

Mars Rover Marks First Year on Red Planet

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This week marks the first anniversary of a major exploration effort on Mars. It has been 12 months since the exploration device called "Curiosity" landed on the distant planet. Curiosity is named for the human condition of wanting to learn or know something.

The United States space agency, NASA, says Curiosity has driven more than 1.6 kilometers on Mars. The device, called a "rover," is about the size of a car.

Curiosity has found evidence of an ancient riverbed and other signs of wet conditions. NASA scientists say that with these discoveries, Curiosity has answered the question of whether conditions on ancient Mars could have supported life.

Jim Green leads the planetary division at NASA's Science Mission Directorate.

"We found all the ingredients of life as measured in this material that's deposited in this ancient riverbed. Mars was habitable in its past."

Curiosity is a traveling laboratory that contains 10 scientific instruments. The rover has found hydrogen, oxygen and other elements necessary for life.

The space agency says Curiosity has fired more than 75,000 laser shots. The laser turns rocks and soil into gas. The equipment on Curiosity then examines and identifies the materials on the Martian surface.

Curiosity has sent back more than 70,000 images that give a new understanding of Earth's neighboring planet.

Curiosity's findings will help set future Mars exploration. NASA's Jim Green says the next mission will be launched in 2020.

"Knowing that Mars was an environment that was habitable in its past, we're going to start seeking the signs of potential life that could have existed on Mars. And that, if we could answer that question, will change everything."

Space scientists chose to explore Mars instead of other planets because of the Red Planet's similarities with our own. NASA Administrator Charles Bolden says Mars is the most Earth-like planet in our solar system.

"If life exists beyond Earth, and I am one who believes that it may very well, Mars, for me, is the most likely place that that life will be found."

Mr. Bolden spoke at an event to mark Curiosity's first year of exploring Mars.

Curiosity is traveling in the low area called Gale Crater, where it landed last year. The crater was formed by an asteroid that hit Mars long ago. It is a deep, 150-kilometer-wide area similar to a valley or canyon on Earth.

Curiosity is moving toward the area called Mount Sharp. NASA scientists plan for the device to study the lower levels of that Martian mountain. It will search for clues about how the planet has changed over time. The rover will also search for a type of soil called "clay." Curiosity has found clay minerals on Mars. Clay is evidence of once wet conditions on the planet.

Curiosity was designed to work for two years, but it could go on exploring and sending information back to Earth much longer. NASA scientists and engineers say that in the years to come they hope to work on ways to send people to Mars.

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