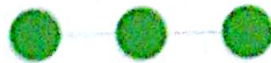


Earth, Moon, and Sun

GLOSSARY



altitude The angle between a celestial object and the horizon measured at right angles to the horizon.

artificial satellite A human-made object that orbits Earth or another celestial body.

axis The real or imaginary straight line through the center of an object around which it rotates.

celestial navigation The determination of location on Earth, or in air or space, by observations of the position of the Sun, Moon, or stars.

crescent The first and last phase of the lunar cycle, in which the Moon appears to have one very concave edge and one very convex edge.

direct sunlight Sunlight that reaches the surface of the Earth at angles greater than 45° from the horizon.

equinox The moment when the Sun crosses the celestial equator and the day and night are of equal length anywhere in the world; *equinox* means "equal night."

first quarter Moon The lunar phase between new Moon and full Moon in which half of the lighted portion of the Moon is visible.

full Moon The lunar phase in which the entire lighted surface of the Moon is visible.

gibbous The lunar phases between quarter Moon and full Moon in which the Moon has convex edges.

gnomon An object that, by the position or length of its shadow, measures the Sun's altitude and serves as an indicator of the hour of the day.

gravity A fundamental property of matter that produces a mutual attraction between all bodies. Although gravity is by far the

weakest of the known forces of nature, on an astronomical scale it overwhelms all other forces, determining the motions of planets, stars, galaxies, and even the universe.

horizon The apparent junction between Earth and the sky.

indirect sunlight Sunlight that reaches the surface of the Earth at angles less than 45° to the horizon.

latitude The angular distance north or south on the Earth's surface measured from the equator.

local noon Time when the Sun reaches its highest point during the day for a given place on Earth.

longitude The angular distance east or west on the Earth's surface as measured from the Prime Meridian in Greenwich, England.

lunar Of or relating to the Moon.

lunar eclipse The passage of the Moon behind the Earth, occurring at full Moon, so that Earth is positioned between the Sun and the Moon.

midnight The time at which the Sun is on the meridian on the opposite side of the Earth; midnight does not necessarily correspond to the clock.

natural satellite A naturally occurring body that orbits a larger celestial body; a natural satellite that orbits a planet is called a "moon," after our Moon.

neap tide The diminished tidal effect that occurs when the Moon is at first and third quarter and pulling at right angles to the Sun, so that the tidal effects are working against each other.

new Moon The lunar phase in which the lighted side of the Moon faces away from Earth and so the Moon is not visible.

noon The time at which the Sun is on the meridian for a given location on Earth; noon does not necessarily correspond to the clock.

orbit The path followed by an object in its revolution around another body.

partial eclipse An eclipse (lunar or solar) in which the disk of the Moon or Sun is not completely covered by the eclipsing body.

phase Any of the various stages of illumination of the Moon or a planet by the Sun.

planet Any substantial celestial body, massive enough to be round, that orbits the Sun.

Polaris A star that lies nearly in a direct line with Earth's axis above the North Pole; because of Earth's rotation, this so-called North Star seems to be a fixed point around which the other stars of the northern sky appear to rotate.

Prime Meridian The zero point for longitude that, by mutual agreement, passes through Greenwich, England, via the geographic North and South Poles.

rectified Corrected by adjustment.

revolution The action of a celestial body going around in an orbit.

rotation The action of turning about on an axis.

solar eclipse The passage of the Moon between the Sun and the Earth, occurring at new Moon.

solar system The astronomical group of objects consisting of the Sun and all the bodies that orbit it.

solstice The moment when the Earth's axis is inclined at its maximum (23.5°) toward or

away from the Sun; on or about June 21 and December 21.

spring tide Tide that is higher than normal, occurring at new and full Moon, when the Sun and Moon are pulling in line and their tidal effects combine.

star A large, luminous sphere, made up of primarily hydrogen and helium, that derives its energy from nuclear fusion.

sundial An instrument used to show the time of day by casting a shadow on a horizontal plate or cylindrical surface.

sunrise The apparent rising of the Sun above the horizon; the time when the uppermost portion of the Sun's disk appears above the horizon as a result of the rotation of the Earth.

sunset The apparent descent of the Sun below the horizon; the time when the uppermost portion of the Sun's disk disappears below the horizon as a result of the rotation of the Earth.

third quarter Moon The lunar phase between full Moon and new Moon when half the lighted portion of the Moon is visible.

tide The rhythmic rise and fall of the surface of the sea that occurs twice each day and is due to the gravitational attraction between the Moon and Earth and the Sun and Earth; because the Moon is so much nearer, it has about twice the effect on tides as the Sun does.

total eclipse An eclipse (lunar, solar, or other) in which the entire disk of the Moon, Sun, or other object is covered by the eclipsing body.

Universal Time The time at the Prime Meridian, usually given in terms of a 24-hour clock.

Note: The Delta Science Reader includes its own glossary of terms.