Curiosity: Finding Answers on Mars

The planet Mars is very different from where we live. It's smaller, icy, covered in red dust and craters, and doesn't have any water or life. Scientists here on Earth have lots of questions about Mars. What is the weather like? How is its surface different from Earth? Was there ever life on Mars? Could humans live there someday?



This is a picture of Mars. It's nicknamed the "Red Planet" because of the red dust that covers its surface.

These questions can be hard to answer because it's not easy for humans to go to Mars. Mars is very far away, so it would take a lot of time to get there – more than 7 months! And because there's no air or plants on Mars, it would be very tough for humans to live there. One solution to this problem is to send **rovers** to Mars instead of people.

A rover is a robot sent to study Mars. Scientists control the rover from here on Earth and use it to do science experiments and help us answer questions. There are four rovers on Mars right now. The one that we sent most recently is named Curiosity. Curiosity has an important mission: it is looking for liquid water and tiny, microbial life on Mars. It is also studying the rocks and dust on Mars' surface.

Curiosity needs many special tools to complete this mission. It is the largest robot we've landed on another planet: it weighs nearly 2,000 lbs and is the size of a large car! It also has six large wheels to help it drive over rocks and dust without getting stuck. Curiosity has 17 different cameras to send pictures back to Earth, which help scientists learn more about Mars and help the rover watch out for unexpected dangers like large holes. Curiosity has an arm that's 7 feet long and a drill to help it reach and study rock samples. It also has antennas for "listening" to instructions from scientists here on Earth, and for "speaking" to tell scientists about what it has discovered.



Curiosity used a camera at the end of its robotic arm to take a "selfie" in February 2013. Take a look at Curiosity's big wheels and its camera "eye," two important tools it uses to study Mars.

Rovers help scientists answer important questions about Mars. With the answers from Curiosity and other rovers like it, we could one day learn if there was life on other planets in the past and even if humans could visit Mars someday.



