit the formation of crystals.
Grains	Mineral or rock particles less than a few millimetres in diameter.
Granite	A light coloured, speckled <u>igneous</u> rock in which the individual minerals may be easily seen. It cools very slowly from <u>magma</u> which does not reach the surface of the Earth thereby giving the crystals time to grow.
Graphite	A naturally occurring crystalline form of carbon which is steel-grey or black. It is used in pencils and also as a lubricant.
Groynes	A groyne is a low wall or sturdy timber barrier that is built out into the sea from a beach and is used to prevent local currents moving sand along a beach.
Igneous Latin: ignis meaning fire	A group of rocks which have solidified from molten rock or <u>magma</u> . The cooling may take place on the surface or at depth.
Impermeable	The characteristic of a rock or soil which does not allow fluids like water to move through it.
Intrusive (rocks)	The group of <u>igneous</u> rocks which cool at depth within the Earth's crust thereby allowing them to cool slowly and give time for the growth of distinctive mineral crystals.
Lignite	Often referred to as brown coal, it is a soft brown <u>sedimentary</u> rock consisting of naturally compressed plant remains (peat). It is regarded as the lowest rank of coal due to its low heat content.
Limestone	A <u>sedimentary</u> rock composed primarily of calcium carbonate. In colour it can be anything from white to black depending on the proportion and colour of other incorporated sediment.
Magma	High temperature molten rock generated deep within the Earth's <u>crust</u> or upper <u>mantle</u> and a source of both <u>extrusive</u> and <u>intrusive</u> rocks.
Mantle	The zone of the Earth which lies below the <u>crust</u> and extends down to the <u>core</u> ; it is essentially solid in nature.
Marble	A fine to coarse grained <u>metamorphic</u> rock of many different colours which occurs when a <u>limestone</u> is subjected to intense heat and/or pressure at depths within the crust.
Meanders (rivers)	Curves, bends or loops which develop in rivers when they flow relatively slowly across flood plains due to reductions in the gradient.
Mercalli Scale	A scale of <u>earthquake</u> intensity (from 1–12) based on the noticeable effects of an earthquake. It has no mathematical basis and was developed before accurate measurement was made possible by the use of highly accurate instruments.

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Metamorphic (rocks) Greek: meta meaning change morphé meaning form	Any rock type can be altered and recrystallised when subjected to great pressure and/or heat at depth within the Earth's crust For example, <u>limestone</u> can become <u>marble</u> and <u>shale</u> can become <u>slate</u> .
Mineral	A mineral is an element or inorganic chemical compound that is normally crystalline and that has been formed as a result of geological processes. Examples from granite are quartz, mica and feldspar.
Non-renewable	An energy source, such as oil or natural gas, or a natural resource, such as a metallic ore, that is not replaceable after it has been used.
Permeable	The characteristic of a rock or soil which does allow fluids like water to move through it.
Plastic	A plastic material is one which is capable of being shaped and moulded.
Plate (tectonics)	A segment of the Earth's crust, continental or oceanic, which is essentially rigid but capable of moving over the underlying mantle. There are some 9 major plates and many smaller ones.
Plate boundary	A plate boundary is where two plates either meet (collide), separate or move horizontally past each other.
Plate tectonics	Plate tectonics is the study of plates, plate movements and the association of <u>volcanoes</u> , <u>earthquakes</u> and mountains with plate boundaries.
Porous	A rock or other substance which has numerous pores or spaces through which liquids or air can pass.
Recycled rocks	Rocks which have been formed from the breaking down of existing rocks: many sedimentary rocks are examples of such recycling.
Renewable (energy)	Energy which comes from resources like sunlight, wind, rain, tides, waves and geothermal heat; these sources are continually replenished on a human timescale.
Revetments	Sloping wood, stone, or concrete structures placed on banks or cliffs in such a way as to absorb the energy of moving water.
Richter Scale	A mathematically designed scale based on accurate scientific measurement to indicate the strength and force of an <u>earthquake</u> . It has a scale of values up to 9 and the highest recorded value has been 8.8. It is so designed that a value of 5 means an earthquake has a shaking amplitude 10 times larger than one that measures 4.0.
Rock	A rock is a naturally occurring solid making up the Earth's crust and comprised of minerals or organic material.

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Sandstone	A <u>sedimentary</u> rock consisting of mainly sand grains which have been broken down from a variety of other rocks. Some are soft and some are hard depending on the amount of compression which it has undergone. It can have virtually any colour – red, white, brown, yellow.
Sea stack	Pillar-like remnants resulting from the erosion of caves and arches on the coast. They are often a short distance offshore.
Seawall	A wall of concrete or stones built along a coast and designed to prevent further erosion.
Sedimentary	A rock which has been formed from <u>sediments</u> and which has usually been compacted and made harder by pressure.
Sediments	Inorganic or organic material which has settled from being suspended in water, wind or ice.
Seismometer Greek: seismos meaning earthquake or movement	An instrument which measure motions of the ground, including those of seismic waves generated by earthquakes and volcanic eruptions.
Seismology	The study of movements within the earth's <u>crust</u> and arising from earthquakes and volcanic activity.
Shale	A fine grained <u>sedimentary</u> rock formed by the compaction of clay or silt, which is slightly coarser than clay.
Slate	A metamorphic rock which results from the altering of <u>shale</u> by heat and/or pressure.
Soil	The layer of organic and inorganic material which accumulates on the Earth's surface as a result of <u>weathering</u> .
Storm surge	A storm surge is an unexpectedly high offshore rise of water level associated with low atmospheric pressure weather systems like tropical cyclones. When this occurs devastating waves of sea water come on shore causing natural catastrophes.
Strata	Layers commonly found within a sedimentary rock and they may differ in terms of colour, composition or thickness.
Transportation	The carrying of eroded material by rivers, oceans, wind and ice.
Volcano	A vent or opening in the Earth's surface through which <u>magma</u> and gases erupt.
Weathering	Weathering is the breakdown of rocks at the Earth's surface, by the action of rainwater, extremes of temperature and biological activity (plants and animals). It does not involve the removal of rock material.