ARE YOU READY TO ROCK?

FITNESS AND NUTRITION

MISSION DESCRIPTION

This mission will consist in retrieving Moon rocks using a simulated lunar rover. Crews will retrieve 10 Moon rocks and return them to the lunar station.

Difficulty: **MODERATE**

Duration: **20–25 MINUTES**

Materials: **MODERATE**

MISSION PREPARATION

TIMELINE

Breakdown	Duration
Background	2 minutes
Educator's instructions/demonstration	5 minutes
Group activity	10–15 minutes
Wrap-up	3 minutes
Total	**20–25 minutes**

MATERIALS

- Two gym mats per team
- Balls of various sizes
- Target (examples include a garbage can, a basket, an "X" on a wall, a basketball hoop)
- Large play space suitable for physical activity

GOALS

Astronaut crews will use their physical fitness and mental acuity to determine the most efficient way to transport Moon rocks back to their lunar base.

OBJECTIVES

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

- Collaborate to accomplish a physically demanding task in a confined environment
- Use balance, coordination and muscular endurance to complete their task
- Work as a team and communicate effectively
- Use creativity to complete the task

BACKGROUND

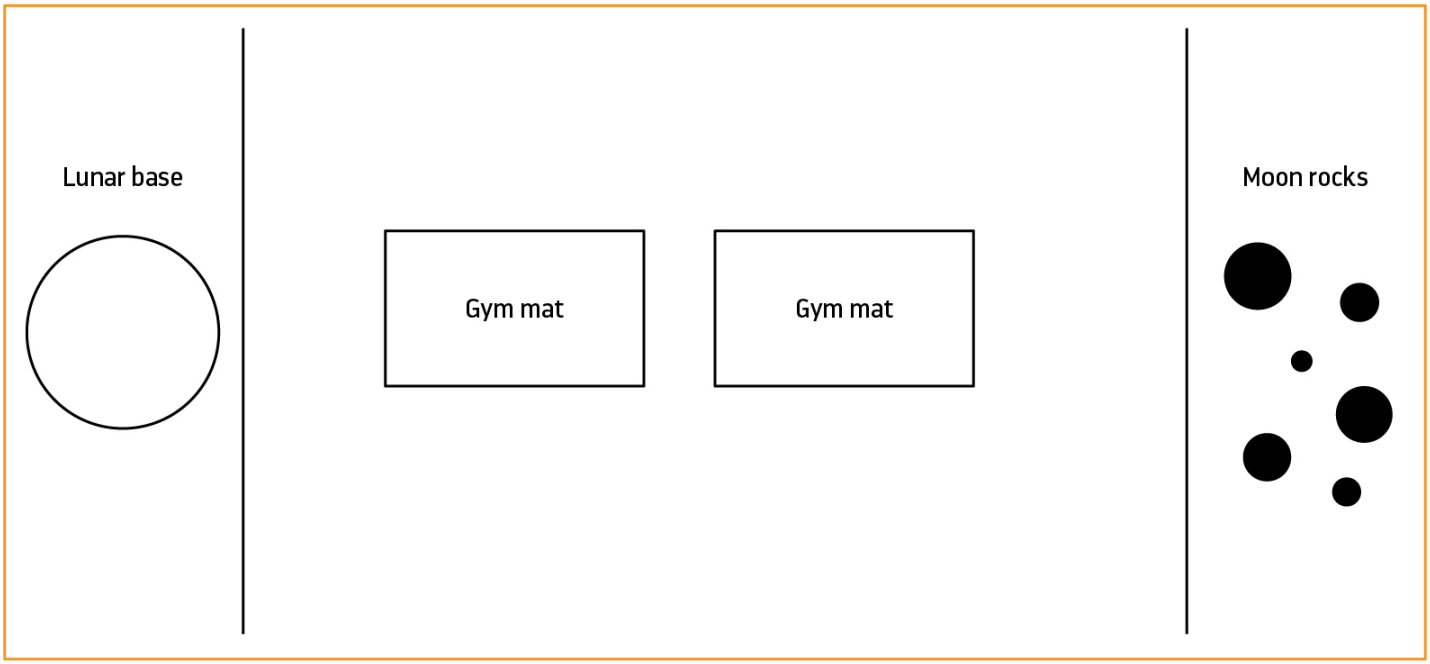
The last astronauts to set foot on the Moon were the crew of Apollo 17 in 1972. Starting with the Apollo 15 mission, astronauts brought lunar rovers to the surface of the Moon so they could travel farther, faster. This lunar rover, or "Moon buggy," was a small all-terrain vehicle capable of carrying two astronauts, their equipment and lunar samples. The Apollo missions successfully collected approximately 382 kilograms of lunar rock samples.

Astronauts preparing for future missions to the Moon will be required to develop skills and abilities to once again set out on lunar exploratory missions. It will be important for these astronauts to be in excellent physical shape for this demanding task.

SET-UP

- Create a starting position that will be the lunar base.
- Give each team two mats at their starting position.
- Place various-sized balls at the other end of the play space.

LAYOUT



MISSION INSTRUCTIONS

1. Have participants organize themselves into astronaut crews of six to eight (depending on the size of the mats).

2. Each astronaut must fit inside their “Moon buggy” and cannot touch the floor (or lunar surface) at any time.

3. Crews must work together to make their way across the floor to a designated pile of Moon rocks. (If at any time an astronaut touches the lunar surface, the whole team must start again.)

4. This can be achieved by each crewmember standing on one mat and passing the second mat to the front of the Moon buggy.

5. After placing the second mat on the floor, each crewmember steps onto this mat and repeats the process until they arrive at their pile of Moon rocks.

6. Once astronauts reach the pile of Moon rocks, they must pick them up and make their way back to the Moon base, or starting line.

7. Each astronaut can carry only one Moon rock at a time.

8. Astronauts cannot put their Moon rocks down until they reach the Moon base.

9. Crews must decide how many rocks to take while still being able to manoeuvre the mats back to the Moon base.

10. Once crews have arrived at the Moon base, they must hit their target with the Moon rocks.

11. For each Moon rock that misses the target, astronauts must do three squats.

12. Repeat until all the Moon rocks have hit their target.