



A VIEW FROM SPACE

A TRAVELING EXHIBITION

(700 Sq. Ft.)

EXHIBIT DESCRIPTION

Since the launch of the world's first artificial satellite Sputnik in 1957, satellites have dramatically changed the way we study our planet. *A View from Space*, a bilingual (Spanish and English) traveling exhibit from the Oregon Museum of Science and Industry, gives museum visitors a chance to see the world from a satellite's perspective. In this highly interactive, hands-on science exhibit, visitors will be able to track a hurricane from space, send a satellite spinning into orbit around a model Earth, study images of our planet captured by NASA's Earth Observing System, and more.

A View from Space is designed to introduce visitors to the latest and greatest of the Earth observing satellites and give them an appreciation for the value of studying Earth from space. Visitors will be challenged to become scientists, study satellite images, and try to answer important questions about our dynamic planet.

A View from Space includes:

SATELLITE ACTIVITY AREA

Young visitors are just beginning to think about Earth, space, and the solar system. The satellite activity area encourages families to explore these topics together through creative, open-ended play. The area features a drawing station with satellite stencils, a free-play activity table with space-themed toys, and a reading area. A posting board lets visitors display their artwork and allows educators to share the latest news from NASA's Earth observing satellites.

HOW HIGH ARE THE SATELLITES?

How far above us do satellites orbit? Where is the International Space Station? When you are in an airplane, are you as high as a satellite? Using an air-powered bar graph, visitors send balls shooting up a large profile of the Earth's atmosphere, revealing the orbit and flight altitudes of satellites, space stations, weather balloons, airplanes, and more. Visitors can compare and contrast the height of satellites.

SATELLITE ORBIT

This exhibit offers a dramatic demonstration of how satellites orbit the Earth and capture images of the entire planet. With the turn of a crank, visitors send a satellite spinning around a rotating model Earth. An ultraviolet light from the satellite leaves a phosphorescent trail, painting a clear picture of the satellite's path.

SATELLITE PUZZLES

Two large floor puzzles offer a playful activity for families and young visitors. The first puzzle uses colorful cartoons to compare the size of satellites to everyday objects, such as a beach ball or a mini-van. The other puzzle gives visitors a peek into the inner workings of NASA's *Aqua* satellite.

SEASONAL CHANGES

From space, satellites can capture images of the entire globe over long periods of time, revealing new and often surprising information about our planet. At this station, visitors spin a praxinoscope and see an entire year of satellite data from North America compressed into a few seconds of animation. Complex patterns of change are suddenly revealed as visitors watch cycles of drought, snow accumulation, and vegetation growth across the continent.

CHANGING OUR PLANET

What can satellites tell us about the way human population growth and resource use are changing the Earth's lands, oceans, and climate? At this exhibit three rotating cubes, featuring modern and historic satellite images, illustrate some of the important environmental changes that NASA's satellites are tracking from space. As visitors turn the cubes, they watch the city of Las Vegas expand, the forests of Brazil shrink, and the Antarctic ozone hole grow.

THE BIG PICTURE

The world looks very different when you are more than 400 miles from the surface of the Earth! This flip panel matching game challenges visitors to expand their point of view and try to identify the Grand Canyon from a series of ground photos, aerial photos, and satellite images. A topographical map of the canyon gives visitors a hands-on appreciation of a satellite's perspective.

WHAT CAN YOU FIND?

A large banner display features a wide-view image of North America on one side and a detailed, one-meter resolution image of downtown Manhattan on the other. Visitors are introduced to the importance of scale and resolution as they compare these images captured by two different satellite missions. An accompanying activity encourages visitors to search for details, such as the smoke from a Montana wildfire, which is visible on the image of North America.

IMAGE GALLERY

This two-sided banner demonstrates the beauty of our planet viewed from space and highlights several of NASA's important satellite missions. On one side, visitors can study the classic "blue marble" image of the Earth. On the other side are nine images of the planet, each created using data from a different satellite sensor, depicting global ocean temperatures, sea surface winds, the Antarctic ozone hole, and more.

SATELLITE VISION

By carefully measuring different wavelengths of light reflected from the Earth, many of which are invisible to the human eye, satellites reveal a whole new level of information about our planet. At these specially designed "Pepper's Ghost illusion" boxes, visitors turn a knob to fade between true-color and false-color satellite images. Through the activity, visitors learn how a satellite's sensors are able to measure sea surface temperature in the Atlantic Ocean and track atmospheric pollution over Central America.

SATELLITES TRACK HURRICANES

On the afternoon of August 13, 2004, one of the most devastating hurricanes in history slammed into the Florida Coast, causing an estimated 15 billion dollars in damage. This interactive hurricane-tracking map tells visitors the story of Hurricane Charley and challenges them to predict Charley's landfall location based on real satellite data. Visitors use a magnetic "puck" to trace the path of the hurricane and discover the important role of satellites in studying these awesome storms.

A VIEW FROM SPACE was created and is toured by the Oregon Museum of Science and Industry. The exhibit was made possible with funds provided by the National Aeronautics & Space Administration (NASA).