

Lesson 4: *We Choose Space!*

Living on the Moon

Standard: Identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation.

Objective: Students will demonstrate their knowledge of Earth's renewable and nonrenewable resources and their importance to humans by designing a lunar habitat.

Procedures:

1. Explore prior knowledge – Discuss the difference between renewable and nonrenewable resources. Nonrenewable resources are resources that will not be replenished in our lifetime.
2. Independent Practice – Give each student an “Earth’s Resources: Renewable vs. Nonrenewable” worksheet. Students should list as many of the resources as possible in each column. They should also indicate what the resource provides for humans.
3. Class Discussion – Discuss the worksheet and have students fill in any incomplete answers.
4. Paired Work – Students should generate a list of resources that they will need to build their habitat on the Moon. In addition to listing those resources, they should also list possible sources.

Assessment: Students will design a lunar habitat.

Name _____

Lesson 4: *We Choose Space!*

Living on the Moon

Directions: In the table below, list renewable and nonrenewable resources as well what each resource provides for humans.

Renewable Resources	Nonrenewable Resources

Lesson 4: *We Choose Space!*

Living on the Moon

Answer Key

Directions: In the table below, list renewable and nonrenewable resources as well what each resource provides for humans.

Renewable Resources	Nonrenewable Resources
<p>Air – for humans to breathe</p> <p>Plants – provide oxygen for humans, provide food for humans and animals</p> <p>Water – necessary for humans and animals to survive</p> <p>Animals – provide food for humans, responsible for helping to maintain soil composition</p>	<p>Coal – used to fuel power plants and factories</p> <p>Oil – refined into many products including gasoline</p> <p>Natural Gas – used both in households and commercially for heating, cooling, and cooking</p>

Lesson 4: *We Choose Space!*

Living on the Moon

Directions: Your task is to design a lunar habitat. Now that you know what resources we have on Earth, you should have an understanding of what you will need to survive on the Moon. Additionally, after watching *We Choose Space!*, you should now have ideas as to how those resources could be made available on the moon. Below list what you will need to survive and how it will be provided. You also need to create a visual of your habitat. Your visual may be a drawing, 3-D model, or computer generated model.

What you need in your habitat	How will it be provided

Lesson 4: We Choose Space!

Living on the Moon

Grading Rubric for Project

	Minimal Progress – 3 points	Progressing toward Mastery – 5 points	Meets Mastery – 7 points	Exceeds Mastery – 10 points
Habitat: Identifies the basic needs 1. Air 2. Food 3. Water 4. Shelter	Unable to determine habitat. Or is very inappropriate for humans.	The habitat is identifiable. May lack details such as food source, or water, etc.	Habitat uses some different materials. The habitat is identifiable. Includes sources for food, water and shelter.	Project uses many different types of materials to show lunar habitat. Includes detailed sources for food, water, and shelter.
Neatness and Creativity	Habitat shows no effort of neatness or creativity.	Habitat is put together but shows some signs of damage or lack of effort towards neatness. Used few materials creatively.	The habitat is slightly messy. But effort towards neatness and creativity are apparent in use of materials.	The habitat is neat and creative. Materials were used in innovative ways.
Oral Presentation	Did not speak clearly.	You needed help with portions of your presentation. Most students could hear you.	Everyone could hear you. You did your presentation with no help. Presentation was smooth and clear.	You presented with no errors in a smooth, clear voice. You used expression when presenting. You were able to answer questions about your animal.