

Glossary for *The Changing Earth*

Words with an asterisk (*) are important bolded words in this Reader that are not part of the reading lessons.

A

***active volcano**, *n.* a type of volcano that has erupted in the past 10,000 years and is likely to erupt again (**active volcanoes**)

aftershock, *n.* a smaller, weaker earthquake that often follows a main earthquake event (**aftershocks**)

altar, *n.* a platform or table used as a center of worship in religious ceremonies or services (**altars**)

B

basalt, *n.* heavy, dense rock formed from cooled, hardened lava

basin, *n.* a large area in the earth that is lower than the area around it (**basins**)

bitter, *adj.* 1. resentful and angry because of unfair treatment; 2. very cold

bulge, *v.* to stick out or swell

C

caldera, *n.* a crater caused by the collapse of the top of a volcano

canyon, *n.* a deep valley with steep sides and often a stream or river flowing through it (**canyons**)

catastrophe, *n.* a terrible, sudden event (**catastrophes**)

***chemical weathering**, *n.* a process that breaks down rocks by changing the minerals they contain

climate, *n.* the average weather conditions of a particular area

clustered, *adj.* grouped close together

***coal**, *n.* a dark, solid substance in the earth formed from plant fossils and used as fuel

***collide**, *v.* to crash together with strong force (**colliding**)

compact, *v.* to closely pack or press together (**compacts, compacting**)

conclude, *v.* to decide something or form an opinion based on information you have (**concluded, n. conclusion**)

continental drift, *n.* a process in which continents slowly move over time on the surface of the earth

contract, *v.* to shrink slightly or get smaller

crater, *n.* a bowl-shaped opening at the top of a volcano or geyser

***crust**, *n.* Earth's outermost layer, featuring a rocky surface

D

dense, *adj.* thick or heavy (**denser**)

deposit, 1. *v.* to put or leave something in a particular place; 2. *n.* material laid down or left by a natural process (**v. deposited, n. deposits**)

descend, *v.* to move downward (**descends**)

detective, *n.* a person whose job is to find information about someone or something (**detectives**)

dissolved, *adj.* mixed with liquid so no solid pieces are visible anymore

distant, *adj.* far away in time

dome mountains, *n. mountains generally formed when magma pushes upward into Earth's crust from the mantle and cools into igneous rock underground, causing the crust above it to bulge; usually occur as isolated mountains on otherwise flat plains

dormant volcano, *n. a type of volcano that is considered active but hasn't erupted for a very long time

drift, *v. to slowly move with water, wind, or other natural processes (**drifted**)

durable, *adj.* able to last a long time in good condition

dwelling, *n.* a place where someone lives (**dwellings**)

E

elder, *n.* a person who is older, respected, and often in a position of authority (**elders**)

entomb, *v.* to bury (**entombed**)

epicenter, *n. the point on Earth's surface directly above an earthquake's focus

erosion, *n. any process or force that moves sediments to new locations

erupt, *v.* to send out rock, lava, and ash in a sudden explosion (**erupted, *n.* eruption**)

eruption column, *n.* an enormous cloud of ash, bits of rock, and toxic gas produced by a volcanic eruption that can travel hundreds of feet per second

eternal, *adj.* lasting forever, with no beginning and no end

evacuate, *v.* to remove people from a dangerous place

evidence, *n.* proof; information and facts that are helpful in forming a conclusion or supporting an idea

excavation, *n.* a hollowed-out place formed by digging or carving (**excavations**)

exert, *v.* to cause a force to be felt or have an effect (**exerts**)

expand, *v.* to get bigger

experiment, *n.* a scientific test to try out something in order to learn about it

extinct volcano, *n. a type of volcano that has not erupted for at least 10,000 years (**extinct volcanoes**)

eyewitness, *n.* a person who has seen something happen and is able to describe it

F

fault, *n.* a crack in Earth's crust (**faults**)

fault-block mountains, *n. mountains formed when gigantic blocks of rock move up and down along faults

fine, *adj.* very small

firsthand, *adv.* coming directly from actually seeing or experiencing something

focus, *n. the place in Earth's crust where huge blocks of rock move along a fault, triggering an earthquake

fold mountains, *n. mountains formed when rocks are pushed up into huge folds by moving tectonic plates

force, *n. strength, power (**forces**)

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fossil, n. the preserved remains of things that lived long ago (**fossils**)

foundation, n. the basis of something, the support upon which something else is built (**foundations**)

G

geologist, n. a scientist who studies the makeup of the earth and the forces and processes that shape and change it (**geologists**)

***geyser, n.** an underground hot spring that periodically erupts, shooting hot water and steam into the air (**geysers**)

granite, n. a common igneous rock that forms from magma that cooled within Earth's crust

H

heave, v. 1. to move up and down over and over; **2.** to lift, pull, push, or throw with a lot of effort

hoodoo, n. the tallest kind of pinnacle (**hoodoos**)

hotspot, n. a very hot region deep within Earth's mantle where a huge magma chamber forms (**hotspots**)

hot spring, n. a naturally flowing source of hot water (**hot springs**)

hydrothermal vent, n. a deep-sea geyser that forms as seawater sinks down through cracks in the oceanic crust and then releases extremely hot, mineral-rich water back up through cracks in the crust (**hydrothermal vents**)

hypothesis, n. an idea that has been suggested and may be true but has not yet been proven

I

***ice wedging, n.** a process in which water alternately freezes and thaws and breaks rocks apart

***igneous rock, n.** rock that forms when magma cools and solidifies (**igneous rocks**)

***inner core, n.** Earth's deepest layer, made of very hot, solid metal

L

lava, n. red-hot melted rock that has erupted above Earth's crust from deep underground

***limestone, n.** a sedimentary rock often packed with the fossilized skeletons and shells of tiny ocean creatures that is commonly used for building

litter, v. to scatter in disorder (**littered**)

lofty, adj. high up

M

magma, n. melted rock in Earth's mantle

magnitude, n. an earthquake's strength

***mantle, n.** Earth's largest and thickest layer that consists of very hot, very dense rock

***metamorphic rock, n.** rock that forms when minerals in igneous, sedimentary, or older metamorphic rocks are changed due to extreme heat and pressure (**metamorphic rocks**)

mineral, n. a solid, nonliving substance found in the earth that makes up rocks (**minerals**)

moai, n. statues on Easter Island carved from tuff in the shape of partial human figures with large heads, high cheekbones, and heavy brows

O

observation, n. 1. the act of paying careful attention to gather information; 2. a statement based on paying careful attention to something (**observations**)

obsidian, n. a dark rock or natural glass formed from lava that cooled very quickly

ocean trench, n. a narrow, extremely deep valley formed when the seafloor dips down as one tectonic plate slides under another (**ocean trenches**)

offering, n. something that is presented as an act of worship (**offerings**)

***outer core, n.** the layer within Earth between the inner core and the mantle that is made of very hot, liquid metal

outsmart, v. to trick or defeat someone by being clever

P

panic, v. to be fearful in a sudden and overpowering way (**panicked**)

pepper, v. to sprinkle or cover

***physical weathering, n.** a process that breaks big rocks into smaller rocks without changing the minerals they contain

pinnacle, n. a slender, soaring rock formation made of tuff (**pinnacles**)

pinpoint, v. to figure out the exact location of something

plate tectonics, n. a theory that Earth's crust and the solid top part of the mantle are broken up into sections that fit together but move against each other

plume, n. a column of magma that rises from the mantle into a chamber beneath Earth's crust

porthole, n. a small, round window on the side of a ship, submersible, or aircraft (**portholes**)

pressure, n. the weight or force produced when something presses or pushes against something else

pyroclastic flow, n. a sort of avalanche of intensely hot ash, rock fragments, and volcanic gas that rolls quickly down the side of a volcano (**pyroclastic flows**)

R

revenge, n. the act of getting even for a wrongdoing

***rock cycle, n.** the continuous cycle in which rocks are created, destroyed, and recreated

rugged, adj. having a rough, uneven surface

S

scald, v. to burn with very hot water or steam

school, n. a large number of ocean animals of one type swimming together (**schools**)

sea level, n. the average height of the ocean's surface

seamount, n. an underwater volcano that forms wherever magma is erupting through oceanic crust (**seamounts**)

***sediment, n.** rock, sand, or dirt that has been carried to a place by water, wind, or other natural processes (**sediments**)

***sedimentary rock, n.** rock that is made of sediments that have been naturally compacted and cemented together (**sedimentary rocks**)

seismic wave, n. a surge of energy traveling out from an earthquake's source through the earth (**seismic waves**)

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***seismogram, n.** the record a seismograph makes, showing seismic waves as jagged up-and-down lines

***seismograph, n.** an instrument used to track seismic waves traveling through the earth (**seismographs**)

sensor, n. an instrument that detects and measures changes, and then sends information to a controlling device (**sensors**)

sheer, adj. very steep, almost straight up and down

sheet, n. a broad stretch of something (**sheets**)

silt, n. very small sediments deposited by water

solidify, v. to make or become hard or solid (**solidifies**)

state, n. the condition of being a solid, liquid, or gas

strong-willed, adj. determined to do what you want even if other people tell you not to

***subduction, n.** a process in which a heavier oceanic plate slides under a lighter continental plate

subduction zone, n. the place where one tectonic plate is sliding beneath another tectonic plate (**subduction zones**)

submersible, n. a small vehicle that can travel deep under water for research (**submersibles**)

surge, v. to move forward quickly, suddenly, and with force (**surges**)

T

texture, n. the size, shape, and sorting of mineral grains in rocks

theory, n. an explanation for why something happens based on evidence

trigger, v. to cause something to start or happen (**triggered**)

tsunami, n. a gigantic wave of seawater caused by an earthquake in oceanic crust (**tsunamis**)

tuff, n. a type of volcanic rock formed from hardened volcanic ash

U

ultimately, adv. finally; at the end of a process

underlie, v. to be located under something (**underlies**)

undertaking, n. something that someone takes on as a task or duty

V

volcano, n. a hill or mountain that forms over a crack in Earth's crust from which lava erupts (**volcanoes**)

W

***weather, v.** to break down into smaller pieces (**n. weathering**)