

Space Odyssey Online Teacher's Guide

Space Exploration Timeline

Previsit Activity for Space Exploration



Courtesy NASA

Grades 4-8

CDE Standards

Science: 4.4e

Language Arts: 1,2,3,4,5,6

History: 1,2,4

Math: 1,2,5

Preparation and Materials

Estimated Preparation Time: 30 minutes

Estimated Activity Time: Two or more time periods of 30 minutes each

Materials

Books about space travel and space exploration

Paper

Pencils

Colored pencils, crayons, or markers

Learning Goals/Objectives

Students will

- Learn about many different kinds of space exploration missions (including the space race, Mercury, Apollo, space shuttles, and space stations)
- Develop a time line of space exploration events
- Compare different space missions

Connection to *Space Odyssey*

When visiting *Space Odyssey*, visitors will be "transported" into space. However, it will be important for visitors to know just how space travel and exploration have evolved over the past 50 years. Visiting the Mars Diorama and maneuvering the Mars Rover will give visitors further insight to the real challenges of exploration on other worlds.

Advanced Preparation

Locate books on space travel and space exploration. You may also want to explore some Web sites about the history of flight and space exploration.

Classroom Activity

1. Choose a book from the list below or another book about the history of space travel and read it out loud to your class. Make sure that the book includes dates of missions and pictures of each different type of mission so that students can see how space vehicles have changed over time. Don't forget early rockets and satellites, as they will very clearly illustrate how much technology has changed over time.

2. While you're reading, have students take notes (or take notes as a class) of mission names and dates. Depending on the amount of time you want to spend on this activity, you may want to talk about the important events of each mission. For instance, Apollo 11 (man's first walk on the Moon) would be one mission you would probably discuss at length. Be sure to include important missions from countries other than the United States.
3. When you've finished reading, ask students to create a time line of space missions. They may choose to add pictures (drawn or printed from the Internet) of various missions to make their time lines more creative. Students may also choose to research additional missions to add to their time lines.

Variations/Extensions

1. Ask each student to choose one space mission and research it in more depth. Have students produce a research report (see activity sheet) or some other project about their space mission.
2. Discuss with students how space missions have changed over time. Using a Venn diagram or some other graphic organizer, compare the similarities and differences among various space missions.
3. Students may use various craft supplies to build a replica of the spacecraft they researched.
4. Have students display or share their research projects with the rest of the class. Have a "Space Night" for families to view classroom and individual projects. You may decide to partner this with a Star Party Museum Outreach program.

Resources

Books

George, Michael. *Space Exploration*. Mankato, Minn.: Creative Education, 1992.

Space Exploration is book filled with beautiful images from space. It tells the story of America's history in space. It chronicles space exploration from Sputnik to space probes, including several of the crewed space missions.

Goldsmith, Mike. *Space Travel: Spinning Through Space*. Austin, Tex.: Steck-Vaughn Publishers, 2001.

Space Travel is an outstanding book that discusses the history of the space race, as well as the subsequent missions that have originated from that race. The book includes not only Mercury, Apollo, and shuttle missions but also future mission possibilities.

Rinard, Judith. *The Story of Flight*. Buffalo, N.Y.: Firefly Books, 2002.
This book chronicles the entire history of flight, but specifically addresses space travel on pages 38-63. It gives information on early spaceflight, the race to the Moon, and the future of space travel.

Stott, Carole. *Space Exploration*. New York: Alfred A. Knopf, 1997.
Space Exploration is an Eyewitness Book and is loaded with information about the exploration of space, including information about living in space. Pages 14-23 look specifically at the space race and other NASA missions.

Web sites

<http://www.nauts.com>

This Web site is an outstanding resource for the space exploration enthusiast. It comes complete with a time line of space missions, information about individual space vehicles and their missions, and biographies of several astronauts.

<http://spaceflight.nasa.gov/history/index.html>

NASA has developed a Web site with information about the history of space missions, including Mercury, Gemini, Apollo, and space shuttle missions. It also includes time lines and biographies for each individual launch program.

Name: _____

An Out-of-This-World Mission

Name of Mission: _____

Date of Mission: _____

Length of Time in Space: _____

Names of Astronauts Aboard: _____

Mission Highlights: _____
