



CREW MANIFEST

MISSION: Expedition Mars

Mission Date: _____ Mission Time: _____ # of Students: _____ Grade: _____

Teacher's Name(s): _____ School: _____

Please bring two (2) copies of this completed **CREW MANIFEST** with you on the day of the mission. Instructions for completing this form are provided on page 2. ***Required to fly Expedition Mars**

	TEAM	MARS TRANSPORT VEHICLE CREW	MISSION CONTROL CREW
1	COM <i>Communications</i>	* _____	* _____
2	NAV <i>Navigation</i>	* _____ _____	* _____ _____
3	ROV <i>Rover</i>	* _____ _____	* _____ _____
4	Weather <i>Weather</i>	* _____ _____	* _____ _____
5	MED <i>Medical</i>	_____ _____	_____ _____
6	BIO <i>Biology</i>	_____ _____	_____ _____
7	BOT <i>Robotics</i>	_____ _____	_____ _____
8	LS <i>Life Support</i>	_____ _____	_____ _____
9	GEO <i>Geology</i>	_____ _____	_____ _____



CUSTOMIZE YOUR CREW

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The crew is customizable based upon the number and talents of your students. We recommend filling in the teams in a manner that fits the strengths of your students and teaching objectives.

To start, review the team descriptions on page 3. This will provide you with details needed to place your students on the most appropriate team. Then follow the guidelines below for completing the crew form on page 1.

Each Team includes at least one student on the Mission Control crew and one student on the Mars Transport Vehicle crew.

- A minimum of 12 students are needed to fly Expedition Mars.
- If you have 12-32 students, you should assign students to the top four (4) teams to start.
 - Place one (1) student on each crew – Mission Control and Mars Transport Vehicle for each team.
 - Once you have assigned one (1) student to the top four (4) teams of both crews, go back and assign students to the remaining teams and/or a second student to the other slot for each team. These students will work as partners.
- Remember, each team member in the Mission Control crew must have a corresponding team member in the Mars Transport Vehicle crew.

If you have questions about completing the Crew Manifest, please call your Challenger Learning Center.



TEAM DESCRIPTIONS

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Review each of these job descriptions to familiarize yourself with the type of work being conducted during the mission.

	TEAM	DESCRIPTION	JOB TITLES
1	COM <i>Communications</i>	<ul style="list-style-type: none"> • Provide communications support between astronauts and Mission Control • Discover and reprogram missing communication satellites 	Communications Engineer CAPCOM
2	NAV <i>Navigation</i>	<ul style="list-style-type: none"> • Calculate and plot the course for the Spacecraft to reach and navigate to Mars from Phobos • Perform critical pre-flight checks to ensure the MTV is ready to fly 	Pilot Commander
3	ROV <i>Rover</i>	<ul style="list-style-type: none"> • Build and test a remotely operated vehicle (R.O.V.) to search Mars for signs of water, installing critical equipment and components and retrieving data 	Mechanical Engineer Electrical Engineer
4	Weather <i>Weather</i>	<ul style="list-style-type: none"> • Locate a missing satellite and track other objects in the Martian sky • Track and observe dust storms on the Mars surface. 	Space Weather Forecaster Meteorologist
5	MED <i>Medical</i>	<ul style="list-style-type: none"> • Monitor the health of the crew with a focus on radiation • Run various diagnostics on different team members, blood pressure, monitoring radiation, and heart rate 	Doctor Nurse
6	BIO <i>Biology</i>	<ul style="list-style-type: none"> • Testing soil to determine the presence or absences of microbes • Checking the spacecraft for signs of beneficial or harmful bacteria 	Biologist
7	BOT <i>Robotics</i>	<ul style="list-style-type: none"> • Examine different Martian rocks through the use of robotic arms • Execute basic programs for unmanned rovers to gather their payloads 	Computer Scientists Mechanical Engineer
8	LS <i>Life Support</i>	<ul style="list-style-type: none"> • Work hand in hand with their peers to ensure safe conditions for all team members on the spacecraft • Manage life support emergencies as they emerge 	Systems Engineer Technical Specialist
9	GEO <i>Geology</i>	<ul style="list-style-type: none"> • Examine different Martian rocks for key elements and minerals • Research and map possible dig sites for important minerals 	Geologist