
Glossary

'aa' flow	Rapid flowing lava which when cool exhibits a rough, clinkery surface.
Anlacime	A white, pink or grey aluminosilicate mineral containing sodium associated with basic igneous rocks.
Alluvial	Environments, actions and products of rivers or streams.
Amygdale	Vesicles and cavities in lavas which are infilled with minerals.
Anticline	A structural term describing an arch-shaped fold in rock in which the rock layers are upwardly convex. The oldest rock layers form the core of the fold, and outward from the core progressively younger rocks occur.
Augite	A silicate mineral, the most common pyroxene, dark green to black in colour.
Basalt	A fine-grained, dark-coloured igneous rock composed of iron and magnesium rich minerals.
Basanite	A fine-grained extrusive igneous (volcanic) rock of basic to ultra-basic composition (relatively low in silica and alkali content; see Appendix 3)
Bedding	A feature of sedimentary rocks, in which planar or near-planar surfaces known as bedding planes indicate successive depositional surfaces formed as the sediments were laid down.
Bedrock	A term used to describe unweathered rock below soil or superficial deposits. Can also be exposed at the surface.
Biotite	A common aluminosilicate mineral commonly forming brown crystals with a characteristic platy cleavage.
Bioturbation	The disruption of depositional sedimentary structures by organisms e.g. activities such as burrowing.
Bivalve	Class of molluscs with paired oval or elongated shell valves joined by a hinge (e.g. mussels).
Brachiopods	A phylum of solitary marine shelled invertebrates, the shell is made up of two unequal valves.

Breccia	<p>A coarse-grained clastic rock, composed of angular rock fragments. Breccias are formed in sedimentary and volcanic environments, and via tectonic processes.</p>
Calcite	<p>Calcium Carbonate [CaCO₃] a widely distributed mineral and a common constituent of sedimentary rocks, limestone in particular. Also occurs as stalactites and stalagmites and is often the primary constituent of marine shells.</p>
Calcareous	<p>Containing calcium carbonate.</p>
Carboniferous	<p>A geological period [359–299 Ma] of the Palaeozoic Era preceded by the Devonian and followed by the Permian.</p>
Cementstone	<p>A name used to describe a limestone, usually containing clays, that is, or was, used to make cement.</p>
Clast	<p>Particle of broken down rock, eroded and deposited in a new setting.</p>
Clinopyroxene	<p>Common aluminosilicate mineral usually forming black or green crystals.</p>
Columnar jointing	<p>A type of jointing which looks like columns. Found in igneous rocks and results from the internal contraction during cooling of lava, as seen in the vertical columns of the Giant's Causeway, N. Ireland.</p>
Conglomerate	<p>A coarse-grained clastic sedimentary rock, a significant proportion of which is composed of rounded or subrounded pebbles and boulders.</p>
Country rock	<p>A general term used to describe any rock which has been penetrated by an igneous intrusion.</p>
Crinoid	<p>A sea dwelling creature (class Crinodea) which has survived since Ordovician times. They are known as sea-lilies and have three sections, the stem, the calyx and feather-like arms by which they collect food. Their abundance in the Palaeozoic era has meant that their remains have formed large thicknesses of limestone due to their calcareous skeletons.</p>
Cross-bedding	<p>Sets of strata which are inclined to the general stratification of the beds. They dip in the direction of fluid flow at the time when the beds were laid down.</p>

Desiccation cracks	Polygonal cracks formed in a sediment as it dries out in a terrestrial environment, also known as shrinkage cracks
Devensian	The last glacial stage in Britain, lasting from around 116 000 BP (Before Present) to about 11,700 BP.
Devonian	A geological period [416–359 Ma] of the Palaeozoic Era preceded by the Silurian and followed by the Carboniferous.
Dolomitic limestone	A limestone containing a high concentration of the mineral dolomite
Dyke	A sheet-like body of intrusive igneous rock emplaced along a vertical or near vertical fracture, normally discordant to the structure in the country rocks.
Dune slack	The flat areas that lie between the ridges of a coastal dune system. The area is usually covered in vegetation as it lies close to the water table.
Earth heritage	The geological and landscape heritage of an area. Used mostly in the context of geoconservation.
Earth science	Science related to planet Earth. Also known as geoscience. Includes disciplines such as economic geology, geochemistry, geomagnetism, geomorphology, geophysics, glaciology, hydrogeology, mineralogy, palaeontology, petroleum geology, petrology, stratigraphy, structural geology, engineering geology, sedimentology, seismology.
Erratic	A piece of rock (can vary in size from pebbles to very large boulders) which has been transported by glacial ice often over a large distance.
Esker	A long and winding landform composed of stratified sand and gravel formed by streams flowing beneath or on a glacier.
Extrusive	Describes igneous rocks that have been extruded onto the Earth's surface, rather than being intruded beneath the surface (intrusive).
Fault	A fracture in the Earth's crust across which the rocks have been displaced relative to each other.
Fault plane	A vertical or dipping surface of a fault.
Feldspar	A group of common aluminosilicate minerals, typically forming white or light pink crystals.

Fissile	A term used to describe a rock which is easily split.
Fluvial	Referring to a river environment.
Fold	A bend in planar structures such as rock strata or bedding planes.
Formation	The fundamental unit used in lithostratigraphy. Specific features distinguish one formation from another. Formations may be subdivided into members and several formations may constitute a group.
Gastropod	Molluscs belonging to the class Gastropoda, usually with coiled shells.
Geomorphology	The study of landforms and the processes that form them
Glaciofluvial	Refers to sediments deposited by flowing glacial meltwater.
Graptolites	A class of extinct colonial animals that lived from the Cambrian (542Ma to 488Ma) through to the early Carboniferous. They were marine in origin and are often found preserved in mudstones and shales deposited in deep water environments.
Hematite	Iron oxide (FeO_2)
Holocene	The youngest epoch of the Quaternary Sub-Era. Covers the last 11 800 years. The concept of the Holocene ending at the end of the 18th Century is gaining ground, with the following Epoch termed the Anthropocene.
Hornblende	A common aluminosilicate mineral commonly forming green or brown crystals.
Igneous rocks	A rock that has formed from the cooling of magma (molten rock).
Intrusion	A body of igneous rock which has been injected as magma into existing hard rocks (country-rock). On cooling the magma is called an igneous intrusion.
Joints	A fracture, or potential fracture, in a rock adjacent to which there has been no displacement.
Ka	Abbreviation for kiloannus meaning a thousand years
Kame terrace	A terrace between a hillside and a glacier formed by glaciofluvial activity.
Lacustrine	Refers to a lake environment.
Limestone	Sedimentary rock composed mainly of calcium carbonate.

Lithology	The character of a rock expressed in terms of its mineral composition, structure, grain size and arrangement of its constituents.
Lithostratigraphy	The branch of stratigraphy concerned with the description of rock units in terms of their lithological features and spatial relationships
Ma	Abbreviation for megannum (or more correctly, megannus) meaning million years
Macrophyric	A textural term describing a coarse-grained crystalline igneous rock
Mafic	Term referring to a dark coloured igneous rock
Magma	Molten rock.
Marl	A sedimentary rock, a calcareous (lime-rich) mudstone, or clay-rich chalk.
Massive	A term used to describe a thick rock unit without any stratification, jointing or fracturing.
Meltwater	Water produced by melting of snow or ice.
Microporphyrritic	A fine grained igneous rock containing phenocrysts less than 0.025 mm in diameter.
Mugearite	A fine-grained extrusive igneous rock (volcanic) of intermediate composition. Mugearite is a subdivision of basaltic-trachyandesite with a high Sodium (Na) content (see Appendix 3).
Nepheline	A feldspathoid mineral high in alkali (K and Na) but low in silica found in igneous rocks. Typically white in colour and hard to identify.
Olivine	A common aluminosilicate mineral forming near-spherical greenish crystals (phenocrysts) in many igneous rocks.
Ordovician	A geological period [495–443 Ma] of the Palaeozoic Era preceded by the Cambrian and followed by the Silurian. Small aquatic crustacean dating back to Cambrian times, [class: Ostracoda].
Ostracod	Ostracods vary in size from 0.2mm to 30mm and have a bivalve-like protective shell. They are very important in correlating palaeoenvironments due to their worldwide occurrence.
Palaeozoic	The lowest era of the Phanerozoic Eon. It is preceded by the Proterozoic and is followed by the Mesozoic, [542–251Ma].

Periglacial	Conditions, processes and landforms associated with cold, nonglacial environments.
Permian	A geological period [299–251 Ma] of the Palaeozoic Era preceded by the Carboniferous and followed by the Triassic.
Phenocryst	Large crystals, usually of near perfect shape, which occur in a finer-grained groundmass in igneous rocks.
Phonolite	A fine-grained extrusive igneous rock (volcanic) of intermediate composition with very high alkali content (K + Na; see Appendix 3).
Phreatomagmatic	Pertaining to a volcanic explosion that extrudes both magmatic gases and steam, occurring when magma is in contact with water either groundwater or sea water.
Plagioclase	A common feldspar mineral forming elongate white crystals
Porphyritic	The term applied to igneous rocks which contain isolated crystals, or phenocrysts, larger than those forming the main body of the rock.
Pseudomorph	A secondary mineral which has replaced another but maintained its shape.
Pyroxene	A common aluminosilicate mineral forming black or dark brown crystals in igneous rocks.
Quartz	The mineral form of silicon dioxide (SiO ₂). The most abundant and widespread of all minerals, it generally appears transparent or white and is hard enough to scratch glass.
Quartz-microgabbro	Medium grained basic igneous rock containing minor quartz.
Quaternary	A geological sub-era [2.6 Ma to present day] of the Cenozoic Era, following the Neogene.
Reduction spots	A typically spherical feature found in reddened rocks, where its colour has been bleached by local chemical reduction of the iron compound to its ferrous state. This reduction is typically white or pale-green, and also forms as linear features along fractures.
Rinnenkarren	Solution grooves that form due to channelization of runoff in calcareous rock surfaces.

Ripple marks	<p>Small scale ridges and troughs formed by the flow of water or wind over unconsolidated sandy or silty sediment.</p> <p>The fossilised equivalent of ripples found today on beaches and river sands.</p>
Roche moutonnée	<p>A feature formed by glacial erosion, usually a mound of rock with one side moulded by the ice and the other side steepened.</p>
Runnel	<p>A very small stream</p>
Seat earth	<p>A sedimentary rock underlying a coal seam representing an old soil that supported the vegetation from which the coal has formed.</p>
Sedimentary rock	<p>A rock formed in one of three main ways: by the deposition of the weathered remains of other rocks (clastic sedimentary rock); by the deposition of the results of biogenic activity; and by precipitation from solution. Four basic processes are involved in the formation of a clastic sedimentary rock: weathering (erosion), transportation, deposition and compaction.</p>
Sill	<p>A tabular igneous intrusion with concordant contacts with the surrounding country rocks</p>
Silurian	<p>A geological period [443–417 Ma] of the Palaeozoic Era preceded by the Ordovician and followed by the Devonian.</p>
Slickensides	<p>A polished rock surface, usually displaying linear grooves and ridges (slickenlines). Found on fault planes and caused by the movement of adjacent blocks of rock.</p>
Spheroidal weathering	<p>A type of chemical weathering where jointed blocks of rock are slowly rounded by the removal of their outer shells. Often known as onion-skin weathering and typically seen in igneous rocks.</p>
Spinel lherzolites	<p>An olivine rich ultra-basic (very low silica) rock containing the magnesium-rich mineral spinel.</p>
Strata	<p>Rocks that form layers or beds.</p>
Stratigraphy	<p>The definition and description of the stratified rocks of the Earth's crust.</p>

Syncline	A structural term describing a basin- or trough-shaped fold in rock in which rock layers are downwardly concave. The youngest rock layers form the core of the fold and outward from the core progressively older rocks occur.
Talus	A sloping accumulation of loose clasts generally in the form of a wedge, usually found at the base of a steep rock face.
Tetrapods	The first four limbed vertebrates which evolved from lobe-finned fishes.
Throw	The amount of displacement on a fault.
Trachybasalt	A fine-grained extrusive igneous rock of basic composition (see Appendix 3)
Tuff	A rock formed of consolidated fine-grained volcanic ash ejected during a volcanic eruption.
Turbidite	A deposit from a turbidity current which is sediment which has flowed via gravity e.g. at the edge of a continental shelf. The sequence of sediment usually fines upwards.
Unconformable	A term generally applied to younger strata that do not conform in position or that do not have the same dip and strike as those of the immediately underlying rocks. Also applies to the contact between unconformable rocks.
Unconformity	A surface of contact between two groups of unconformable strata. Represents a break in the geological record where a combination of erosion and lack of deposition was taking place.
Vein	A fracture in the rock infilled with secondary minerals, often quartz or calcite.
Vesicles	Small spherical or elliptical cavities in an igneous rock which represent bubbles of gas which existed in the hot magma. Before the gas could escape, the magma cooled and hardened, 'trapping' the gas bubbles in the rock.
Wacke	A texturally immature sandstone with a fine-grained matrix which forms 15–75% of the rock (informally termed 'greywacke')
Xenoliths	A foreign crystal or rock fragment which becomes enveloped within a larger rock during its development.

[References](#)