



Expedition Mars Pre-Mission Vocabulary



CLC Terms

Mission Commander – the person who is in charge of the astronauts onboard a space vehicle

Flight Director – the person who supervises a space mission from Mission Control

Simulator – an artificial environment created to resemble an actual place

Task Cards – a step-by-step set of written instructions for performing a job

Orientation – an introduction, as to guide one in adjusting to a new activity

Airlock – a device that permits the passage of people and objects between areas while minimizing the change of pressure and loss of air

Communication (COM) – means of sending or receiving information

Navigation (NAV) – the science of getting ships, aircraft, or spacecraft from place to place, especially related to the method of determining position, course, and distance traveled

Medical (MED) – relating to the science of medicine, or to the treatment of illness and injuries

Robotics (BOT) – a branch of engineering that involves the conception, design, manufacture, and operation of robots that can assist humans in a variety of ways



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ROV – a remotely operated vehicle that is an unmanned tool for exploring distant locations

Geology (GEO) – the science that deals with the history of the earth and its life, especially as recorded in rocks

Biology (BIO) – the branch of science that deals with living organisms and their vital processes

Life Support (LS) – the components of a spacecraft that address the core needs of human life, including air, water, and oxygen supply

Space Weather (SW) – the variable conditions on the sun and in space that can influence the performance of the technology we use on Earth

Mars Mission Terms

Docking – joining with a space station or another spacecraft while in space

Altitude – the vertical elevation of an object above a surface (such as sea level or land) of a planet or natural satellite

Velocity – the speed of something in a given direction

Satellite – an artificial body placed in orbit around the Moon, Earth, or another planet in order to collect information for communication

Orbit – the path followed by an object around another object

Crater – a basin resulting from the collision of an object with a planetary surface



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Drone – a remote-controlled pilotless aircraft or small flying device used for many purposes, including surveying the land and transporting materials

Deploy – to bring into action and make useable

Atmosphere – the envelope of gases surrounding the earth or another planet

Asteroid – a large, irregularly shaped rocky object in space that orbits the sun

Ejecta – material or particles that are forced or thrown out of an area after a forceful impact has occurred

Impact – the action of one object coming forcibly into contact with another

Greenhouse – a structure enclosed and used for the cultivation of or protection of plants

Touchdown – the moment at which a part of a spacecraft makes contact with the ground during landing

Troubleshoot – to identify, plan, and resolve a problem

Job-Specific Terms

Frequency – the number of waves that pass a fixed place in a given amount of time (COM)

Calibrate – to adjust precisely for a particular function (COM)

Descent – an action of moving downward, dropping, or falling (NAV)



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Liquid Fuel – the substance that burns to create the expanding gases that power a rocket engine (NAV)

Oxidizer – a source of oxygen necessary in the vacuum of space, where there is no oxygen to help ignite the fuel (NAV)

Aerobraking – a spaceflight technique wherein an orbiting spacecraft brushes against the top of a planetary atmosphere (NAV)

Vital Signs – measurements of the body's most basic functions, including body temperature, blood pressure, heart rate (pulse), and breathing rate (MED)

Remote Team – group of individuals who are located in a place physically distant from the rest of the team (MED)

Triage – the sorting of patients according to the urgency of their need for care (MED)

Radiation – a form of energy that is emitted in the form of rays, electromagnetic waves, and/or particles; space radiation can cause health problems in astronauts who are exposed (MED)

Program – to provide a computer or machine with coded instructions for the automatic performance of a task (BOT)

Payload – the object or the entity that is being carried by a vehicle (ROV)

Bus – the ROV body that holds the core (ROV)



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Vein – a line formed on a rock when water passes over it; can show that at one point the rock was exposed to water (GEO)

Porous – description of a rock that has a lot of small holes in it (GEO)

Microbe – a living thing that is small or microscopic, such as bacteria or fungi (BIO)

Air Pressure – the pressure exerted by the weight of air on the earth's surface (LS)

TDS – total dissolved solids; a measure of anything dissolved in water that is not an H₂O molecule (LS)

Humidity – the amount of water vapor in the air (LS)

pH – a scale used to specify the acidity or basicity of a liquid (LS)

Starfield – any set of stars visible in a field view of a telescope, usually in the context of some region of interest (SW)