



SETI INSTITUTE

## Glossary

**Astronaut.** A person who trains for space travel.

**CASETI.** Cultural Aspects of the Search for Extraterrestrial Intelligence.

**Earth.** In our solar system, the third planet from the Sun. Our home world!

Gravity (Earth = 1): 1

Mean Distance from the Sun (million km): 149.6

Mean Distance from the Sun (AU): 1

Period of Revolution: 365.26 days

Period of Rotation: 23 hr., 56 min., 4 sec.

Axial Tilt: 23° 27'

Equatorial Diameter (km): 12,756

Volume (Earth = 1): 1

Main Component(s) of Atmosphere: Nitrogen, Oxygen

Atmospheric Pressure (Earth = 1): 1

Known Natural Satellites: 1

**Extraterrestrial.** Any living organism not of or from Earth. Often, this term assumes intelligence. Currently, we know of no extraterrestrials, intelligent or otherwise. This term is often applied to fictitious "space aliens."

**Hypothesis.** A tentative explanation of an observation; an educated guess. A hypothesis must be testable. When enough experimental results confirm a hypothesis to the point that the scientific community generally accepts its validity, a hypothesis becomes a theory. A theory is considered to be true and factual, the best-available scientific explanation.

**Life.** There is no simple definition for life. Living things have specific structures and metabolism; living things respond to stimuli and reproduce themselves. On Earth, all life is cellular and has DNA and/or RNA (except viruses, which are not considered to be alive).

**"Needle in the haystack."** An expression describing something that is hard to find because it is so small, and because it is hidden in something so big. In the search for extraterrestrial intelligence, the needle is a radio signal sent by extraterrestrial life, and the haystack is our Milky Way Galaxy. Of course, there may be many, many needles in this haystack—or perhaps there are none.

**Orbit.** The path an object follows around another object, such as the path of a planet around its star, the path of a moon around its planet, or the path of a satellite or spacecraft around a moon, planet, or star.

**Planet.** A substantially large body that is held in orbit around a star, such as Earth, Mars, or Venus (which orbit around the Sun). Planets do not generate their own light but only reflect the light of a nearby star.

**Planetology.** The study of planets. Comparative planetologists explore and compare the planets to learn of their composition, formation, and the dynamics responsible for their major features. These questions are important to our understanding of life in our solar system.

**Satellite.** An object in orbit around another object. Satellites can be natural (Earth's moon) or artificial (a telecommunications satellite).

**SETI.** The Search for Extraterrestrial Intelligence. This search is being conducted by the SETI Institute in Mountain View, California, and by other organizations and researchers around the world. They are using radio telescopes to search for radio signals coming from planetary systems around likely stars in a "targeted search."

**Spacecraft.** A vehicle designed for orbital or interplanetary travel. In this guide, the term is used to describe the portion of the vehicle that travels through space, as opposed to the *lander*, which is sent down to a planet's surface. Sometimes one vehicle can take on both roles.

**Star.** A hot, glowing mass; a sphere of gas that emits energy (electromagnetic radiation) from nuclear fusion reactions in its core. Stars have gravity, which holds planets in orbit around them. Stars could not support life as we know it on their surfaces.

**Sun.** The star around which Earth orbits. Our star is named Sol. It is a very typical star. It only appears to be exceptional because we are so close to it and so far away from other stars.