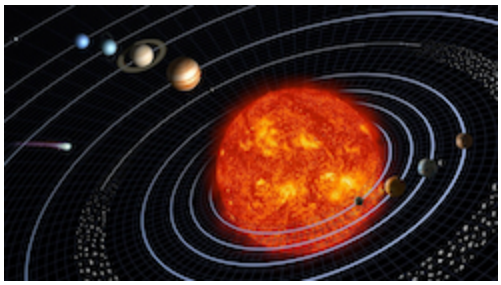

“You are the Next Space Explorers”

Lesson 1: “Our Place in Space”

Description:

Humans look up at the sky in wonder every day. Who cannot help but notice the bright, warm Sun, the glowing Moon and the spectacular array of sparkling flecks of light in the nighttime sky? Today’s astronomers provide us with even more wondrous views of the sky using the eyes of technology. Our views and understanding of our place in space have inspired our stories, music and art across history. How have we come to know our place in space? What new unexpected things will we learn from astronomers and astronauts today, tomorrow or next week?

Articles, Activities and Videos in this mission reflect a very holistic view of the space program (history, people, science and culture). Whenever possible students are provided with the opportunity to share their learning and understanding through a variety of mediums (e.g. images, words, videos, voice, song).

Target Grade level or Course:

5th-9th grade science, social studies and math

Instructional resources included:

Type of Resource	Name of Resource	Description of Resource
Video	Solar System Size and Distance	In this NASA JPL video, get a handle on the size of the planets in our solar system and the distances between them.
Article	Sky Time	Learn how humans have used the movement of objects in the sky to describe and mark the passage of time.
Article	We’re Out There	NASA explores the solar system and beyond, through a series of exploration steps designed to answer humanity’s most compelling questions about worlds beyond Earth.
Article	Communicating at Lightning Speed	Learn about the electromagnetic spectrum and how communications happen in space.

Article	Environmental Challenges of Living and Working in Space	Learn how pressure, temperature, and space debris pose potential threats to astronauts while living and working in space.
Article	Living and Working in Space	Learn about the systems NASA has in place to ensure healthy astronaut habits for nutrition, hydration, exercise, sleep, and spacewalking.
Activity	Can You Hear Me Now?	Students calculate the amount of time needed to send signals to solar system locations.
Activity	Working in Space Safely	Students experiment with creating a mock space suit that protects astronauts from extreme temperatures and micrometeoroids.
Activity	Backyard Calendar	Archeoastronomy is the field of study where we explore the relationship between observations of the sky and how they influence how we live. In this activity, students will observe the passage of time by tracking the position and time of Sunsets in your community twice a week for six weeks.