



United States  
Department of  
Agriculture

NIFA

National Institute  
of Food  
and Agriculture



[https://nifa.usda.gov/  
program/4-h-positive-youth-  
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National Aeronautics  
and Space  
Administration

EXPEDITIONARY  
SKILLS FOR LIFE

A FEDERAL PARTNERSHIP FOR STEM EDUCATION

## LESSON PLAN: ACTIVITY 2.8

# LUNAR HOTEL

### LESSON DETAILS

#### AGE/GRADE LEVEL

Middle School

#### LEARNER OUTCOMES

Youth will have a greater understanding of working together in a team and utilizing resources to achieve a goal. Youth will develop life skills in teamwork, leadership and followership.

#### SUCCESS INDICATORS

Youth will use problem-solving and interpersonal skills to help guide each other and utilize each other's strengths and abilities to perform a team task.

#### LIFE SKILLS

Teamwork, Communications, Critical Thinking, Goal Setting, Problem Solving

#### NATIONAL STANDARDS

21st Century Skills/Learning and Innovation Skills/COMMUNICATION AND COLLABORATION/  
Communicate clearly, collaborate with others

21st Century: Life and Career Skills / FLEXIBILITY AND ADAPTABILITY /  
Develop thinking skills, content knowledge, and social and emotional competencies to navigate complex life and work environments

21st Century Skills/Learning and Innovation Skills/CRITICAL THINKING AND PROBLEM SOLVING/  
Reason effectively, use systems thinking, makes judgements and decisions, solve problems

#### PREP TIME

15minutes

#### ACTIVITY TIME

2 hours (all activities combined)

#### MATERIALS LIST

- Something to simulate a Meteorite (heavy book)
- Step stool or short ladder to stand on to drop the Meteorite
- Flipchart

Each team will need a building kit:

- Fifty 4 x 6 index cards
- Ruler
- Scissors
- Roll of scotch tape
- Pack of markers

#### SAFETY NOTES

A spotter will be needed for the person climbing the ladder.

Scissor safety should be reviewed before starting the activity.

#### SUGGESTED SPACE

Tables with chairs

#### SUGGESTED GROUP SIZE

Suggested total number is 30 youth

#### REFERENCES

Followership: The Other Side of Leadership  
[http://iveybusinessjournal.com/  
publication/followership-the-other-  
side-of-leadership/](http://iveybusinessjournal.com/publication/followership-the-other-side-of-leadership/)

Insights into Followership  
[http://leadershiptrainingtutorials.  
com/leadershiptraining/leadership-  
styles/insight-into-the-followership-  
styles/#.WMfkOW\\_yvX4](http://leadershiptrainingtutorials.com/leadershiptraining/leadership-styles/insight-into-the-followership-styles/#.WMfkOW_yvX4)

A Healthy Home Checklist  
[https://www.surgeongeneral.gov/  
library/calls/checklist.pdf](https://www.surgeongeneral.gov/library/calls/checklist.pdf)

### INTRODUCTION

**F**ollowers are an essential part of the leadership equation. Without good followers, becoming a good leader is difficult. As the proverb says: "He who thinks he leads, but has no followers, is only taking a walk." Everyone aspires to be a leader, but the chief ingredient that makes a leader effective is the followers. A good leader knows the importance of followers.

Followers impact leaders and the leadership process. Followers provide the "horsepower" for tasks. Outstanding followers are people who know what to do without being told. They are people who act with intelligence, independence, courage and a strong sense of ethics. Followership is the ability to take direction well, to get in line behind a program, to be part of a team and to deliver on what is expected of you. Improving your followership skills involves focusing on the following traits.

**Judgement.** Followers must take direction, but only when the direction is ethical and proper. The key is having the judgement to know the difference.

**Work Ethic.** Good followers are good workers. They are diligent (careful), motivated, committed, pay attention to detail and make the effort.

**Competence.** The follower cannot follow properly unless they are skilled at the task that is directed by the leader. It is the responsibility of the leader to assure that followers are competent.

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EXPEDITIONARY SKILLS FOR LIFE

## LUNAR HOTEL, CONTINUED

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**Honesty.** The follower owes the leader an honest and clear assessment of what the leader is trying to achieve and how. Respect and politeness are important, but it is not acceptable for followers to sit on their hands when they can show a flaw in the plan.

**Courage.** Followers need to be honest with those who lead them. They also need the courage to be honest. It takes real courage to confront a leader about concerns with the leader’s plan.

**Loyalty.** Good followers respect their obligation to be loyal to their team. Loyalty is a strong belief in and commitment to the team’s success. Followers should remember that their responsibility is to the enterprise, not a given leader at a given point in time.

**Ego Management.** Good followers have their egos under control. They are team players in the fullest sense of the concept.

One could argue that any good leader is in turn a good follower. In some situations you may be a leader, and in others a follower, depending on the task. How well the followers follow is just as important to success as how well the leaders lead. Who would not benefit from giving some thought to how they could be a better follower? Such thought may actually improve your ability to get to the leadership position you actually want.

## ACTIVITY INSTRUCTIONS

### ACTIVITY: LUNAR HOTEL (60 MINUTES)

Note:

Preparing a list of the project rules and the presentation points will help the youth stay focused. This list should be large enough and posted somewhere where all the teams will be able to view it.

1. Divide the group into small teams of 3-6 youth per team.
2. Provide each team with a building kit.

Explain / Directions:

You are a project team that has the task of designing and constructing a model for the first hotel on the moon. Because the moon is a dangerous environment, your model must meet certain specifications and standards.

Your group has been provided with a building supply kit containing:

- Fifty index cards
- Ruler
- Scissors
- Roll of scotch tape
- Pack of markers

The construction must have visual appeal (beauty) and be able to withstand a direct hit from a meteorite. The meteorite will be simulated by dropping a book on the structure. All buildings must be fully enclosed, and must have ceilings that are at least three inches from the floor. The only materials that can be part of the actual structure are index cards and scotch tape. If any other item is used, the team will be disqualified.

You will have 30 minutes to plan and construct your lunar hotel. Then each team will give a 2 minute presentation on the features and benefits of their hotel. After the presentation, one person will stand on the ladder (with a safety spotter). They will drop the meteorite (heavy book) from a height of approximately five feet directly onto the hotel. This tests the durability of the hotel.

Time to get to work!

### DEBRIEF ACTIVITY: STORYBOARDS (60 MINUTES)

Using the same teams from the lunar hotel activity, provide each team with four pieces of flip chart paper and a set of markers. Explain that the teams will be creating a series of four boards (or posters) that will tell the story of their lunar hotel building experience.

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EXPEDITIONARY SKILLS FOR LIFE

## LUNAR HOTEL, CONTINUED

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**First Board** – Draw what you did as a team when you began to plan your Lunar Hotel.

**Second Board** – Draw the progress of your design as you started building.

**Third Board** – Draw what changed during the activity.

**Fourth Board** – Draw what the final product looked like and draw how it looked after the meteorite landed on it.

Each Team will share their boards (posting the boards for all teams to see). Team members will describe the “story” on each board. The following questions should be answered while describing the story.

- What were your objectives of this project?
- What plan did you use to achieve your objective?
- How were group members organized to accomplish this task? Include any leader or follower strategies that were used.
- How did you utilize resources?

Team members will then ask for feedback from other teams on their drawings.

### APPLIED CHALLENGE: SAFE HOMES

Lunar hotels are not the only living spaces that need to be kept safe from unexpected hazards. While the chances of being hit by a meteorite here on Earth are extremely low, there are lots of potential dangers to Earthling homes. The Office of the U.S. Surgeon General has put together a checklist that you and those you live with can use to make sure your home is safe and healthy. Download the checklist (see resource section for link). Working with those you live with, use the checklist to conduct an assessment of the health and safety of your home (whatever that may be). Identify what action steps you can take to address any issues found, and identify the person with the best skills to complete those action steps.

### FUN FACTS

- Hong Kong is a crowded city and homes are very expensive. Many people live on small boats, called sampans, which float in the harbor.
- In England and other parts of Europe, you can still see cottages built with thatched roofs. The roofs are made from water reeds or grasses. Thatched roofs are water-proof, but they burn easily.
- In Mongolia, nomadic tribes live in domed tents called gels or yurts. These homes are covered with cloth insulated with wool or fur. The homes are open with a stove in the center for cooking and heating.
- The Bagobo tribe in the Philippines lived in tree houses, which kept them safe from snakes, dangerous animals and enemies. Today, the tree houses are mostly used for rest and play.

### INSTRUCTOR'S NOTES

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**ACTIVITY 2.8: LEARNER ASSESSMENT**

These questions are about things you learned during this activity. Please check the circle that best describes you.

**Q1** I understand the connection between leadership and followership.

- Not at all like me
- A little like me
- Somewhat like me
- A lot like me

**Q2** I am able to listen to the ideas of everyone on my team before deciding how to complete a task.

- Not at all like me
- A little like me
- Somewhat like me
- A lot like me

**Q3** I believe that everyone has the ability to contribute, in a positive way, to a team project.

- Not at all like me
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