Curiosity rover discovers a perfect home for possible life on Mars
By Los Angeles Times, adapted by Newsela staff
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This self-portrait of NASA’s Mars rover Curiosity combines 66 exposures taken by the rover’s Mars Hand Lens Imager (MAHLI) during the 177th Martian day, or sol, of Curiosity’s work on Mars (Feb. 3, 2013).

Scientists now believe there could once have been life on Mars. They just found some signs. But they didn’t find anything like aliens from the movies. The type of life they found is too small to be seen.

NASA’s Curiosity rover landed on the Red Planet in August 2012 to look for signs of life. The rover can drive around the planet like a car.

Last Monday, scientists said the rover had made a discovery. It had found the remains of an ancient lake. It was in a hole on the surface of the planet. The hole is called a crater.

This lake had just the right chemicals for life to thrive. It existed at around the same time that life was just starting on Earth.

Searching For Signs Of Life

The rover found that the crater was once full of water. Some simple animals may have lived there. These very small lifeforms feed on chemicals found in rocks. The lifeforms that they found also
exist on Earth.

John Grotzinger is the main scientist for the mission. He said it could have been easy for simple animals to live on Mars.

The findings were announced on Dec. 9 in San Francisco. Other scientists were very impressed. “They’re really quite amazing,” said Malcolm Walters, who works at a university in Australia.

The history of Mars is written in its many layers of rock. The Curiosity rover went to discover this history. The rover was planning to visit Mount Sharp. It’s a 3-mile-high mountain.

The goal was to search for places that could support life.

But the rover didn’t head straight to Mount Sharp. It first visited an interesting spot called Yellowknife Bay. Curiosity drilled into two rocks there. They also contained a lot of the chemicals needed for life on the planet.

The water that was once in the lake would have been drinkable, scientists said. Some water had been found on the other side of Mars. But, it wasn’t drinkable.

So the water in this old lake may have supported lots of life.

**Curiosity Now Looking For Carbon**

The rover has not yet found any carbon. Carbon is the most important element for all life on Earth. But there could have been life on Mars without carbon.

Some simple animals would have done just fine with the elements already found there.

Yet scientists do want to find some carbon. This would mean that Mars once had more places where things could live.

The Curiosity team feared that the surface of Mars had been damaged. Over the years rays from space have hit the planet. This would have also destroyed any carbon that was once there.

Then the Curiosity rover took soil samples. The scientists found gases that helped them figure out the age of the planet’s surface. It was much younger than the scientists had thought it would be. That meant the soil wasn’t as damaged as they had thought.

The team then noticed a small cliff located near where Curiosity landed. The scientists saw that the cliff used to cover some rocks. They wanted to test the rocks. But the cliff had worn away over time. This showed younger rock underneath.
The team will send the rover to dig at the cliff. They hope to find some carbon. This is the best place to search for it on the whole of Mars.

NASA scientist Douglas Ming led the study. He said that you never know what you are going to find. But, one thing he knows from studying Mars, “is to expect the unexpected,” Ming said.