
Glossary

aesthenosphere (*aestheno means to flow*) — The aesthenosphere is a part of the mantle below the lithosphere. The upper portion of the aesthenosphere is a region with a plastic, semisolid consistency that bends and flows in response to pressure.

aftershock — An aftershock is an earthquake which follows a major earthquake, and is of lesser magnitude.

amplitude — Amplitude is the measurement of a wave determined by measuring the distance from the top of the wave to the bottom of the wave and dividing that amount by 2.

abyssal plain — a flat region of the deep ocean floor.

body waves — Body waves are earthquake waves that travel through the body of the Earth. They are of two types, P-waves and S-waves.

convection current — A convection current is a circular movement in a fluid in which hot material rises and cold material sinks.

continental drift — Continental drift is an outdated theory, first advanced by Alfred Wegener, that Earth's continents were originally one land mass, which split up and gradually migrated to form today's continents.

convergent plate boundary — A convergent plate boundary represents the collision of two plates moving toward each other. Such collisions may generate mountain ranges and volcanoes.

core — The core of the Earth consists of two sphere-shaped bodies; the inner core is like a very hot solid steel ball, surrounded by a liquid outer core. The core is the deepest part of the Earth, and is thought to be responsible for generating the Earth's magnetic field.

crust — The crust is the very thin uppermost layer of the Earth's lithosphere.

culture — A culture is the special way of life that holds a group of people together and makes it different from all other groups.

divergent plate boundary — A divergent plate boundary represents the separation of two plates moving apart. This divergent movement is in response to forces in the Earth's mantle. Features formed at divergent boundaries include mid-ocean ridges and rift valleys.

earthquake — An earthquake is a sudden, rapid shaking of the Earth caused by the release of energy stored in rocks.

earthquake intensity — Expressed as Roman numerals on the Modified Mercalli scale, earthquake intensity is a measure of ground shaking based on damage to structures and changes felt and observed by humans.

earthquake magnitude — Earthquake magnitude is a measure of the amount of energy released by an earthquake. Expressed in Arabic numerals, it is based on several widely-used logarithmic scales.

earthquake waves — Earthquake waves, or seismic waves, are waves caused by the release of energy in the Earth's rocks during an earthquake.

elastic rebound theory — Elastic rebound was proposed by H. F. Reid in 1906 to explain earthquake generation. Reid proposed that faults remain locked while strain energy slowly accumulates in surrounding rock. When rock strength is exceeded and rocks fracture, the fault slips suddenly, releasing energy in the form of heat and seismic waves.

energy — Energy is the power to move or change things.

epicenter — The epicenter is the point on the Earth's surface directly above the focus. The focus is the place within the Earth where an earthquake's energy is released.

fault — A fault is a crack in rock or soil along which movement has taken place.

fault scarp — A fault scarp (cliff) is the topographic result of ground displacement attributed to fault movement.

fault creep — Fault creep is slow ground movement or slip occurring along a fault without production of earthquakes.

fault plane — A fault plane is a surface along which fault movement has occurred.

fissure — A fissure is an open crack in the ground.

focus — The focus, or hypocenter, is the place inside the lithosphere where an earthquake's energy is first released.

foreshock — A foreshock is an earthquake which comes before the main earthquake and is less severe.

hazard — A hazard is any object or situation which contains the potential for damage, injury, or death.

hypocenter — See focus.

lateral fault — See strike-slip fault.

legends — Legends are traditional narrative explanations of natural phenomena that evolve when scientific explanations are not available.

liquefaction — Liquefaction is the process in which soil or sand suddenly loses the properties of solid material (cohesion) and behaves like a liquid.

lithosphere (*litho means rock/stone*) — The lithosphere is the solid outer region of the Earth in which earthquakes occur. It contains the crust and the uppermost portion of the mantle.

Love waves — Love waves are surface waves that move in a back and forth, horizontal motion.

magma — Magma is liquid rock beneath the Earth's surface. When it erupts it is called lava.

mantle — The mantle is the layer of the Earth between the core and the crust. It has a semisolid consistency and is capable of movement.

mid-ocean ridge — A mid-ocean ridge is a submarine mountain range along a divergent plate boundary, formed by volcanic activity.

mountain — A mountain is a portion of the Earth's surface that has distorted (folded, faulted, volcanic) rocks and is higher in elevation than surrounding regions.

normal fault — A normal fault is one in which an upper block of rock, separated by a fault from a lower block, moves downward relative to the lower block.

oceanic crust — Oceanic crust is the basaltic portion of the Earth's crust that is generated at mid-ocean ridges. Most of this crustal material makes up the ocean floor. Oceanic crust is thinner and greater in density than continental crust.

oceanic trench — An oceanic trench is a long, narrow depression in the seabed which results from the bending of an oceanic plate as it descends into the mantle at a subduction zone.

P-waves — P- (or Primary) waves are the fastest body earthquake waves, which travel by compression and expansion.

plain — A plain is a flat-lying geographic area.

plate, tectonic — A tectonic plate is a large, relatively rigid segment of the Earth's lithosphere; these plates move around in relation to other plates because they "ride" on the plastic asthenosphere.

plate tectonics — Plate tectonics is a geological model in which the Earth's crust and uppermost mantle (the lithosphere) are divided into a number of relatively rigid, constantly moving segments (plates).

plateau — A plateau is an area of horizontal rocks that is higher than surrounding areas and usually has some areas of steep slopes.

potential energy — Potential energy is stored energy.

primary waves — See P-waves.

Richter scale — Richter scale is a type of measurement of earthquake magnitude. Charles Richter and Beno Gutenberg created this scale in 1935.

reverse fault — A reverse fault is one in which an upper block of rock slides over a lower block which is separated from it by the fault. A low-angle reverse fault is called a thrust fault.

risk, earthquake — Earthquake risk is the potential for loss (life, property) in the event of an earthquake.

S-waves — S- (or Secondary) waves are body earthquake waves which travel more slowly than P-waves, and create elastic vibrations in solid substances. S-waves do not travel through liquids.

secondary waves — See S-waves.

seismic sea wave — See tsunami.

seismic wave — An energy wave in the Earth generated by an earthquake or explosion.

seismogram — A seismogram is a recording of the Earth's motions produced by a seismograph.

seismograph — A seismograph is an instrument for recording the motion of the Earth in response to seismic waves.

seismologist — A seismologist is a scientist that studies the cause, measurement, and effects of earthquakes.

seismology — Seismology is the study of earthquakes.

strain, elastic — Elastic strain is the deformation or change in the shape of a body in response to stress.

stress, elastic — Elastic stress is a measure of the forces acting on a body.

strike-slip fault — Strike-slip fault is a fault along which motion is mostly in a horizontal direction.

subduction — Subduction occurs where the leading edge of a plate made of oceanic crust and underlying mantle sinks under the edge of an opposing plate made of continental crust and underlying mantle.

surface waves — Surface waves are seismic waves that travel only on the surface of the Earth.

transform fault — A transform fault is a lateral or sideways moving fault, generated along mid-ocean ridges.

thrust fault — See reverse fault.

tsunami — A tsunami is an ocean wave caused by movements of the ocean floor, such as from earthquakes and volcano eruptions.

turbidity current — A turbidity current is a dense current of sediment mixed with water that flows downslope in ocean regions. Turbidity currents are often started by earthquake shaking.

volcano — A volcano is a mountain of erupted volcanic material.