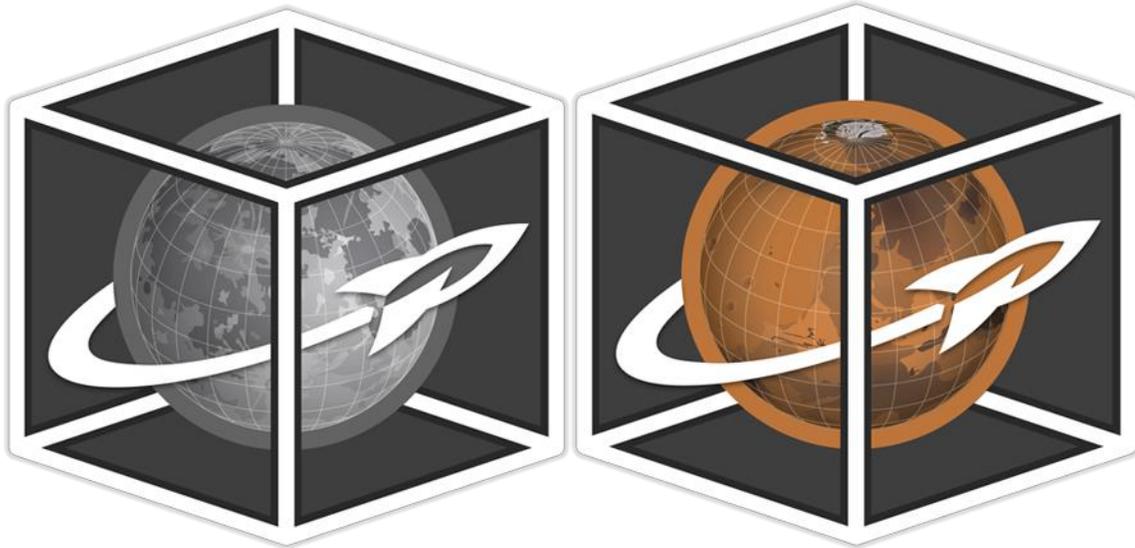


*the Houston Museum of natural science*

## EXPEDITION CENTER PROGRAM



# OPERATION: MOON TO MARS



# Corporate Team Building

The Corporate Team Building Expedition utilizes the HMNS Expedition Center's talented staff and immersive environment to teach team work, communications, decision-making, problem solving, and crisis management. Expeditions are available for groups of ten to forty-five.

## Real World Model

The Expedition Center mimics a real world work place. Today's companies are often global, with a home office and worksite locations around the world. In the HMNS Expedition Center Program, Flight Controllers are the information side of each team, doing research and calculations, gathering data and tracking the progress of their astronaut partners. At the same time the astronauts are doing the hands-on work as they navigate the ship, operate robots, build a satellite and conduct experiments. This environment is often a familiar workplace to companies that have an office that handles information and accounting, and employees who may work in warehouses, oil fields, construction, or other job sites. Communication protocols are NASA-based and allow participants to compare mission communications with their own protocols.

## Better Employees

The Expedition Center Program can help your employees work more efficiently.

- ✦ Improve communications between employees and departments
- ✦ Practice prioritizing tasks and information
- ✦ Work toward a common goal
- ✦ Solve problems efficiently
- ✦ Rely on coworkers and build trust
- ✦ Share a fun experience to boost morale

## Workplace Situations

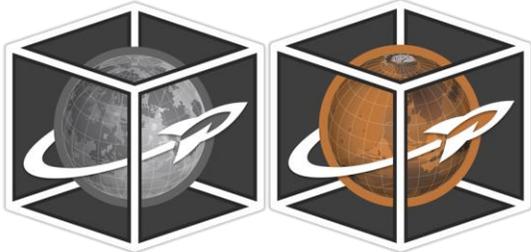
Communication is a vital component to working as a team. The flight cannot be accomplished without clear communication, accurate information, and people being "on the same page". On the *SS Legacy*, astronauts must trust each other, back each other up, and be responsible for their part of the workload and the success of the mission.

Your company could be running like a well-oiled machine or be in "damage control." During your flight to the Moon and Mars, many situations can arise caused by human error or natural phenomena that will bring your crew together to save the ship and the expedition. Just like a day on the job, space travel rarely goes as planned.

The "big picture" goal of an Expedition Center flight, like that of any successful organization, depends on the individual successes of each member and each team.



# OPERATION: MOON TO MARS



**Operation: Moon to Mars** is a unique teambuilding scenario developed by the staff at HMNS.

In the year 2076, the United States is ready to take the next big leap in space exploration. After successfully operating a base on the Moon, called New Tranquility Base, the time has come to send astronauts to the planet Mars.

**The mission has two phases.**

**Phase one:** The New Tranquility Base colonists must act as Mission Controllers to bring their replacements from Earth orbit to the Moon. The astronauts traveling from Earth to the Moon must complete experiments and confirm that the ship is functioning properly. Once they arrive on the Moon, these astronauts will take over Mission Control in New Tranquility Base.

**Phase two** This phase begins with new mission controllers and new astronauts ready to begin the journey to Mars. Along the way, astronauts have new experiments to complete and face new challenges from the deep space environment. Mission controllers must track information, do research, and ensure the safety of the crew. The expedition concludes with a landing on Chryse Planitia, the Golden Plains. Success of the expedition relies on responsibility, teamwork, communications, and good decision making.

## **Expedition Options and Cost**

A Full Expedition consists of both a Moon and Mars landing with mission controllers and astronauts. Full Expeditions are great for group sizes 14 to 45 and last 2 to 2 ½ hours.

Mars Expeditions only do half of *Operation: Mission to Mars* with all participants acting as astronauts on a journey to the Red Planet. Groups of 10 to 20 can choose to do a Mars Expedition, lasting 1 to 1 ½ hours.

## **Cost**

Full Expeditions are \$500 per group, Mars Expeditions are \$300. This fee includes entrance to the HMNS permanent exhibit halls. Giant Screen Theater films, Planetarium shows, and the Cockrell Butterfly Center are also available at extra cost.

Meeting space and meals are also available to complete your day at the Museum. Go to [www.rentthemuseum.com](http://www.rentthemuseum.com) for available spaces, prices, and catering options.



# The Expedition Center Environment

The Expedition Center Program consists of three rooms - the Briefing Room, Mission Control, and the space ship, SS Legacy. While working in Mission Control, participants must handle all the information needed to complete the job, including computer research and test results. The SS Legacy is built for the “hands-on” experimental and engineering work. The Briefing Room is used to prepare teams for the mission.



SS Legacy Simulator (above)



Mission Control (above)



Briefing Room (below)



# Expedition Teams

During a flight through space in the Expedition Center, every team has a different job, and each job is vital to the success of the mission. All teams must complete their tasks for the entire crew to be successful. Each team is responsible for its own work, and each team relies on the rest of their crew to complete the mission.

Teams are split between Mission Control and the *SS Legacy*. Astronauts do all the hands-on experimental work and mission controllers handle the information that is required to get the job done. The team cannot accomplish its goal without both the experiment and information being in synch.

## NAVIGATION

The Navigation team must complete the measurements and calculations to send the ship into orbit around the Moon and then Mars. Once in orbit, the flight path and landing coordinates will be determined.

## LIFE SUPPORT

The Life Support Team is responsible for all the systems that are required for the astronauts to survive in space. They will test samples from the water recycling system, make sure the air is being filtered properly, and are responsible for setting the solar power grids.

## ISOLATION

These scientists study materials that are too dangerous to touch or that may release harmful substances into the air. These items are sealed inside the ISO Chamber and the experiments are performed using robotic arms.

## PROBE

The Probe Team's responsibilities are to build satellites that will either improve the Lunar Communications Network or study the moons of Mars.

## DATA

The Data Officers are in charge of the flow of technical information between Mission Control and the Legacy, and pass on vital information to the crews.

## COMMUNICATIONS

All verbal messages are passed through the Communications Team. They are the central hub that links astronauts to their flight controllers. They must organize messages to be sent as well as set priorities for which messages are most important.

## MEDICAL

The doctors on board the ship are responsible for the health and safety of the crew. They will conduct vision and muscle fatigue tests, and monitor heart rates.

## REMOTE

The Remote Team has the task of preparing the astronauts for their jobs once they land on the Moon and Mars. The Lunar Remote Team will practice driving rovers around Shackleton Crater, while the Martian Remote team will practice flying powered gliders around Ophir Chasma in Mars' Mariner Valley region.

## BIOLOGY

The Biolab is a complete experimental station with living animals and plants that will be observed during the flight. The Biology Team watches small animals on the ship and determines the viability of seeds to be planted in the Lunar and Martian greenhouses.

## GEOLOGY

The Geology Team studies rocks, minerals, core layering, meteorites and surface features. In addition to their work in the Geo Lab, they may assist the Navigation Team in locating the landing sites, or move to the Glovebox Lab to study possibly contaminated specimens



# Accepting Your Expedition

## Spend the Day at HMNS

HMNS can provide space to complete your day. Classrooms and conference rooms are available for meetings or meals. The Planetarium and Giant Screen Theater can be used for presentations (time and dates subject to availability). Our special events coordinator can also help you plan a catered meal for your staff.

Call our Special Events Manager at 713-639-4756 to inquire about rental space and catering, or go to [www.rentthemuseum.com](http://www.rentthemuseum.com).

General Exhibits are included in the price of the Expedition Center activity, and Planetarium, Giant Screen Theater, Butterfly Center, and special exhibit tickets can be added at the group rate for over 20 people.

## Booking Your Activity

To book your team building activity or discuss different expedition options, contact the Expedition Center Director at [expedition@hmns.org](mailto:expedition@hmns.org) with you company name, group size, possible dates and questions. Or, call the Director at 713-639-4727 (but we spend most of our day in outer space!).

Once booked, you will receive by email an invoice with payment instructions and a packet of materials which you may use to prepare for the mission. This packet will give you instructions on how to assign people to the different teams, as well as other preparation activity options.

### Expedition to the Moon and Mars

**Team roles:** astronauts & flight controllers

**Group size:** 14 - 45

**Time needed:** 2 - 2.5 hours

**Price:** \$500

### Mars Expedition

**Team roles:** astronauts only

**Group size:** 10 - 20

**Time needed:** 1 - 1.5 hours

**Price:** \$300

