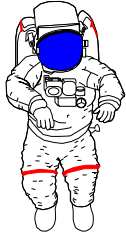


# Space Suit Design



*When Earth astronauts leave the surface of their planet and travel into space, they must carry some of their environment with them.*

## Introduction

Life on Mars will be different than life on Earth. You will need to wear a spacesuit any time you step outside of your habitat. What kind of protection will you need? What special features will you want to build into your suit to make it comfortable and easy to move around in? What will you need to know about the conditions on Mars in order to construct an appropriate spacesuit?

## Your Task

You are part of a NASA spacesuit design team. Your job is to build a prototype spacesuit to be worn on Mars. Materials have been provided for you to build your model. You need to consider the following criteria:

- *Conditions on Mars* chart (attached)
- Type of mission the astronauts will performing:
  - Climbing and rappelling in the canyon Valles Marineris to do geological surveys.
  - Flying to the top of the giant volcano Olympus Mons to study the caldera.
  - Examining rocks and digging for fossils on what appears to be a dry river channel. Going to the poles to cut ice and melt it for water.
  - Tinkering with Mars Sojourner or one of the Viking Landers to get it to run again.
- Features needed to accommodate human body functions.
- Communication with Mars Control

## Procedure

1. Use the *Conditions on Mars* chart to compare and contrast conditions on Mars and Earth.
2. Consider the type of mission the astronauts will be performing and incorporate that information into your design.
3. Based on what you know about conditions on Mars, construct a spacesuit from the materials provided.
4. Prepare to explain the functions of the parts of your spacesuit design.

