ALLEY THEATRE

The Brainstormers & Their Cosmic Mission

Post-Show Activity
4-6

Build a Moon Base

Goals:

- *Students will design and construct a moon base model that supports human survival and research.*
- *Students will apply teamwork, critical thinking, and creativity to solve design challenges.*
- *Students will present and explain their design choices using scientific reasoning*

NOTE: This activity has been aligned with TEKS and Universal Design for Learning. TEKS can be found at the end of this document.

Materials Needed

- Large base (poster board, cardboard sheet, floor)
- Art supplies (markers, crayons, colored pencils)
- Construction materials (cardboard, recycled materials like plastic bottles, paper towel tubes, found objects from the classroom)
- Scissors and glue
- Planning sheet (included)
- Alley ReSourced guide

Introduction

- Begin by watching the astronaut read-aloud video in the Alley ReSourced guide and exploring the Artemis Missions section.
- Discuss the conditions humans would face.
- Ask students:
    - What challenges would people face living on the Moon?
    - What systems would we need to survive and thrive?

Notes for UDL alignment: Use videos and images from Alley ReSourced to support comprehension. Let students brainstorm ideas verbally, visually, or through written notes.

Team Brainstorm and Planning

- Divide students into small groups (3–4). Give each team a planning sheet to sketch or list their moon base features.
- Encourage teams to consider:
  - Life-support systems (air, food, water, temperature)
  - Sustainability (energy, recycling, growing food)
  - Research spaces and daily living needs
  - How people will move around the base

Notes for UDL alignment: Provide the planning sheet, allow both verbal and visual expression.

Student-Led Build Time

- Teams will build their moon base model using the provided materials.
- Emphasize collaboration, creative problem-solving, and flexibility.
- Encourage students to adapt or revise their plans as needed during construction.

Notes for UDL alignment: Offer a variety of materials and roles to meet motor, sensory, and collaboration preferences. Adults or peers can assist with materials.

Reflection and Sharing

- Ask students to present:
  - The function of each area, their design rationale, and how they worked together as a team
- Hold a class reflection session. Ask:
  - What was your favorite part of the design process?
  - What made your team successful?
  - What would you change next time?

Notes for UDL alignment: Allow options for presenting—spoken, poster-supported, or video-recorded. Provide flexible ways to reflect—verbally, through journaling, or drawing.

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TEKS

Science

4.8(C) / 5.8(C) / 6.11(C): Analyze space environments and how they affect living systems.

4.3(B) / 5.3(B) / 6.3(B): Plan and conduct investigations and communicate findings.

English Language Arts and Reading (ELAR)

4.6(A) / 5.6(A) / 6.6(A): Summarize and synthesize plot elements and challenges.

4.10(A) / 5.10(A) / 6.10(A): Plan and develop written and spoken drafts to communicate ideas clearly.

Fine Arts – Theatre & Visual Arts

4.2(A) / 5.2(A) / 6.2(A): Create and represent original ideas through imaginative play and design.

4.3(B) / 5.3(B) / 6.3(B): Reflect on creative work and connect to personal experience.

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Moon Base Planning Sheet

Team Name: ____

Team Members: ____

Step 1: Brainstorm

What will your moon base need to support life and research?

(Check or list ideas below.)

☐ Sleeping area
☐ Kitchen/food storage
☐ Oxygen supply
☐ Garden or greenhouse
☐ Bathroom
☐ Research lab
☐ Recreation area
☐ Power source
☐ Rocket docking station
☐ Other: ____________________

Step 2: Sketch Your Base

Draw a map or layout of your moon base. Label the parts.

(Use another page if you need more space.)

📐 Tip: Think about how people will move between spaces. Will your base be one big building, or multiple modules?

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Step 3: Materials Planning

What will you use to build your model?

Moon Base Feature	Materials You Might Use

Step 4: Team Roles

Decide how your team will divide the work:

Role	Team Member Name
Designer (sketch/layout)	
Builder (model construction)	
Presenter (shares final project)	
Organizer (materials & ideas)	

(*You can rotate or share roles!*)

Step 5: Our Big Idea

What makes your moon base unique or special?