The Red Planet

by Phil Moschowitz

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# Table of Contents

Liftoff ..................................................... 3

The Red Planet ........................................ 4

Life on the Red Planet ................................. 7

Rovers on the Red Planet ............................. 10

Humans on the Red Planet ......................... 12
The rocket waits on the launching pad as scientists check and recheck the instruments. Finally, everything is ready.

3, 2, 1... liftoff!

The rocket blasts off into the sky! Up the rocket flies, carrying a spacecraft through the clouds and into outer space. Soon the people on the ground can no longer see it, but the scientists in the control room can watch the spacecraft on their computers. They watch it fly past the moon and head deeper and deeper into space—to the planet Mars!

This rocket launched a spacecraft that traveled to Mars!
The Red Planet

Mars is one of the only planets you can see from Earth without a telescope. Look up at the sky one night, and you will see a red dot floating high above. That’s Mars! You’ll see why Mars is called the “red planet.”

Mars often looks red in the sky.
Scientists have been studying Mars for a long time. They know Mars is like Earth in many ways. Scientists know Mars orbits, or travels around, the sun, like Earth and the other planets do. Mars also has ice caps just like Earth. Mars even has clouds, wind, and seasons!
Mars has volcanoes, too. The tallest volcano on Mars is called Olympus Mons. Olympus Mons is 13 miles high! The tallest volcano on Earth isn’t even 6 miles high.

Mars has deep canyons, too. They are much deeper than the canyons on Earth. The Grand Canyon in Arizona is a little more than a mile deep. On Mars, one canyon is more than five miles deep! Scientists believe there may have once been water on Mars that made its canyons.
Scientists wanted to find out more about Mars, so they sent spacecraft to the red planet. Spacecraft are very important to people who study astronomy. Spacecraft can take pictures and send them back to scientists on Earth.

In 1976, two Viking spacecraft landed on Mars. The spacecraft were looking for life on Mars. They sent back information about the temperature, wind, and soil. But scientists still weren’t sure if there was life on Mars.

The Viking spacecraft sent back more than 50,000 pictures of Mars!
On July 4, 1997, the spacecraft *Pathfinder* landed on Mars. A parachute helped it float down to the surface from outer space. Giant airbags inflated around the spacecraft, helping it land with less force.

*Pathfinder* carried the first rover to Mars. A rover is a small vehicle with wheels, cameras, and other instruments. The rover rolled around and explored Mars. The rover studied the dirt and rocks. It also took pictures and sent them back to scientists on Earth. The pictures were shown on television and in newspapers.

Scientists didn’t find any signs of life on Mars, but they still believe life might have existed long ago. Living creatures need water to survive, so some scientists think they might find life in the ice on Mars.
This rover landed safely thanks to its parachute and airbags.
In 2003, two more rovers landed on Mars. These two rovers had the same mission—to find proof that there was once water on Mars.

The two rovers drilled into rocks. They also took pictures and drove around Mars. Finally, they found evidence that there may have been life on Mars! They discovered a place that might have been a sea long ago.

What new discoveries will scientists make in the future? Another spacecraft will soon look for life and research the history of water on Mars. Scientists are excited to learn what the spacecraft will discover.
These pictures were taken by a camera on a rover.
Humans on the Red Planet

Scientists would like to send humans to Mars in the future. But it would take a long time for astronauts to reach Mars. Scientists may set up a base on the moon where astronauts can rest and repair their spacecraft. Then they can finish their trip to Mars.

A moon base might look like this.
Maybe someday humans will build homes and cities on Mars! But there’s one problem—humans can’t breathe on Mars. One idea is to build giant greenhouses where plants could grow. The plants would provide fresh air for humans to breathe.

There may be greenhouses like this on Mars one day.
Humans have been interested in Mars for hundreds and hundreds of years. Thanks to the rovers and other spacecraft, we are finding out more and more about the planet every day. One day, we might even be able to call Mars home!
Responding

**TARGET SKILL** Text and Graphic Features

What do the photos and diagrams in this book help you understand about Mars? Copy and complete the chart below.

<table>
<thead>
<tr>
<th>Page Number</th>
<th>Photo/Diagram</th>
<th>What It Shows</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Photo</td>
<td>Shows the color of Mars</td>
</tr>
<tr>
<td>5</td>
<td>Diagram</td>
<td>?</td>
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<tr>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

**Write About It**

**Text to Self** Would you like to be the first person to live on Mars? Why or why not? What would you like or dislike? Write a paragraph that gives your answer.
<table>
<thead>
<tr>
<th>TARGET VOCABULARY</th>
<th>EXPAND YOUR VOCABULARY</th>
</tr>
</thead>
<tbody>
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<td>space</td>
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<td>vehicle</td>
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</tbody>
</table>

**TARGET SKILL**  Text and Graphic Features  Tell how words go with photos.

**TARGET STRATEGY**  Analyze/Evaluate  Tell how you feel about the text, and why.

**GENRE**  Informational text  gives facts about a topic.