

Pathfinder: Outer Space

-by Nancy Metteauer

Outer space continues in all directions and has no known limits. The sun and billions of other stars make up a giant galaxy, and many other galaxies are scattered throughout space. Outer space begins about 100 miles above the earth's surface, where the air is too thin to affect objects moving through it.

The purpose of this pathfinder is to serve as a starting point for research on the topic of outer space. It is designed for students, educators, and anyone wishing to learn more about our universe, the solar system, space travel, astronauts, and cosmonauts. All resources included are Internet sites. They are divided into three groups:

- Ω OUTER SPACE RESOURCES
 - Ω SPACE TRAVEL RESOURCES
 - Ω ASTRONAUT AND COSMONAUT RESOURCES

OUTER SPACE RESOURCES

Liftoff to Space Exploration

<http://liftoff.msfc.nasa.gov/>

Liftoff to Space Exploration contains information and photos of spacecraft, the universe, pioneers and tools of science and engineering. Also, it allows the visitor to keep track of satellites and spacecraft.

The Planetary Society

<http://planetary.org/>

The Planetary Society is an organization that supports scientific and educational programs. A visitor to this site can help design a community on Mars in the year 2030 or view an image of the largest of Jupiter's 28 moons.

Virtual Solar System

<http://www.nationalgeographic.com/solarsystem/>

This Virtual Solar System site allows the visitor to discover the wonders of our solar system in a spectacular 3-D environment.

The Space, Planetary, and Astronomical Cyber-Experience

<http://nss.org/space/>

This site is presented by the National Space Society, and it allows the visitor to learn about international space agencies, companies making space exploration a reality, and the history of space exploration.

Space

<http://www.space.com/>

Space.com contains top news stories on space. Photos and videos can be viewed on space related topics. Included is a section for educators.

SPACE TRAVEL RESOURCES

National Aeronautics and Space Administration

<http://www.nasa.gov/>

Homepage to the space agency's extensive online presence, providing access to mission news, education resources and the various national centers.

United Space Alliance - Shuttle

<http://www.unitedspacealliance.com/shuttle/>

Live mission audio and video of the space shuttle, with real-time animated positioning can be found at this site. It also includes information on the spacecraft and its components.

Popular Science Five Year Guide to Space Exploration

<http://space.popsci.com/space/default.html>

This science magazine offers images, illustrations and details for every space mission scheduled between 2000 and 2005.

Maximov Online

<http://www.maximov.com/Mir/index.html>

Maximov Online contains current news on the Mir space station, with details of its research, history and design.

Space Wardrobe

<http://www.jsc.nasa.gov/pao/factsheets/nasapubs/wardrobe.html>

Space Wardrobe features a sketch of the current wardrobe with components worn by space shuttle crews. Also included is a history of space wear from the beginning.

ASTRONAUT AND COSMONAUT RESOURCES

Astronaut Biographies

<http://www.jsc.nasa.gov/Bios/>

Astronaut Biographies provides a short profile on every astronaut and cosmonaut who has flown. Includes press releases from the agency for current crew addition.

Astronaut Connection

<http://www.nauts.com>

Astronaut Connection contains biographies of the men and women who have been involved in the study of space and its exploration, with trivia and launch schedules.

Astronaut Memorial Foundation

<http://www.amfcse.org/>

Astronaut Memorial Foundation honors American astronauts who lost their lives on missions or in training.

Young Astronaut Council

<http://www.yac.org/>

This site explores this organization's educational programs, curriculum, contests and conferences for kids aspiring to be astronauts.