

Touchdown!

A powerful robot called Curiosity lands safely on Mars and begins to explore the planet

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JPL-CALTECH/NASA/AP

Late Sunday night, cheers rang throughout NASA's Jet Propulsion Laboratory (JPL), in Pasadena, CA. In November, the team had launched a high-tech robot, called Curiosity, into space. On Sunday, after more than eight months of travel, Curiosity reached its destination: Mars.

The mobile robot, or rover, landed in a crater near Mars's equator. Minutes later, it sent back to Earth a black-and-white picture of its own wheel on Mars soil.

"We've landed in a nice flat spot," said engineer Adam Steltzner, who led



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NASA scientists high-five each other after the successful landing of the Mars rover Curiosity.

the landing team. "Beautiful, really beautiful."

A Tricky Landing

Curiosity had a particularly risky landing. Weighing about a ton, the car-sized rover is the heaviest Mars explorer yet. The previous three Mars rovers relied on giant airbags for a soft, safe landing. But Curiosity's weight made landing more complicated.



JPL-CALTECH/NASA/AP

In this artist's rendering, the Mars rover Curiosity explores the surface of Mars.

NASA scientists planned a number of steps to slow down the spacecraft carrying Curiosity so it would not go crashing into Mars. As the craft neared the Red Planet, a giant parachute popped out, helping to slow down the landing. Later, powerful engines fired from the craft to slow it down some more.

Much to the relief of NASA scientists, Curiosity steered itself to a safe and gentle landing. "That rocked!" said Richard Cook, the mission's deputy project manager, shortly after the landing. "Seriously, wasn't the cool?"

Why Are We Exploring?

This is NASA's seventh successful landing on Mars. Over its 98-week mission, Curiosity will search for essential ingredients of life, including oxygen, and might find an answer to the question of whether or not Mars once sustained life.

Scientists decided against a safer landing on a plain and instead chose to land in a crater, where water tends to gather. The crater is next to the Martian mountain Sharp, which is three times the size of Everest, the tallest mountain on Earth. "We're hoping to find materials that interacted with water," said John Grotzinger, the mission project's scientist.

NASA scientists hope that Curiosity will make some big discoveries over the course of the mission. But for the moment, they are thrilled that their latest rover made it to Mars safely. JPL Director Charles Elachi compared his team of scientists to a team of Olympic athletes. "This team came back with gold," he said.



NASA/AP

The first photo sent to Earth from the Mars rover Curiosity is a black-and-white picture of the Mars rover's shadow on the surface of Mars.