

## Solar System Glossary

<b>Apogee</b>	The point in an object's elliptical orbit farthest from the body it is orbiting
<b>Atmosphere</b>	The air that surrounds Earth and other planets & moons
<b>Asteroid</b>	Minor Planet
<b>Axis</b>	An imaginary line around which a planet seems to be turning
<b>Autumn</b>	The season between summer and winter, starting on or about September 22 (Autumnal Equinox) in the northern hemisphere and ending on December 21 (Winter Solstice)
<b>Barred spiral</b>	A type of galaxy which has a central nucleus and open arms trailing from the bar
<b>Big Bang Theory</b>	A model defined by Hubble to explain the universe as an ever-expanding entity starting as tiny particles of matter
<b>Black holes</b>	An extremely dense object which has such a strong gravitational pull that even light cannot escape from it
<b>Bulges</b>	Swells in the ocean during tides caused mainly by the movement of the Earth and the moon
<b>Comet</b>	An object made from ice and rocky material which travels in long elliptical orbits in an out of our solar system
<b>Constellation</b>	A group of stars seen in one part of the night sky. Ex: The Big Dipper
<b>Crescent</b>	The moon at any stage between new moon and first quarter moon, and between third quarter moon and the succeeding new moon when less than half of the illuminated hemisphere is visible
<b>Cycle</b>	Any series of actions or events that happen over and over. Ex. The Water Cycle
<b>Diameter</b>	The length of a straight line through the center of a body
<b>Ebb Tide</b>	The flow of ocean water away from the coast as low tide approaches
<b>Eclipse</b>	The temporary blotting out of the light of a heavenly body

<b>Elliptical Galaxy</b>	A galaxy in the shape of an ellipse
<b>Equator</b>	An imaginary line that circles the Earth halfway between the North and South Poles at 0 degrees latitude
<b>Equatorial</b>	Relating to the equator
<b>Equinox</b>	Time of the year when the sun crosses the equator on its way to the Tropic of Cancer (23.5° -N - Vernal Equinox) or the Tropic Capricorn (23.5° S - Autumnal Equinox)
<b>Fall</b>	(see Autumn)
<b>First Quarter</b>	Occurs from the waxing crescent to waxing gibbous moon phases
<b>Full Moon</b>	A view of the entire lighted side of the moon from Earth
<b>Fusion</b>	Combining the nuclei of two or more atoms to form another atom. For example, two hydrogen nuclei can be fused to make a helium atom. When this is done a huge amount of energy is released
<b>Galaxy</b>	A large system of stars that is held together by gravitational attraction
<b>Gibbous moon</b>	An almost full moon. Gibbous means humpbacked
<b>Gravity</b>	The force of gravitation felt on Earth and other bodies in space. It keeps the planets in orbit around the sun
<b>Hemisphere</b>	One half of a planet or other celestial body
<b>Hertzprung-Russel</b>	A chart that relates the brightness of stars to diagram their temperature
<b>High tide</b>	The rise of the ocean water higher and farther up on a beach or coastline. High tide is caused by the pull of the moon's gravity. In most places on Earth it usually occurs about twice a day
<b>Irregular Galaxy</b>	The least common type of galaxy which has no distinct shape. For example: the Large and Small Magellanic Clouds
<b>Last Quarter</b>	Occurs from the full moon to the waning crescent moon phases

<b>Low tide</b>	The movement of ocean water away from a beach or coastline. Low tide comes to an area when the moon, with its gravitational pull is closest to the opposite side of the Earth. In most places it occurs about twice a day
<b>Luminosity</b>	The quality or state of emitting or reflecting light; brightness
<b>Lunar eclipse</b>	The time when Earth comes between the sun and the moon, casting a shadow on the moon
<b>Magnitude</b>	Measure of a star's brightness
<b>Main sequence star</b>	Star located in an area that runs from the upper left corner to the lower right corner of the Hertzsprung-Russell diagram
<b>Milky Way</b>	A spiral galaxy to which our solar system belongs
<b>Moon</b>	Earth's only natural satellite and our nearest neighbor in space
<b>Natural satellite</b>	A smaller body that revolves around a larger body such as a planet. The moon is a natural satellite of the Earth
<b>Neap tide</b>	The tide with the smallest range between high and low tides. Neap tides occur twice a month when the sun and moon are at right angles to each other
<b>Nebula</b>	A huge cloud of matter caused by a supernova. Gravity can pull the dust and gas together until it is dense enough to cause a nuclear reaction and create a new star
<b>New moon</b>	The moon is not visible because the lighted side is facing away from the earth
<b>Nuclear</b>	Having to do with the nucleus of atoms
<b>Orbit</b>	The path of a heavenly body around another. It takes the earth one year to complete an orbit around the sun
<b>Partial eclipse</b>	Occurs when only a portion of the sun or moon is covered during an eclipse
<b>Penumbra</b>	The lighter part of a shadow where only some of the light source is blocked
<b>Perigee</b>	The point in an object's elliptical orbit closest to the body it is orbiting

<b>Phase</b>	A change in the apparent shape of the moon
<b>Planet</b>	A heavenly body that revolves around a star
<b>Pulsar</b>	A rotating neutron star that gives off radio waves
<b>Quasar</b>	An object in space that appears to be as large as a very large star but gives off energy comparable to a thousand galaxies
<b>Radiation</b>	A form of energy, such as heat, light, X rays, microwaves, or radio waves
<b>Reflection</b>	The change in direction of a wave of energy, bouncing off a surface
<b>Revolution</b>	The motion of the earth around the sun, or of any body around the object it is orbiting
<b>Rotation</b>	The daily turning of the earth or any object on its axis
<b>Season</b>	One of four periods of the year (spring, summer, autumn, and winter), each with a set of average temperatures, weather conditions, and lengths of daylight. Some tropical areas have only 2 seasons: wet and dry
<b>Shadow</b>	The dark image or shade cast by an object where it blocks light
<b>Solar Eclipse</b>	The time when the moon comes between the earth and the sun
<b>Solar System</b>	The sun and all the objects that revolve around the sun
<b>Solstice</b>	Time of the year when the sun's direct vertical rays reach their farthest point north or south of the equator
<b>Spiral galaxy</b>	Stars revolving around a central nucleus in the same direction as its arms
<b>Spring</b>	The season between winter and summer. In the Northern Hemisphere it starts on or about March 21 (vertical equinox) and ends on or about June 21 (summer solstice)
<b>Spring tide</b>	The very high tide that comes at a new moon or full moon. The sun and moon are in a line and pull on the water creating a tidal bulge
<b>Star</b>	Large body, such as the sun, that produces its own energy through a series of nuclear reactions

<b>Supernova</b>	A star that explodes and dies
<b>Summer</b>	The warmest season of the year. Summer comes between spring and autumn. In the Northern Hemisphere it starts on or about June 21 (summer solstice)
<b>Tides</b>	The regular rise and fall of ocean water caused by the pull of the moon and sun's gravity
<b>Tilt</b>	Slant, the Earth's axis is on a 23.5 degree slant, which causes our seasons
<b>Total eclipse</b>	Occurs when the sun, moon, and earth are exactly lined up. The moon's umbra falls on the earth and the sun cannot be seen from that part of the earth
<b>Tropic of Cancer</b>	The parallel of latitude that is approximately 23 ½ degrees north of the equator
<b>Tropic of Capricorn</b>	The parallel of latitude that is approximately 23 ½ degrees south of the equator
<b>Umbra</b>	The dark central part of a shadow cast by the earth or moon during an eclipse, where the entire light source (the sun) is blocked out
<b>Universe</b>	All of space, matter, and radiation
<b>Waning</b>	Growing smaller
<b>Waxing</b>	Growing bigger
<b>Winter</b>	The coldest season of the year. Winter comes between autumn and spring. In the Northern Hemisphere it starts on or about December 21 (winter solstice) and ends on or about March 21 (vernal equinox)