

Unit: 1. ORIGIN OF THE EARTH

VOCABULARY

accretion	process of steady growth of an object by a steady accumulation of material
aphelion	farthest point from the Sun in a planet's orbit
astronomer	a scientist who studies various stars, galaxies, and planets of the universe
astronomy	the study of the universe beyond the earth
atmosphere	the gaseous layer of a planet usually retained by its gravity
big bang theory	theory that suggests the origin of the universe started with a "bang" and expansion of a very hot, dense, compact fireball
biosphere	the system of Earth by which living organisms exist
condensation theory	theory about the origin of the solar system that agrees with the nebular theory, but stresses the importance of interstellar dust in planet formation
cosmic microwave background radiation	remaining heat or energy left over by the big bang
cosmological principle	states that the universe looks the same at any location, but can change over time
cosmologist	scientist who studies the origin and structure of the universe
cosmology	the study of the origin and structure of the universe
cryosphere	the frozen water or ice system of a planet
differentiation	a process creating different layered compositions of a planet

Doppler effect	a change in the frequency of sound or light waves that can determine distance
ellipse	geometric shape resembling a flattened circle that has two focal points
galaxy	a large scale collection of stars, dust, and gas held together by gravity
general relativity theory	Albert Einstein's theory that space and time are relative to matter
geocentric	model of the solar system that suggested earth was the center of the universe and everything orbited around it
geologist	a scientist who studies topics related to the structure and composition of the earth
geology	the study of the structure of the earth, and the physical forces that continuously impact the structure of the earth itself
geosphere	the solid, rocky layer of a planet
heliocentric	model of the solar system that suggested the Sun was the center of the universe, and planets orbit it in circular paths
Hubble expansion law	the recessional velocity, which is the speed of a celestial body moving away from the observer, is proportional to its distance
hydrosphere	the water system of the earth; includes solid, gas, and liquid water
inertia	the tendency of an object to remain in its current state; if it is at rest to remain at rest, and if it's in motion, to remain in motion
inflation theory	theory that upholds the big bang theory, but suggests there was an extremely rapid expansion or inflation milliseconds after the big bang
interstellar	among or between stars

isotropic	identical in all directions
lithosphere	the solid, crustal layer of Earth
meteorologist	a scientist who studies the changes in atmospheric conditions that produce different weather and climate patterns
meteorology	the study of the earth's atmosphere and the processes that produce weather and climate conditions
nebula	enormous cloud of gas and dust in space
nebular theory	theory about the origin of the solar system that suggests our Sun and planets formed from a cloud of dust and gas
nuclear fusion	a nuclear reaction where nuclei combine and release intense energy
nuclei	the center of an atom containing most of its mass
oceanographer	a scientist who studies the oceans of the earth using the scientific disciplines of biology, chemistry, physics, and geology
oceanography	the study of the earth's oceans
oscillating universe theory	theory about the origin of the universe that suggests the universe is a never-ending cycle of expansion and contraction
perfect cosmological principle	steady state theorists' belief that the universe looks the same in the past, present, and future, and does not change over time
perihelion	closest point to the Sun in a planet's orbit
primordial	primitive; in its earliest form
protoplanet	a planet in its first stage of development
protostar	a star in its first stage of development
quasars	the oldest and farthest celestial bodies of the universe

radiation	emission of energy
redshift	an increase of wavelength of radiation emitted by a celestial body moving away from an observer
solar nebula	cloud of gas and dust from which our solar system formed
steady state theory	theory about the origin of the universe that suggests the universe has and will continue to be at a steady, continuous state
stellar evolution	the life cycle of a star
supernova	an explosion of a star that emits large amounts of matter and energy
visible color spectrum	array of colors visible to the naked eye