Space Odyssey Online Teacher’s Guide

Space Exploration Timeline
Previsit Activity for Space Exploration

Grades K-3
CDE Standards
Science: 4.4e
Language Arts: 1,2,3,4,5,6
History: 1,2,4
Math: 1,2,5

Courtesy NASA
Preparations 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
Post-it notes
Butcher paper
Chart paper
Pencils
Copies of mission vehicles pictures

Learning Goals/Objectives
Students will
• Learn about many different kinds of space exploration missions (including early space race, Mercury, Apollo, space shuttles, satellites, and space stations)
• Develop a time line of space exploration events
• Compare different space missions

Connections 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 has evolved over the past 50 years. Visiting our Mars diorama and maneuvering the Mars rover will give visitors further insight to the real challenges of exploration on other worlds.

Advanced Preparation
1. 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.
2. Reproduce a blank time line on white butcher paper (you may want to go back as far as the 1900s when Wilbur and Orville Wright invented the first airplanes). Leave plenty of space between each time period for students to place Post-it notes or pictures of various space missions.
3. Make copies of space mission pictures for students to color and place on the time line.
**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, ask students to listen for and point out mission names and dates. Add them to your list on chart paper. 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, assign or have students choose a mission, write the mission name and date on a Post-it note, and have them place it in the appropriate place on the butcher paper time line. You can also have students label, color, and cut out pictures of missions and use those on the time line instead of Post-it notes. This would be a great time for discussion of chronological order, as well as ordinal concepts.

4. Display the time line in your classroom. Have students add to the time line as they learn more about various space missions.

**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 model 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 combine this with a Star Party Museum Outreach program.
Resources

Books


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


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


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.


*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 those of Mercury, Gemini, Apollo, and space
shuttle missions. It also includes time lines and biographies for each individual launch program.
SATURN Y BOOSTER LAUNCHING
An Out of This World Mission

Name of Mission: ___________________________________________

Date of Mission: ___________________________________________

Names of Astronauts Aboard: _________________________________

________________________________________________________________________

________________________________________________________________________

Mission Highlights: __________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Draw a picture of your spacecraft.