

Space Exploration



Humans have been exploring space ever since a balloon flight in 1912 discovered cosmic rays. Today there are regular launches of satellites and spacecraft designed to explore the solar system and the universe.

Perhaps some of the most famous are: Pioneer, Voyager, Mariner, Viking, Magellan, Galileo and the Mars Pathfinder.

The Pioneers were a series of spacecraft launched by the US between 1958-78. Pioneers 10 & 11 achieved the first flybys of Jupiter and Saturn.



Voyagers 1 & 2 were launched in 1977 and first passed Jupiter in 1979. Over the next 10 years they explored the outer Solar System and even today send back information from beyond the outer planets as they head out of the Solar System.



The Mariners were launched in the 60's and 70's to explore the inner planets Venus and Mercury. The missions included the first planetary flyby, first planetary orbiter and the first details of Jupiter, Saturn and Uranus.

NASA's mission to Mars consisted of two Viking spacecraft, each with an orbiter and a lander. Launched in 1975 they reached Mars a year later and landed, taking samples and pictures from the surface of the red planet. (see picture at the top) They failed to find any evidence for life on Mars.

Magellan was launched in 1989 and mapped the entire surface of Venus between 1990-92 using radar.



Galileo was also launched in 1989 and arrived at Jupiter in 1995, after first flying past the large asteroid Gaspra in 1991. Galileo included an atmospheric probe which will drop into the dense gaseous atmosphere of Jupiter. Galileo also gave astronomers important information on some of Jupiter's largest moons. (see the three pictures on this page)



The Mars Pathfinder actually landed on the surface of Mars (in an inflatable 'ball') and deployed a 'roving vehicle' called Sojourner. Sojourner (see picture left) moved over the surface of Mars, taking pictures and information on the planet's surface and sending them back to Earth.