**LESSON PLAN: ACTIVITY 3.9**  
**SPACE WALK**

### LESSON DETAILS

**AGE/GRADE LEVEL**  
High School

**LEARNER OUTCOMES**  
Youth will learn the importance of engaging all team members in a task that requires the sharing of limited resources.

**SUCCESS INDICATORS**  
Youth will demonstrate their ability to engage as a team, share limited resources, and communicate clearly by completing a team challenge.

**LIFE SKILLS**  
Leadership, Communication, Teamwork, Problem Solving, Critical Thinking, Decision Making, Contributions to group effort, Goal Setting

**NATIONAL STANDARDS**  
21st Century Skills/Learning and Innovation Skills/COMMUNICATION AND COLLABORATION/Communicate clearly, collaborate with others  
21st Century Skills/Learning and Innovation Skills/Critical Thinking and Problem Solving/Reason effectively, use systems thinking, makes judgements and decisions, solve problems  
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: Life and Career Skills/Leadership and Responsibility/guide and lead others, be responsible to others

### PREP TIME
15 minutes

### ACTIVITY TIME
2 hours (all activities combined)

### MATERIALS LIST
- “Protective Boots,” which can be carpet squares (or odd-shaped flat pieces big enough for 2-4 adult feet to be placed on), card stock paper, placemats, dish towel, rug pads 12”, bandanas, old dish towels  
- Rope or cord (various lengths)  
- Optional items such as bandannas, balls (tennis ball, baseball, baseball, or football types), other props  
- Paper  
- Pens, pencils

### SUGGESTED SPACE
Field or open area, gym floor, large classroom, large hallway. Try to use an area surface that is safe and clear of any large debris or slip hazards. Some students may fall on the ground and they will need room to move.

### SUGGESTED GROUP SIZE
5 to 30. You can do this with one group of five or multiple teams with up to 30 depending on your area and the resources available.

### INTRODUCTION

Planning intelligently also goes a long way in overcoming challenges in leadership. Do not depend on a single plan. It is always better to be ready with Plan B and Plan C. Think of this as an ideal way to be creative in your thinking and innovative in your approach. So, what measures can you take if you have to get more done with less? Here are some ways of mastering your resources:

**Prioritize Your Tasks**
- It sounds obvious and yet a kind of paralysis can set in when a team finds itself having to cope with less.
- Decide what needs your attention urgently and act accordingly.
- Be decisive and realistic. Will that approach you just selected really deliver the result you need?

**Effective Planning is a Winning Strategy**
- With resources more stretched, and possibly fewer people, you need to think outside the box. Effective planning is key to managing slimmer resources.
- Decide what needs to be done first and ensure everyone is onboard.
- Draw up a timeline for action.
- Be proactive rather than reactive.
- Ensure all members of your team know their roles and the necessity of delivering.

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Keep Your Lines of Communication Open

- You may have clear goals, but do you have a good communication strategy within your team to bring people along with you? Can you inspire people to work harder? Here are some tips:
  - Ensure everyone knows what is expected of them.
  - Be clear about your objectives.
  - Be open to other views and you’ll keep your team onboard.

Resources are finite, and you have to think smarter with less. There is no room for wastage, so ask yourself how you can best use what you have to maximum effect. Delivering results with limited resources is something everyone faces at some point in their career. The ability to quickly adjust and still deliver is an important professional skill.

Activity: Space Walk (60 Minutes)

**Objective:** Get your team safely from the spaceship (Point A) to the cargo ship (Point B) without touching the surface. You may only use the “Protective Boots” provided to protect you from the surface. Those materials are limited. Obstacles and challenges will occur as your team crosses the area. Your Captain and crew must communicate how to overcome the obstacles and complete the task.

**Directions/Rules:**
1. Designate an area behind a rope or a marker on the ground as the spaceship “safe ship” (Point A) and another area far enough apart to have the group have to recycle their materials or use of their boots to get to the cargo ship (Point B). (Note: you can use rope, chalk, tape, or cones to designate these areas)
2. Divide the group into teams or crews and have each crew select a Captain.
3. Give the Captain one less protective boot than there are number of crew members.
4. Anyone that touches the ground must go back to the spaceship (Point A) to repair their boots.

**Example Challenge Scenarios:**
- You are finding that if the boots are not being touched by your crew/team member they will be “eaten” by the alien surface. Your team must have a hand, foot or body part on the protective boots at all times! If they are not, the boot is taken away.
Space Walk, Continued

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• One of the crew has a malfunction in their communication device located in their helmet. The Captain chooses someone who can no longer speak or give any verbal feedback.

• One of your crew members gets surface dust in their eyes and can no longer see. The Captain can choose who will need to wear a blindfold (note: can use a hat, bandana or something to cover crew member’s eyes).

• One of your crew members rips their space suit and now needs medical attention. The Captain must assign a doctor to attend to the crew member. The two crew will need to remain together while the patient and doctor hold a small rope or object between them. Or they may just hold hands.

• Gloves fall off a team member and they lose the use of their hands. The Captain will choose a crew member who will now hold a ball (ex. tennis ball, football or other object) in their hand.

• Your crew comes across a large crater and must go around it. The Captain must instruct the team to go 4 steps to the side (either way) and then proceed on (this can be a chair, rock, or other obstruction).

• Your crew comes across a deadly river. You must construct a bridge to cross it. You will need to lay down additional props or boots. Use a bandana, paper, 2 x 4, rope, etc., to get your crew across.

• The battery packs for your suits are losing energy. You need to have them charged every third step. A ball or object will need to be passed or handled by all crew members after the third step in order for the crew to proceed.

• The planet has turned on its axis and you now lose contact with the communication satellite. The Captain and crew now have to whisper information to each other.

Space Walk Variations

• A new Captain can be chosen after a certain time or a number of attempts.

• You may also make a game out of this by pitting teams against each other. You could also introduce a time element; trying to get under a certain time or beat their previous time.

• Other objects or props may be used; hats to cover the eyes, one arm in a shirt, an ankle tied to another, placing objects on the field where the teams have to go around or get over them. You can also construct your own scenarios to introduce to the teams. Be creative!

Debrief Activity: Playing Card Match-Up

(20 Minutes)

Directions:
Youth should sit in a circle (if group is larger than 20, divide into groups of 10-15). e

Use a ball or other object to toss about to various youth who will answer the following questions.

After a participant answers one of the questions below, they may toss the ball or object to another to field the next question.
• What were some of the challenges you or your team faced?
• How did you overcome the challenges?
• How did your team solve the problem?
• How often did you change your plan?
• How did your team communicate the plan or any changes?
• How did you feel when the plans changed?
• What was it like to be the Captain?
• What was it like to be a crew member?
• How did your team adapt to new challenges or adversity?
• What would you have done differently?
• What type of leadership did the Captain(s) display?
• Was your team successful? Why or why not?
• How would this relate to what NASA does?
• How can you develop and utilize these skills in your life?

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Explain:
Communication and problem solving are skills that you use every day to make decisions in your life. They are used in group settings, but also internally. You make a decision or problem-solve about what to wear, how to answer a question on a test, or whom to talk with at lunch. These decisions, and how you communicate them with others, is a vital skill and is part of all aspects of life. How you work within a team and pass along information helps the leaders make decisions and reach team goals.

A quality trait of a good leader is the ability to handle adversity and gather information to solve a problem. Leaders then make a decision and communicate that decision effectively to the team. Patience, understanding, and proper delivery of the information are skills of both a leader and a teammate.

**APPLIED CHALLENGE: MY RESOURCE TOOLBOX (40 MINUTES)**

Each of us has a variety of resources that we bring to everything we do. Learning how to recognize your resources, your potential, and your abilities will assist you in identifying future career paths that match your skills and interests.

**Directions:**
Have each youth create a list of the knowledge, skills, abilities, and/or attitudes that they bring to each of the following categories. Not every category will apply to everyone and youth can add categories that are appropriate for them.

- Emotional -- ability to choose and control emotional responses
- Mental -- possessing the mental ability and acquired skills, such as reading and writing, to function in daily life
- Spiritual -- a belief in divine purpose and guidance
- Physical -- physical health and mobility
- Support systems -- having friends, family, and other backup resources to access in times of need (external resources)
- Role models -- having adults who are appropriate models, and who do not engage in self-destructive behavior
- Knowledge of hidden rules -- knowing the unspoken cues and habits of a group

Once youth have identified their individual resources, have them identify six different career paths that utilize some of their personal resources. If needed, conduct this brainstorming activity in small groups to help them broaden their thinking. For those youth that are comfortable sharing, allow youth to share the career paths they have identified and explain how they relate to their personal resources.

**Note:** For greater depth of understanding, try mapping the collective resources of the group onto an ecological model of human development.
These questions are about things you learned during this activity. Please check the circle that best describes you.

Q1 I can work with others to change a plan when the plan is not working.
   - Not at all like me
   - A little like me
   - Somewhat like me
   - A lot like me

Q2 I can change my approach if what I am doing is not working.
   - Not at all like me
   - A little like me
   - Somewhat like me
   - A lot like me

Q3 I can be a team player even when it is not my plan that the team chooses to perform.
   - Not at all like me
   - A little like me
   - Somewhat like me
   - A lot like me