



LUNAR RESCUE



**FITNESS AND
NUTRITION**

MISSION DESCRIPTION

For this mission, teams of astronauts will work together to rescue a fellow crewmember who has been injured on the surface of the Moon. Crewmembers will perform a series of movements focused on balance and coordination before carrying one crewmate to safety. This competitive training exercise reflects aspects of physical aptitude required of astronauts. These tasks will expose participants to the benefits of repetition, preparation and cooperation for the successful execution of physical tasks while achieving a complex goal.

MISSION PREPARATION

TIMELINE

Breakdown	Duration
Background	2 minutes
Educator's instructions/demonstration	5 minutes
Group activity	15-20 minutes
Wrap-up	3 minutes
Total	25-30 minutes

MATERIALS

- Timer
- Cones or other objects to mark three distinct locations
- Instruction cards (see participant handout)

Difficulty: **MEDIUM**

Duration: **25-30 MINUTES**

Materials: **MINIMAL**

GOALS

Astronaut crews will rescue an injured crewmember and bring them back to their lunar base. Crews will repeat the activity three times with each crewmember switching positions to emphasize how repetition of an activity increases speed and efficiency.

OBJECTIVES

By the end of the mission, participants will be able to

- Process complex information while performing a physical activity
- Work together to accomplish a shared goal
- Understand why astronauts practise emergency scenarios repeatedly during training



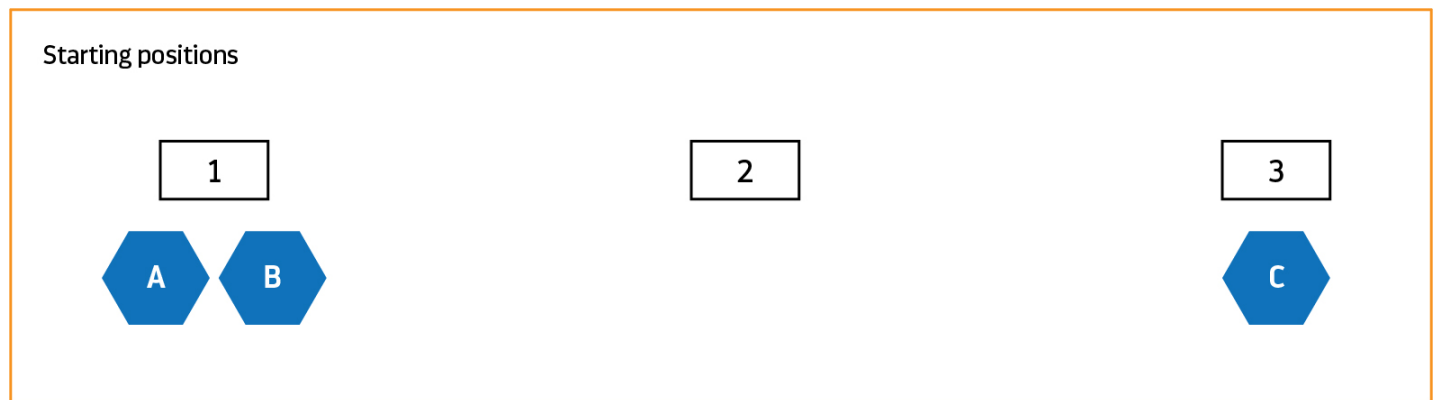
BACKGROUND

Astronauts must be prepared to handle any situation. That is why astronaut training includes learning how to perform minor medical procedures. Astronauts are trained in procedures like dentistry and minor surgery just in case any of their crewmates become ill while living on the International Space Station (ISS). With plans to return to the Moon and establish an orbiting base called Lunar Gateway, astronauts have to be more prepared than ever to handle a medical emergency. It would be impossible to evacuate a sick crewmember back to Earth all the way from the Moon. Astronauts will have to rely on their teammates for help if they need medical attention.

SET-UP

- Place three cones to mark each crewmember's starting location (distance between cones can vary depending on size of play space and activity runner's preference).
- Each crewmember will start at their designated position (A, B or C).
- Each crewmember will have a set of specific instructions waiting for them at their positions.
- Crewmembers A and B will relay instructions to each other.
- Crewmember C is the injured astronaut and must complete a set of their own tasks while waiting for rescue.

LAYOUT



MISSION INSTRUCTIONS

1. Organize participants into astronaut crews of three.
2. Participants A & B start at location 1. Participant C will start at location 3.
3. Participant C will read their instruction card.
They will do a series of dynamic exercises while waiting for their crewmates.
4. From location 1, Participant A will instruct Participant B through a series of dynamic exercises listed on their instruction card to advance them to location 2.
5. From location 2, Participant B will instruct Participant A through a series of dynamic exercises listed on their instruction card to advance them to location 2.
6. From location 2, Participant A will instruct Participant B through a series of dynamic exercises listed on their instruction card to advance them to location 3.
7. From location 3, Participant B will instruct Participant A through a series of dynamic exercises listed on their instruction card to advance them to location 3.
8. Participant C must finish the list of exercises on their instruction card in order to proceed with the next instructions.
9. Participants A & B will form a two-person arm carry “chair” for Participant C (see reference photos below).
10. Participant C will sit securely in the “chair” while Participants A & B carry C back to location 1.
11. The crew that performs these tasks in the fastest time will successfully save their injured crewmember!
12. Crews switch positions and repeat the task.
13. Astronauts can reflect on how their time to complete the activity has changed from the first run to the third.

REFERENCE PHOTOS

Squat



Balance on one foot



Crab walk



Arm hold



Chair squat



Chair carry



Plank



PARTICIPANT HANDOUT

FIRST SET OF INSTRUCTIONS FOR CREWMEMBER A

Relay these instructions to crewmember B while you are both at position 1.

1. Two-footed bunny hop forward 3 times
2. Turn to the left and do 3 lunges
3. Turn to the right and do 3 lunges with the opposite leg
4. Face towards position 2 – do 3 bunny hops forward
5. Do 5 jumping jacks
6. Hold a plank for 30 seconds
7. Turn to the left and do 3 squats
8. Turn to the right and do 3 more squats
9. Do 5 jumping jacks
10. Crab walk the rest of the way to position 2

Now crewmember B will give you their first set of instructions.

SECOND SET OF INSTRUCTIONS FOR CREWMEMBER A

Relay these instructions to crewmember B while you are both at position 2.

1. Do 3 squats
2. Do 5 jumping jacks
3. Do 5 push-ups
4. Do 5 sit-ups
5. Hold plank for 30 seconds
6. Do 3 squats
7. Two-footed bunny hop forward 4 times
8. Turn to the left and do 3 lunges
9. Turn to the right and do 3 lunges with the opposite leg
10. Bear crawl the rest of the way to position 3

Now crewmember B will give their second set of instructions.

Once you reach position 3 retrieve your injured crew member and carry them back to position 1 using a chair carry.

Crewmember A will give the first set of instructions

FIRST SET OF INSTRUCTIONS FOR CREWMEMBER B

Relay these instructions to crewmember A while you are at position 2 and Crewmember A is still at position 1.

1. Do 5 jumping jacks
2. Two footed bunny hop forward 3 times
3. Do 5 jumping jacks
4. Hold a plank for 30 seconds
5. Do 3 squats
6. Turn to the left and do 3 lunges
7. Turn to the right and do 3 lunges with the opposite leg
8. Face towards position 2 and two-footed bunny hop 5 times
9. Do 5 push-ups
10. Bear crawl the rest of the way to position 2

Now crewmember A will give their second set of instructions.

SECOND SET OF INSTRUCTIONS FOR CREWMEMBER B

Relay these instructions to crewmember B while you are at position 3 and Crewmember A is still at position 2.

1. Do 5 push- ups
2. Turn to the left and do 3 lunges
3. Turn to the right and do 3 lunges with the opposite leg
4. Face towards position 3 and do 3 squats
5. Two-footed bunny hop forward 5 times
6. Two-footed bunny hop backward 3 times
7. Do 5 sit ups
8. Do 5 jumping jacks
9. Do 3 squats
10. Crab walk the rest of the way to position 3

Retrieve your injured crew member and carry them back to position 1 using a chair carry.

INSTRUCTIONS FOR CREWMEMBER C

While your fellow crewmembers are on their way to rescue you, perform a series of exercises while you wait. You must complete this list of activities before they can rescue you.

1. Hold plank for 30 seconds
2. Do 5 push-ups
3. Do 5 sit-ups
4. Do 5 squats
5. Hold plank for 15 seconds
6. Do 5 push-ups
7. Do 5 sit-ups
8. Stand on one foot for 30 seconds
9. Stand on the opposite foot for 30 seconds
10. Do 10 jumping jacks
11. Do 5 lunges
12. Do 5 lunges on the opposite leg
13. Hold plank for 15 seconds
14. Do 10 jumping jacks
15. Do 5 squats

When you are finished this list of exercises and your crewmembers have reached you, they will form a chair to carry you safely back to base.