












Teachers' Guide: Student Job Descriptions

Team Name	Description	Student Placement Tips	Career Connections
<p style="text-align: center;">Biology (BIO)</p> 	<p>Responsible for collecting data about organisms and environmental factors that impact space exploration, testing soil to determine if microbes are present, and swabbing surfaces for signs of bacteria.</p>	<p>Students on this team should feel comfortable working on collaborative experiments making quick decisions based on results.</p> <p><i>SKILLS: following procedures, observation, graphing, drawing conclusions</i></p>	<ul style="list-style-type: none"> ● Biologist ● Environmental researcher ● Botanist
<p style="text-align: center;">Robotics (BOT)</p> 	<p>Responsible for programming the ROV, testing the capabilities of a robotic arm, and identifying potential dig sites on the Martian surface.</p>	<p>Students on this team should feel comfortable with troubleshooting, problem solving, and working under pressure with their peers to share and analyze data.</p> <p><i>SKILLS: spatial awareness, computational thinking, good communication skills</i></p>	<ul style="list-style-type: none"> ● Mechanical Engineer ● Software Engineer

<p>Geology (GEO)</p> 	<p>Responsible for conducting tests on Martian rocks and minerals, recording and analyzing observations, and mapping possible dig sites on the Martian surface.</p>	<p>Students on this team should feel comfortable collecting and analyzing data with their peers and enjoy experimenting to reveal data.</p> <p>SKILLS: strong observation abilities, hand-eye coordination, patience, follows procedures</p>	<ul style="list-style-type: none"> ● Geologist ● Environmental Engineer
<p>Life Support (LS)</p> 	<p>Responsible for maintaining the life support systems on the spacecraft by monitoring air and water quality and responding quickly to issues to ensure safe conditions for all members aboard the spacecraft.</p>	<p>Students on this team should feel comfortable communicating verbally with their peers to solve problems and enjoy troubleshooting ideas to come to a solution.</p> <p>SKILLS: reading gauges, following procedures, calm under pressure, strong observation skills</p>	<ul style="list-style-type: none"> ● Industrial or Systems Engineer ● Chemist
<p>Medical (MED)</p> 	<p>Responsible for conducting medical tests on the crew to ensure their health and safety, including vital signs and radiation exposure.</p>	<p>Students on this team should feel comfortable interacting with and conducting experiments with their peers.</p> <p>SKILLS: interacts well with others, patience for repetitive tasks</p>	<ul style="list-style-type: none"> ● Nurse or Doctor ● Emergency Medical Technician (EMT) ● Nutritionist

<p>Navigation (NAV)</p> 	<p>Responsible for calculating fuel levels and plotting the course for the spacecraft, performing critical pre-flight checks, and navigating the spacecraft between Phobos and Mars.</p>	<p>Students on this team should feel comfortable reading aloud, have strong communication skills, and be able to pay close attention to written and oral details.</p> <p><i>SKILLS: can complete multi-step math problems, good communication skills, collaborative</i></p>	<ul style="list-style-type: none"> ● Pilot ● Aerospace Engineer ● Mathematician
<p>Communications (COM)</p> 	<p>Responsible for communicating messages between the Spacecraft and Mission Control, communicating critical messages to crew members, and locating and reprogramming communication satellites.</p>	<p>Students on this team should feel comfortable reading aloud, following quick directives and answering questions orally.</p> <p><i>SKILLS: reads well, assertive, calm under pressure, organized, able to multi-task, leadership</i></p>	<ul style="list-style-type: none"> ● Communication Engineer ● Information technologist
<p>Rover (ROV)</p> 	<p>Responsible for collaborating with teammates to build, test, and troubleshoot the remotely operated vehicle (ROV); and installing critical components and retrieving data.</p>	<p>Students on this team should feel comfortable with troubleshooting and problem solving with lab materials and enjoy collaborating with peers.</p> <p><i>SKILLS: collaborative, can perform basic math, closely follows directions, calm under pressure</i></p>	<ul style="list-style-type: none"> ● Computer Scientist ● Mechanical Engineer ● Electrical Engineer

<p>Weather (WX)</p> 	<p>Responsible for researching and learning about celestial objects, monitoring the Martian sky, tracking objects, and calculating trajectories; and tracking and observing dust storms on the Martian surface.</p>	<p>Students on this team should feel comfortable collecting and organizing data and making quick decisions based on results.</p> <p><i>SKILLS: map reading and plotting, basic math, closely follows instructions, analyzing data</i></p>	<ul style="list-style-type: none"> ● Meteorologist ● Astronomer
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