

PLANET MARS

Facts:

Diameter: 6792 km

Distance from sun: 228,000,000 km

Temperature: -67 degrees F

Number of Moons: 2

Length of Day: 24.62 hours

Length of Year: 687 Earth days

Mars is named after the Roman god of war because the red color of Mars looks like spilled blood. We can see Mars's reddish color and white polar caps from Earth. Mars's atmosphere is 95% carbon dioxide, 3% Nitrogen, and 2% oxygen, water vapor, and other elements.

Mariner Missions:

In 1965, *Mariner 4* flew by Mars and saw no signs of life. Up until this time, scientists thought lines on Mars were canals built by Martians to transport water! In 1971, *Mariner 9* became the first spacecraft to orbit another planet. It orbited Mars for about one year. It photographed month-long dust storms, canyons, floodplains, and other signs that water was once on the planet.

Viking 1 and 2

Viking 1 and 2 arrived at Mars in 1976. Each spacecraft was made of an orbiter and a lander. The orbiter was designed to find a landing site for the lander and to relay information from the lander to scientists on Earth. Images showed volcanoes, lava plains, canyons, craters, dry valleys and channels. Much of the landscape looked as if it had been carved by running water. It also showed that Mars is divided into two main regions: northern low plains and southern cratered highlands. It discovered that Mars has a thin atmosphere made mostly of carbon dioxide. The soil is mainly iron, which gives it the red color. The Vikings also found that Mars has no tremors, quakes, or volcanic eruptions.

Mars Pathfinder

On July 4, 1997, the Mars *Pathfinder*, surrounded by huge air bags, bounced to a stop on the Martian surface. Inside the *Pathfinder* was a rover named *Sojourner* – the first rover to operate on another planet. Its job was to analyze rocks and soil. Data showed that Mars is drier and dustier than any desert on Earth, often having gusts called “dust devils”. Clouds that cover parts of Mars consist of water ice.

Global Surveyor

In November, 1996, the *Surveyor* flew at a low altitude pole-to-pole to study the polar caps. The polar caps get larger in winter and shrink in summer. They are made of layers of dust and frozen carbon dioxide. Scientists think that the enlarging and shrinking of the polar caps infers that Mars has seasons. The *Surveyor* also found that Mars ONCE had a magnetic field, but no longer does.

Spirit and Opportunity Rovers

On January 4, 2004 the rover, *Spirit*, parachuted to Mars. Twenty-one days later on the other side of the planet, *Opportunity* parachuted to the surface. Both rovers were 4.9 feet tall with 6 wheels and solar powered. They explored craters, dug into the soil and found shiny, smooth pebbles and fine-grained soil. They crushed rock to analyze soil contents. One rock, which was named *Humphrey*, is believed to be an igneous rock formed from magma. If this is true, then scientists hypothesize that it once contained water. Both rovers are still today roaming the surface sending information back to earth.