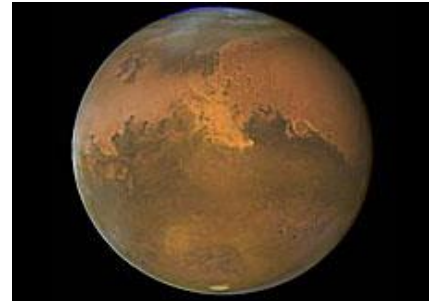


## What Is Mars?

Mars is a planet. It is the fourth planet from the sun. It is the next planet beyond Earth. Mars is more than 142 million miles from the sun. The planet is about one-sixth the size of Earth. Mars is known as the Red Planet. It gets its red color

from the iron in its soil. Mars has two small moons. Their names are Phobos and Deimos.



Mars is the fourth planet from the sun. Image Credit: NASA

## What Is Mars Like?

Mars is very cold. The average temperature on Mars is minus 80 degrees Fahrenheit -- way below freezing! It is rocky with canyons, volcanoes and craters all over it. Red dust covers almost all of Mars. Mars has clouds and wind, just as Earth does. Sometimes the wind blows the red dust into a dust storm. The dust storms can look like tornados. Mars has about one-third the gravity of Earth. A rock dropped on Mars would fall more slowly than a rock dropped on Earth. Things weigh less on Mars than they weigh on Earth. A person who weighs 100 pounds on Earth would only weigh about 37 pounds on Mars because of less gravity.

## What Has NASA Learned About Mars?

NASA has used both spacecraft and robots to learn more about Mars. In 1965, Mariner 4 was the first NASA spacecraft to get a close look at the planet. In 1976, Viking 1 and Viking 2 were the first NASA spacecraft to land on Mars. They took pictures and explored the planet's surface.

Since then, more spacecraft have flown near or landed on Mars. Scientists want to know if there



A computer drawing shows a rover on Mars. Image Credit: NASA

is, or has ever been, water on Mars. Living things need water to survive. So, any sign of water on Mars would mean that there could be, or could have been, life on the planet.

### **How Is NASA Exploring Mars Today?**

Today, three spacecraft are flying around, or orbiting, Mars. The spacecraft are using scientific tools to measure the temperature and the kinds of minerals on Mars. They are also taking pictures and searching for water.

Two robots that move, called rovers, are on Mars' surface. Their names are Spirit and Opportunity. The rovers travel around taking pictures and looking at the planet's soil and rocks. NASA uses pictures and information from the spacecraft and the rovers to learn more about Mars. It will send this information back to scientists on Earth.

### **How Will NASA Explore Mars in the Future?**

NASA plans to send more robots to Mars. It wants robots to one day collect Martian soil and rocks and bring them back to Earth to be studied. A robot named Phoenix landed on Mars in May 2008. Phoenix is digging holes in Mars' surface and studying what it finds in the holes.

NASA also wants to send astronauts to Mars someday. To get ready to send humans to Mars, NASA is studying new kinds of homes where astronauts can live.

Scientists are studying how people in space could grow plants for food. By watching what happens to astronauts on the International Space Station, they are finding out how living in space affects humans.



A computer drawing shows the Phoenix robot landing on Mars.  
Image Credit: NASA