

Teacher Overview

This project is conceived as a team project where groups of students work together to research, report, design, construct and explain a visitor complex for people visiting the Apollo lunar landing sites. Please consider asking students in each group to come to consensus on roles for each group member to include:

1. *Project Director* serves as spokesperson for the group, point of contact for group
2. *Research Scientist* maintains records for the group
3. *Materials Engineer* leads collection, management and use of supplies
4. *Life Support Engineer* assures that the group works well together by encouraging one another, contributing, and helping one another
5. *Social Scientist* assures that the group maintains focus on pertinent objectives

The big idea of this project is to combine all the elements of STEAM (science, technology, engineering, the arts, and mathematics) into a single project that requires people to work together in specific roles as a part of a team.

Engagement

In the not-to-distant future people will travel to the Moon for a holiday. As new businesses develop to conduct these trips it will be reasonable that places on the Moon that will be of high interest to visit will be the historic Apollo landing sites. Due to the unique characteristics of the Moon, these sites are to this day almost exactly the way they were when the astronauts left them in 1969 through 1972. The first footprints on the moon are literally still there. How can these sites be protected for all time, but also permit visitors to experience them? Your mission is to create a visitor complex that will allow visitors to experience the landing site, learn of the history of the flight, understand the scientific mission, and view the materials left behind all while protecting everything, including footprints, from damage and erosion.

Exploration

Use the Giant Moon Map and other resources to learn about each of the Apollo landings. This should include at least the following:

1. The landing location and date
2. The purpose of the mission including the science conducted
3. The members of the crew and call signs for the spacecraft
4. Special features related to the mission
5. Any stories from the mission that provide insight

Explanation

Prepare a report to be orally presented to the other groups and teacher to describe what the group has discovered concerning the Apollo mission the group has selected. Include an explanation of the historic and scientific significance of the mission.

Extension

Create a diagram, flat artwork, video, 3-D computer drawings, model, or diorama of your proposed Visitor Complex. Include a description of how the architectural design of the memorial contributes to an understanding of the significance and story of the mission.

Evaluation

A rubric has been prepared to assist the teacher in evaluating the project. We suggest that evaluation of each individual's learning resulting from this project is the result of an interview of each student by the teacher using the following rubric for guidance.

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Concept	9-10	7-8	5-6	3-4	1-2
Big idea behind the project	Adequate description of how the project is intended to build understanding of how people contribute in different and essential ways in projects.		Describes how he/she contributed to the program with minimal mention of the contributions of other team members.		Describes facts learned during the project.
Architecture and Design	Describes the design and explains how the team arrived at the solution.		Describes the design and significance.		Offers few details of design or significance of the design.
Historic Significance	Describes the mission in detail related to the work of the team.		Describes the historic significance.		Offers few details of historic significance.
Scientific Significance	Describes the scientific purpose of the mission in detail related to the work of the team.		Describes the mission's scientific significance.		Offers few details of scientific significance.
Teamwork	Offers evidence of effectively working as a team member to meet goals.		Describes inconsistent attempts at collaboration		Offers minimal evidence of teamwork.

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