

**ABSORPTION:**

A condition in which something takes in another substance.

**ACCELERATOR:**

An accelerant can be any substance that can bond, mix, or disturb another substance and cause an increase in the speed of a natural, or artificial chemical process.

**ANCHOR:**

A device for securing stone to a structure.

**ARGILLITE:**

A fine~grained sedimentary rock composed predominantly of indurated clay particles. Argillaceous rocks are basically lithified muds and oozes. They contain variable amounts of silt~sized particles. Metamorphism of argillites produces slate, phyllite, and pelitic schist.

**ARMORSTONE:**

Large Quarystone used primarily for riprap retaining walls. Dense limestone, buff to grey in color.

**BASALT:**

Basalt is usually grey to black in color, but rapidly weathers to brown or rust~red due to oxidation of its mafic (iron~rich) minerals into rust. It almost always has a fine~grained mineral texture due to the molten rock cooling too quickly for large mineral crystals to grow, although it can sometimes be porphyritic, containing the larger crystals formed prior to the extrusion that brought the lava to the surface, embedded in a finer~grained matrix.

**BED:**

In granites and marbles, a layer or sheet of the rock mass that is horizontal, commonly curved and lenticular, as developed by fractures. Sometimes applied also to the surface of parting between sheets. In stratified rocks the unit layer formed by sedimentation; of variable thickness, and commonly tilted or distorted by subsequent deformation; generally develops a rock cleavage, parting, or jointing along the planes of stratification.

**BLEEDING:**

A staining action caused by corrosive metals, oil~based putties, mastics, caulking or sealing compounds.

**BROKEN:**

Irregular shaped pieces of flagstone, traditionally palletized on edge.

**BUILDING STONE, NATURAL:**

Rock material in its natural state of composition and aggregation as it exists in the quarry and is usable in construction as dimension building stone.

**CLADDING:**

Non-loadbearing stone used as the facing material in wall construction that contains other materials.

**CLEAVAGE:**

In structural geology and petrology, describes a type of planar rock feature that develops as a result of deformation and metamorphism.

**CLEAVAGE PLANE:**

Plane or planes along which a stone may likely break or delaminate.

**CONTINENTAL DRIFT:**

A scientific theory that describes the large-scale motions of Earth's lithosphere. It was accepted by the geoscientific community after the concepts of seafloor spreading were developed in the late 1950s and early 1960s.

**COPING:**

A flat stone used as a cap on freestanding walls.

**CORNERSTONE:**

A stone forming a part of a corner or angle in a wall. Also a stone laid at the formal inauguration of the erection of a building, not necessarily at a corner, usually incorporating a date or inscription.

**CROSS~BEDDING:**

The arrangement of laminations of strata transverse or oblique to the main planes of stratification..

**CURBING:**

Blocks of stone bordering streets, walks, etc.

**CUT STONE:**

Stone that has been cut or machined to a predetermined size or shape.

**CUTTING STOCK:**

Any material that's sole purpose is to be fabricated into another product.

**DIMENSIONAL STONE:**

Stone, cut and shaped to a pre-specified size and shape.

**DRESSED OR HAND DRESSED:**

An individual stone that has been worked until squared or the masonry built of such stone.

**DRY WALL/DRY STACK:**

Dry stone stacking means placing each stone in direct contact with another without the use of mortar or any other adhesive agent.

**FACE:**

The exposed portion of a stone.

**FADING:**

Fading is characterized by a chalk~ashen residue that lessens the slates aesthetic beauty.

**NON~FADING:**

The term non~fading often refers to Blue~Black and Blue~Gray slates.

**FLAGSTONE:**

A generic flat stone, usually used for paving slabs or walkways, patios, fences and roofing. It may be used for memorials, headstones, facades and other constructions. Flagstone is a sedimentary rock that is split into layers along bedding planes. Flagstone is usually a form of a sandstone composed of feldspar and quartz and is arenaceous in grain size (0.16 mm ~ 2 mm in diameter). The material that binds flagstone is usually composed of silica, calcite, or iron oxide. The rock color usually comes from these cementing materials. Typical flagstone colors are red, blue, and buff, though exotic colors exist.

**GAUGE:**

The process of grinding pieces of material to a uniform thickness.

**HEARTH:**

A brick or stone~lined fireplace, with or without an oven, used for heating and originally also used for cooking food. In fireplace design, the hearth is the part of the fireplace where the fire burns, usually consisting of masonry at floor level or higher, underneath the fireplace mantel.

**GRAIN:**

The easiest cleavage direction in a stone. "With the grain" same as "natural bed." Also, particles (crystals, sand grains, etc.) of a rock.

**HEARTH STONE:**

Originally the single large stone or stones used for the hearth, now most commonly used to describe the stone in front of the fire chamber and many times extending on either or both sides of the front of the fire chamber.

**HONED FINISH:**

Honed is a super fine smooth finish, though not as fine as a polished finish.

**IGNEOUS ROCK:**

One of the three main rock types, the others being sedimentary and metamorphic rock. Igneous rock is formed through the cooling and solidification of magma or lava. Igneous rock may form with or without crystallization, either below the surface as intrusive (plutonic) rocks or on the surface as extrusive (volcanic) rocks. This magma can be derived from partial melts of pre-existing rocks in either a planet's mantle or crust. Typically, the melting is caused by one or more of three processes: an increase in temperature, a decrease in pressure, or a change in composition. Over 700 types of igneous rocks have been described, most of them having formed beneath the surface of Earth's crust.

**IRREGULAR:**

Pieces of flagstone that are a non-dimensional shape.

**JADE:**

An ornamental stone. The term *jade* is applied to two different metamorphic rocks that are made up of different silicate minerals: Nephrite consists of a microcrystalline interlocking fibrous matrix of the calcium, magnesium-iron rich amphibole mineral series tremolite (calcium-magnesium)-ferroactinolite (calcium-magnesium-iron). The middle member of this series with an intermediate composition is called actinolite (the silky fibrous mineral form is one form of asbestos). The higher the iron content the greener the colour. Jadeite is a sodium and aluminium-rich pyroxene. The gem form of the mineral is a microcrystalline interlocking crystal matrix.

**JOINT:**

The space between stones.

**JUMPER:**

In veneer patterns, a piece of stone of higher rise than adjacent stones.

**JURASSIC PERIOD:**

The Jurassic is a geologic period and system that extends from  $201.3 \pm 0.6$  Ma (million years ago) to  $145 \pm 4$  Ma; that is, from the end of the Triassic to the beginning of the Cretaceous. The Jurassic constitutes the middle period of the Mesozoic Era, also known as the Age of Reptiles. The start of the period is marked by the major Triassic-Jurassic extinction event. Another extinction event, the Late Pliensbachian/Early Toarcian event, occurred in the Early Jurassic, and a third extinction event, the Late Tithonian event, occurred at the end of the Jurassic; however neither of these two events rank among the 'Big Five' mass extinction. The Jurassic is named after the Jura Mountains within the European Alps, where limestone strata from the period was first identified. By the beginning of the Jurassic, the supercontinent Pangaea had begun rifting into two landmasses, Laurasia to the north and Gondwana to the south. This created more coastlines and shifted the continental climate from dry to humid, and many of the arid deserts of the Triassic were replaced by lush rainforests. On land, the fauna transitioned from the Triassic fauna, dominated by both dinosauriform and crocodylomorph archosaurs, to one dominated by dinosaurs. The first birds also appeared during the Jurassic, having evolved from a branch of theropod dinosaurs. Other major events include the appearance of the earliest lizards, and the evolution of therian mammals, including primitive placentals. Crocodylians made the transition from a terrestrial to an aquatic mode of life. The oceans were inhabited by marine reptiles such as ichthyosaurs and plesiosaurs, while pterosaurs were the dominant flying vertebrates.

**LARGE QUARRYSTONE:**

Stone too heavy for one man to free~lift alone

**LIPPING:**

Usually refers to flagging materials; caused when two pieces of material to be joined together are slightly warped or twisted causing one of more edges to be higher or lower than the adjoining material.

**LUG SILL:**

A stone sill set into the jambs on each side of masonry opening.

**MARIPOSA SLATE:**

Named by Geologist G.F. Becker in 1885 for its discovery in the Mariposa region. Mariposa Slate from the Yosemite Slate Quarry is unique due to its high silicate content which makes it non~fading and non~bleeding. Consists of immense thickness of highly metamorphosed auriferous slates occurring along foothills from Mariposa to Nevada Counties, CA. The slate was formed during the late Jurassic Period, when the earth's surface was Pangaea before Continental Drift.

**MARIPOSITE:**

Also known as Phengite. A series name for dioctahedral micas, similar to muscovite but with addition of magnesium. The silica content of phengite has been proposed as a geobarometer for the metamorphism of low grade schists. Found in Mariposa County.

**METAMORPHIC ROCK:**

The transformation of existing rock types, in a process called metamorphism, which means "change in form". The original rock (protolith) is subjected to heat (temperatures greater than 150 to 200 °C) and pressure (1500 bars), causing profound physical and/or chemical change. The protolith may be sedimentary rock, igneous rock or another older metamorphic rock. Metamorphic rocks make up a large part of the Earth's crust and are classified by texture and by chemical and mineral assemblage (metamorphic facies). They may be formed simply by being deep beneath the Earth's surface, subjected to high temperatures and the great pressure of the rock layers above it. They can form from tectonic processes such as continental collisions, which cause horizontal pressure, friction and distortion. They are also formed when rock is heated up by the intrusion of hot molten rock called magma from the Earth's interior. The study of metamorphic rocks (now exposed at the Earth's surface following erosion and uplift) provides information about the temperatures and pressures that occur at great depths within the Earth's crust. Some examples of metamorphic rocks are gneiss, slate, marble, schist, and quartzite.

**MORTAR:**

A workable paste used to bind construction blocks together and fill the gaps between them. The blocks may be stone, brick, cinder blocks, etc. Mortar becomes hard when it sets, resulting in a rigid aggregate structure. Modern mortars are typically made from a mixture of sand, a binder such as cement or lime, and water. Mortar can also be used to fix, or *point*, masonry when the original mortar has washed away.

**NATURAL BED:**

The setting of the stone on the same plane as it was formed in the ground.

**NATURAL CLEFT:**

When flagstone is split along a natural seam, the remaining uneven surface is referred to as a Natural cleft.

**NORTH AMERICAN PLATE:**

A tectonic plate covering most of North America, Greenland, Cuba, Bahamas, and parts of Siberia, Iceland and the Azores. It extends eastward to the Mid-Atlantic Ridge and westward to the Chersky Range in eastern Siberia. The plate includes both continental and oceanic crust. The interior of the main continental landmass includes an extensive granitic core called a craton. Along most of the edges of this craton are fragments of crustal material called terranes, accreted to the craton by tectonic actions over the long span of geologic time. It is believed that much of North America west of the Rockies is composed of such terranes.

**OBSIDIAN:**

A naturally occurring glass formed as an extrusive igneous rock.

**OUT OF WIND:**

To be out of wind is to have the arris of the stone not in parallel or perpendicular lines. Stone which is out of wind has an irregular or rustic appearance.

**PALLETIZED:**

The storage of materials in horizontal rows with multiple levels on wooden pallets.

**PACIFIC PLATE:**

An oceanic tectonic plate that lies beneath the Pacific Ocean. At 105 million square kilometers, it is the largest tectonic plate.

**PANGAEA:**

A supercontinent that existed during the late Paleozoic and early Mesozoic eras, forming about 300 million years ago and beginning to rift around 200 million years ago, before the component continents were separated into their current configurations. The single global ocean which surrounded Pangaea is accordingly named Panthalassa. The name *Pangaea* is derived from Ancient Greek *pan* (πᾶν) meaning "entire," and *Gaia* (Γαῖα) meaning "Earth." The name was coined during a 1927 symposium discussing Alfred Wegener's theory of continental drift. In his book *The Origin of Continents and Oceans (Die Entstehung der Kontinente und Ozeane)*, first published in 1915, he postulated that before later breaking up and drifting to their present locations, all the continents had at one time formed a single supercontinent which he called the "*Urkontinent*".

**PATIO:**

In Mariposa Slate, it refers to smaller pieces of irregular flagstone palletized flat. Sometimes called steppers, colonial or garden path.

**PAVING:**

Stone used as an exterior wearing surface, as in patios, walkways, driveways, etc. (see flooring).

**PERRONS:**

Slabs of stone set on other stones serving as steps and arches in gardens.

**QUARRY:**

The location of an operation where a natural deposit of stone is removed from the ground.

**QUARRYMEN:**

Split veins, or sheets of rock, and extract the resulting blocks of stone from the ground.

**QUARRYSTONE:**

Stone extracted from a quarry as opposed to fieldstone that has been harvested from the regolith (soil) surface.

**QUARTZ:**

The second most abundant mineral in the Earth's continental crust, after feldspar. It is made up of a continuous framework of  $\text{SiO}_4$  silicon–oxygen tetrahedra, with each oxygen being shared between two tetrahedra, giving an overall formula  $\text{SiO}_2$ . There are many different varieties of quartz, several of which are semi-precious gemstones. Especially in Europe and the Middle East, varieties of quartz have been since antiquity the most commonly used minerals in the making of jewelry and hardstone carvings.

**QUARTZITE:**

A hard, non-foliated metamorphic rock which was originally sandstone. Sandstone is converted into quartzite through heating and pressure usually related to tectonic compression within orogenic belts. Pure quartzite is usually white to gray, though quartzites often occur in various shades of pink and red due to varying amounts of iron oxide ( $\text{Fe}_2\text{O}_3$ ). Other colors, such as yellow and orange, are due to other mineral impurities.

**QUARTZ VAIN:**

A vein is a distinct sheetlike body of crystallized minerals (Quartz) within a rock. Veins form when mineral constituents carried by an aqueous solution within the rock mass are deposited through precipitation. The hydraulic flow involved is usually due to hydrothermal circulation.

**QUOINS:**

Masonry blocks at the corner of a wall. They exist in some cases to provide actual strength for a wall made with inferior stone or rubble and in other cases to make a feature of a corner, creating an impression of permanence and strength, and reinforcing the onlooker's sense of a structure's presence.

**RIFT:**

The most pronounced (see "grain") direction of splitting or cleavage of stone. Rift and grain may be obscure, as in some granites, but are important in both quarrying and processing stone.

**RIP RAP:**

Irregularly shaped stones used for facing bridge abutments and fills; stones thrown together without order to form a foundation or sustaining walls.

**RISE:**

The height of stones, generally used in reference to veneer stone.

**RISER:**

Vertical face of a step.

**ROCK:**

An integral part of the earth's crust composed of an aggregate of grains of one or more minerals. (Stone is the commercial term applied to quarry products.)

**RUBBLE:**

Broken stone, of irregular size, shape and texture. Rubble naturally found in the soil is known also as 'brash' (compare cornbrash). Where present, it becomes more noticeable when the land is ploughed or worked.

**SANDSTONE:**

A clastic sedimentary rock composed mainly of sand-sized minerals or rock grains. Most sandstone is composed of quartz and/or feldspar because these are the most common minerals in the Earth's crust. Like sand, sandstone may be any color, but the most common colors are tan, brown, yellow, red, gray, pink, white and black. Since sandstone beds often form highly visible cliffs and other topographic features, certain colors of sandstone have been strongly identified with certain regions.

**SAWN EDGE:**

A clean cut edge generally achieved by cutting with a saw.

**SCHIST (*Also known locally as Yosemite Quartzite*):**

A group of medium-grade metamorphic rocks, chiefly notable for the preponderance of lamellar minerals such as micas, chlorite, talc, hornblende, graphite, and others. Quartz often occurs in drawn-out grains to such an extent that a particular form called quartz schist is produced. By definition, schist contains more than 50% platy and elongated minerals, often finely interleaved with quartz and feldspar. Schist is often garnetiferous. The individual mineral grains in schist, drawn out into flaky scales by heat and pressure, can be seen by the naked eye. Schist is characteristically *foliated*, meaning the individual mineral grains split off easily into flakes or slabs.

**SEDIMENTARY ROCK:**

Types of rock that are formed by the deposition of material at the Earth's surface and within bodies of water. Sedimentation is the collective name for processes that cause mineral and/or organic particles (detritus) to settle and accumulate or minerals to precipitate from a solution. Particles that form a sedimentary rock by accumulating are called sediment. Before being deposited, sediment was formed by weathering and erosion in a source area, and then transported to the place of deposition by water, wind, ice, mass movement or glaciers which are called agents of denudation.

**SERPENTINE:**

A hydrous magnesium silicate of igneous origin, generally a very dark green color with marking of white, light green or black. One of the hardest varieties of natural building stone.

**SHALE:**

A fine-grained, clastic sedimentary rock composed of mud that is a mix of flakes of clay minerals and tiny fragments (silt-sized particles) of other minerals, especially quartz and calcite. The ratio of clay to other minerals is variable. Shale is characterized by breaks along thin laminate or parallel layering or bedding less than one centimeter in thickness, called fissility. Mudstones, on the other hand, are similar in composition but do not show the fissility.

**SILICATE:**

A compound containing a silicon bearing anion. The great majority of silicates are oxides, but hexafluorosilicate and other anions are also included. This article focuses mainly on the anions. Silicates comprise the majority of the earth's crust, as well as the other terrestrial planets, rocky moons, and asteroids. Sand, Portland cement, and thousands of minerals are examples of silicates. Silicate compounds, including the minerals, consist of silicate anions whose charge is balanced by various cations. Myriad silicate anions can exist, and each can form compounds with many different cations. Hence this class of compounds is very large. Both minerals and synthetic materials fit in this class.

**SLATE:**

A fine-grained, foliated, homogeneous metamorphic rock derived from an original shale-type sedimentary rock composed of clay or volcanic ash through low-grade regional metamorphism.

**SLIP SILL:**

A stone sill set between jambs

**SNAPPED EDGE, QUARRY CUT OR BROKEN EDGE:**

A natural breaking of a stone either by hand or machine. The break should be at right angles to the top and bottom surfaces.

**SPALLS:**

Sizes may vary from chip-size to one and two-man stones. Spalls are primarily used for taking up large voids in rough rubble or mosaic patterns.

**STONE:**

Sometimes synonymous with rock, but more properly applied to individual blocks, masses or fragments taken from their original formation or considered for commercial use.

**STONE VENEER:**

Used as a protective and decorative covering for interior or exterior walls and surfaces. The veneer is typically 1 inch (2.54 cm) thick and must weigh less than 15 lb per square foot (73 kg m<sup>-2</sup>) so that no additional structural supports are required. The structural wall is put up first, and thin, flat stones are mortared onto the face of the wall. Metal tabs in the structural wall are mortared between the stones to tie everything together, to prevent the stonework from separating from the wall.

**STOOL:**

A flat stone, generally polished, used as an interior sill.

**STRATA:**

Layers of sedimentary rock or soil with internally consistent characteristics that distinguish it from other layers. Each layer is generally one of a number of parallel layers that lie one upon another, laid down by natural forces. They may extend over hundreds of thousands of square kilometers of the Earth's surface. Strata are typically seen as bands of different colored or differently structured material exposed in cliffs, roadcuts, quarries, and river banks. Individual bands may vary in thickness from a few millimeters to a kilometer or more. Each band represents a specific mode of deposition: river silt, beach sand, coalswamp, sand dune, lava bed, etc.

**STRATIFICATION:**

A structure produced by deposition of sediments in beds or layers (strata), laminae, lenses, wedges, and other essentially tabular units. The same material as marble in which it occurs.

**SURROUND:**

An enframingent.

**TABLET:**

A small, flat slab or surface of stone, especially one bearing or intended to bear an inscription, carving or the like.

**TOLERANCE:**

Dimensional allowances in size and thickness due to stone being a product of nature and is not found in exact measurements.

**TREAD:**

Horizontal surface of a step

**WASH:**

A sloped area or the area water will run over.

**WATERWASHED:**

Stone that has been exposed to the abrasive effects of rushing aggregate-filled water for long periods of time causing a smoothing effect to the exposed surfaces

**WEAR:**

The removal of material or impairment of surface finishing through friction or impact use.

**WEATHERING:**

Natural alteration by either chemical or mechanical processes due to the action of constituents of the atmosphere, surface waters, soil and other ground waters, or to temperature change.

**WEDGING:**

Splitting of stone by driving wedges into planes of weakness.

**WIRE SAW:**

Method of cutting stone by passing a twisted, multi-strand wire over the stone and immersing the wire in a slurry of abrasive material naments, chemical laboratory.

**YOSEMITE QUARTIZITE (*Please See Schist*):**