VOCABULARY

absolute time	geologic time measured in a specific duration of years
atmosphere	the gaseous envelope of a planet
basaltic	common gray to black volcanic rock, usually fine-grained due to rapid cooling of lava
catastrophism	theory that Earth's rock layers formed in a global flood followed by the uplifting of rocks and mountain building over a short, violent period, possibly in the recent past
climate	long-term weather patterns of a particular area
cyanobacteria	simple photosynthetic bacteria; evidence indicates they are among the earliest forms of life
eon	longest interval of geologic time
era	major divisions of geologic time within each eon; identified by major changes in the fossil record
eukaryotic	a cell that has complex internal structures, such as a nucleus; e.g., plant and animal cells
glaciation	the advance and retreat of large masses of slow-moving ice
gradualism	theory that rocks form slowly over time through processes of volcanism, erosion, and sedimentation
Greenhouse Effect	warming of the atmosphere caused by gases that absorb heat from Earth's surface
index fossil	a fossil that is widespread geographically but only occurs in one layer or a small number of layers of rock

law of cross-cutting (or intrusive) relationships	in a sequence of layered rocks, the crosscut, or intrusive feature, is younger than the layers it intercedes
law of faunal and floral succession	animals and plant fossils occur in consistent sequences through time, generally changing from simpler to more complex
law of original horizontality	sediment deposited into water will settle at the bottom in flat, horizontal layers
law of original lateral continuity	sediment deposited into water will spread in a horizontal and continuous sheet
law of superposition	any undisturbed sequence of layered rocks has the oldest rock on the bottom and newest rock on the top
mass extinction	the process in which huge numbers of species die out suddenly
molecular clock	a technique for estimating the age of species by comparing molecular differences between species
outgassing	to lose gasses into the atmosphere
paleontology	study of fossils
Pangaea	supercontinent which connected the landmasses of the southern and northern hemispheres
period	major divisions of geologic time within each era; identified by changes in the fossil record
prokaryotic	a simple cell that lacks complex internal structures, e.g., bacterial cells
radioactive decay	spontaneous disintegration of the atoms of certain isotopes into new isotopes
radiometric dating	dating a rock or mineral by measuring the proportions of an original radioactive material and its decay products

relative dating	process to determine the general time sequence of historic events, rock strata, and fossils
relative time	placing events in chronological order without reference to their ages measured in years
rifting	process by which the earth's crust is pulled apart and new crust forms
sediment	dirt, pieces of rock, and the remains of living things at the bottom of oceans, seas, and lakes
stratigraphy	study of rock layers and the processes that form them
stromatolite	layered structure produced by colonies of cyanobacteria; among earliest fossil evidence of life
uniformitarianism	geologic principle that Earth's processes act in the same manner today as they always have throughout Earth's history