

Plate Tectonics Vocabulary

Divergent Boundary - Also known as spreading boundary, a divergent boundary occurs where two plates move apart, allowing magma, or molten rock, to rise from the Earth's interior to fill in the gap. The two plates move away from each other like two conveyor belts moving in opposite directions.

Convergent Boundary - Also known as subduction boundary, a convergent boundary occurs where one plate slides under another as the two are pushed together. If there is land at the edge of one of these plates, the ocean plate will subduct, or slide under that plate.

Collisional Boundary - A collisional boundary occurs where two land masses on plates are pushed together. Trying to occupy the same space, the land masses buckle and fold, creating mountain ranges.

Transform Boundary - A transform boundary occurs where two plates slide against each other. But rather than sliding smoothly, the plates build up tension, then release the tension with a spurt of movement. This movement is felt as an earthquake.

Asthenosphere - a slowly flowing layer of solid and melted rock formed by heat and pressure; the lithosphere floats on the asthenosphere.

Crust - the outermost layer of Earth.

Hot spot - is formed when very hot rock rises from the mantle and erupts through Earth's crust.

Lava - melted rock on Earth's surface.

Lithosphere - the solid outer part of Earth that includes the crust and upper mantle.

Magma - melted rock beneath Earth's surface.

Mantle - the layer of Earth between the core and the crust; the mantle contains the lower part of the lithosphere and all of the asthenosphere.

Ocean trench - a long, narrow, deep area on the ocean floor that is formed at a convergent plate boundary.

Plate boundary - an area where two or more tectonic plates meet.

Tectonic plate - a large piece of the lithosphere that floats and moves on the asthenosphere.

Transect - a straight line of travel where data is being collected.

Asthenosphere - A hot, malleable semi liquid zone in the upper mantle, directly underneath the lithosphere, on which the plates of the lithosphere move (or float).

Boundary - The border between two tectonic plates.

Collision Zone - The place where a collision between two continental plates crunches and folds the rocks at the boundary, lifting them up and leading to mountain formation.

Continental Crust - A layer of the earth's crust that lies under the seven continents. It is about 20 to 40

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miles (35 to 70 km) thick and very old.

Convergent Boundary -The boundary that occurs where two plates are pushing toward each other.

Crust - Hard and rigid, the earth's outermost and thinnest layer. It is only a few miles (5 km) thick under the oceans and averages 20 miles (30 km) thick under the continents.

Divergent Boundary -The boundary that occurs where two plates are moving apart from each other.

Earthquake - A trembling and shaking of the earth's surface resulting from the sudden release of energy in the crust, either along fault lines or from volcanic activity.

Fault -A crack or fracture in Earth's crust where two tectonic plates grind past each other in a horizontal direction.

Inner Core -The innermost layer of the earth, an extremely hot, solid sphere of mostly iron and nickel. The inner core is 3,200 to 3,960 miles (5,150 to 6,378 km) below the surface and about 750 miles (1,200 km) thick.

Lithosphere - Made up of the crust and a tiny bit of the upper mantle, this zone is divided into several constantly (very slowly) moving plates of solid rock that hold the continents and oceans.

Magma -Molten rock that flows beneath the earth's surface and is made up of gases, liquids, and crystals. When magma reaches the surface, it is called lava.

Mantle - This dense layer of the earth is made of hot, semisolid rock and is located directly below the crust. It is about 1,800 miles (2,900 km) thick.

Mid-ocean Ridge - A raised area or mountain range under the oceans formed when magma fills the space between two tectonic plates that are spreading apart.

Oceanic Crust - The type of crust lying under the oceans of the world. It is only 4 to 6 miles (7 to 10 km) thick and usually younger than continental crust.

Outer Core - This layer of the earth lies between the mantle and the solid inner core. It is the only liquid layer, a sea of mostly iron and nickel about 1,400 miles (2,300 km) thick.

Pangaea - The name given to the supercontinent that existed more than 225 million years ago, in which the present-day continents were joined together in one large landmass.

Rift -A dropped zone where two tectonic plates are pulling apart.

Seafloor Spreading - The process that forms new ocean floor and oceanic crust. Magma oozes up from the mantle through a crack in the ocean floor, filling in the space between the plates and spreading out from the plate boundary.

Subduction zone

The place where one plate is getting bent and pulled under the edge of another plate.

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Tectonic Plates - Several large slabs of the lithosphere that hold the continents and oceans and are slowly but constantly moving around the earth.

Transform Boundary - The boundary that occurs where two plates slide past each other.

Trench - A deep valley that forms at the edge of a continent when an oceanic plate sinks underneath a continental plate.

Tsunami - A huge ocean wave caused by a sudden, powerful shift on the ocean floor, like an undersea earthquake, landslide, or volcanic eruption.

Epicenter - The point on earth's surface that is vertically above the focus of an earthquake.

Focus - The point of origin of an earthquake

Longitude - Part of a grid used for describing positions on the earth's surface, consisting of half circles joining at the poles. A measurement, in degrees, of a place's distance east or west of the prime meridian, which runs through Greenwich, England.

Mantle - The thick shell of dense, rocky matter that surrounds the earth's core. Generally located from 35km to 2900km below the earth's surface. The mantle is ductile (flexible) and composed primarily of magnesium-iron silicate minerals such as olivine. It has an upper, partially-molten section, which is the source of magma and volcanic lava.

Plate Tectonics - The theory that explains the global distribution of geological phenomena such as seismicity, volcanism, continental drift, and mountain building in terms of the formation, destruction, movement, and interaction of the earth's lithospheric plates

Continental Collision Zone - A convergent plate boundary where continents are colliding together and creating mountains.

Subduction Zone - An area where oceanic crust and continental crust are colliding. The denser oceanic crust is subducted under the continental crust resulting in mountains and volcanoes.

Latitude - Part of a grid used for describing positions on earth's surface, consisting of parallel circles. A measurement, in degrees, of place's distance north or south of the equator.

S-waves (shear or secondary waves) - Seismic body waves transmitted by alternating series of sideways (shear) movements in a solid. They are transverse waves.

P-waves (primary waves) - Seismic body waves transmitted by alternating pulses of compression and expansion (push-pull). They are longitudinal waves. Their oscillation is parallel to the direction the wave is moving.

Seismograph - Any of various instruments for measuring and recording the vibrations of earthquakes

Richter Scale - A logarithmic scale, ranging from 1 to 10, for indicating the intensity of an earthquake

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Radius - The distance from the center of a circle to any point on its circumference

Wave - A transference of energy