



## Welcome, crew member!

Before your visit to the Challenger Learning Center, you will apply for a specific job in the mission. Please follow the instructions carefully, so you have the greatest chance of being assigned a position that matches your interests and skills.

- 1 Complete the Applicant Profile at the bottom of this page.
- 2 Read the Job Descriptions and Responsibilities to learn about the jobs needed for the mission. As you read, identify the jobs that sound most interesting.
- 3 Complete the Crew Member Job Application on the next page.

<b>Applicant Profile</b>	
<div>_____</div> <div>First NameLast Name</div>	
<b>What interests and hobbies do you have?</b>	<b>What is your career goal? In other words, what do you want to be when you grow up?</b>
<ul style="list-style-type: none"><li>•</li><li>•</li><li>•</li><li>•</li><li>•</li></ul>	

# Expedition Mars - Crew Member Job Application



Now that you have read the Job Descriptions and Responsibilities for the Expedition Mars Mission, it's time to apply for the job you want. Think about your experiences, skills, interests, and goals. Fill out the chart below for your top three choices and answer the questions at the bottom of this page.

Job Ranking	Desired Job (ex. BOT)	What experiences have you had that would help you do this job?	What interests do you have that would make this job exciting for you?
1 <sup>st</sup> Choice			
2 <sup>nd</sup> Choice			
3 <sup>rd</sup> Choice			

**What makes you the best candidate for your first choice?**

**Why do you prefer this job over the other choices?**

**What experience and skills do you have that will help you to do this job successfully?**

# EXPEDITION MARS JOB DESCRIPTIONS AND RESPONSIBILITIES



## BIOLOGY

### BIOLOGY (BIO) TEAM

#### **Job Description:**

Collect data about organisms and environmental factors that impact space exploration. Test soil to determine if microbes are present. Swab surfaces in the spacecraft for signs of bacteria.

#### **Areas of Interest:**

- Environmental science
- Life sciences (plants, animals, organisms)

#### **Career Connections:**

- Biologist
- Environmental researcher
- Botanist



## ROBOTICS

### ROBOTICS (BOT) TEAM

#### **Job Description:**

Test the capabilities of the robotic arm and examine Martian rocks. Programs the ROV by coding safe pathways. Identify potential dig sites on the Martian surface.

#### **Areas of Interest:**

- Engineering design
- Problem-solving and troubleshooting

#### **Career Connections:**

- Mechanical Engineer
- Software Engineer



## COMMUNICATIONS

### COMMUNICATION (COM) TEAM

#### **Job Description:**

Communicate messages between the Spacecraft and Mission Control. Relay critical messages to crew members throughout the mission. Locate and reprogram communication satellites.

#### **Areas of Interest:**

- Leadership role-comfortable with quick thinking and decision-making
- Satellite communications and systems

#### **Career Connections:**

- Communication Engineer
- Information Technologist

# EXPEDITION MARS JOB DESCRIPTIONS AND RESPONSIBILITIES



## GEOLOGY

### GEOLOGY (GEO) TEAM

#### **Job Description:**

Conduct tests on Martian rocks and minerals. Record and analyze observations. Research and map possible dig sites on the Martian surface.

#### **Areas of Interest:**

- Geology (rocks, minerals, and their interaction with the Earth)
- Land and water resources and processes

#### **Career Connections:**

- Geologist
- Environmental Engineer



## LIFE SUPPORT

### LIFE SUPPORT (LS) TEAM

#### **Job Description:**

Maintain the life support systems on the spacecraft by monitoring air and water quality. Respond quickly to issues to ensure safe conditions for all members aboard the spacecraft.

#### **Areas of Interest:**

- Engineering design
- Hands-on experimentation and troubleshooting with lab materials

#### **Career Connections:**

- Industrial or Systems Engineer
- Chemist



## MEDICAL

### MEDICAL (MED) TEAM

#### **Job Description:**

Conduct medical tests on the crew to ensure their health and safety, including monitoring vital signs and radiation exposure.

#### **Areas of Interest:**

- Human anatomy and physiology
- Nutrition, exercise and health

#### **Career Connections:**

- Nurse or Doctor
- Emergency Medical Technician (EMT)
- Nutritionist

# EXPEDITION MARS JOB DESCRIPTIONS AND RESPONSIBILITIES



## NAVIGATION

### NAVIGATION (NAV) TEAM

#### **Job Description:**

Calculate fuel levels and plot the course for the Spacecraft. Perform critical pre-flight checks. Navigate the spacecraft between Phobos and Mars.

#### **Areas of Interest:**

- Flight paths and orbits of celestial bodies.
- Satellite communications and systems

#### **Career Connections:**

- Pilot
- Aerospace Engineer
- Mathematician



## REMOTELY OPERATED VEHICLE

### REMOTELY OPERATED VEHICLE (ROV) TEAM

#### **Job Description:**

Collaborate to build, test, and troubleshoot the remotely operated vehicle (ROV). Install critical components and retrieve data.

#### **Areas of Interest:**

- Engineering design
- Hands-on experimentation and troubleshooting with lab materials

#### **Career Connections:**

- Computer Scientist
- Mechanical Engineer
- Electrical Engineer



## WEATHER

### WEATHER (WX) TEAM

#### **Job Description:**

Research and learn about celestial objects. Monitor the Martian sky, track objects, and calculate trajectories. Track and observe dust storms on the Martian surface.

#### **Areas of Interest:**

- Meteorology
- Analyzing data and tracking information

#### **Career Connections:**

- Meteorologist
- Astronomist