

# Full product specification

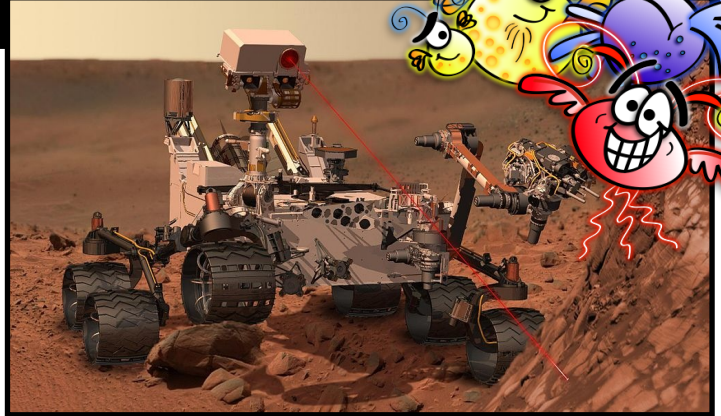
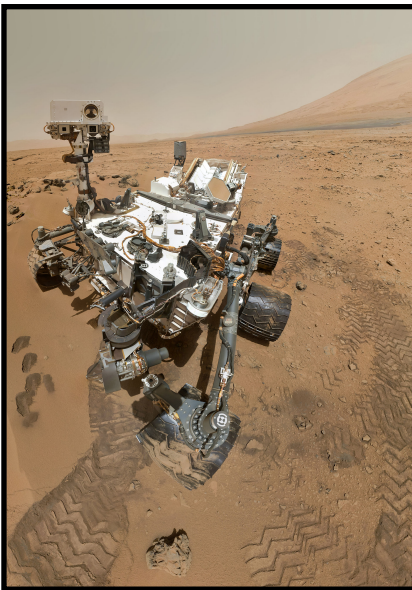
## Planet Mars Gravel

### The Gravel Max



**Product Name**  
The Gravel Max

**Product Code**  
Mars-Gr



**Action shot:** Artist's concept drawing of the Curiosity rover using its Chemistry and Camera instrument to investigate a rock surface.

### Overview

NASA's Mars Science Laboratory Mission launched the Curiosity rover to Mars to understand more about this beautiful red planet. It has four main goals, to study the:

- **biology** (to investigate the building blocks of life, such as hydrogen, carbon, sulphur)
- **climate** (what the atmosphere was like and is like now)
- **geology** (surface, such as the gravel)
- **surface radiation** (this information will help with planning for future manned missions to Mars)

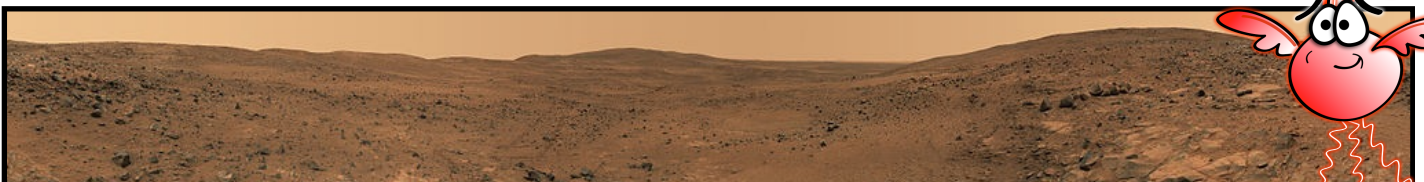
**Let me take a selfie:** NASA's Curiosity rover used the Mars Hand Lens Imager (MAHLI) to capture this set of 55 high-resolution images, which were stitched together to create this full-color self-portrait. Credit NASA. Public domain.

**Recent samples of gravel** analysed by NASA's Curiosity Rover have been found to contain **in-organics**. In-organics are the basic building blocks of life and include elements like hydrogen and oxygen. These two particular elements were identified in a sample taken from a dried up river bed on Mars. This is significant, because when oxygen and hydrogen are combined, they make H<sub>2</sub>O (water) and water is required for life to exist.

### Physical Properties - Surface Composition

Mars, like our Earth, is a **terrestrial planet**, which means that it is mainly made up of **rock** and **metals**. It consists of minerals containing silicon and oxygen, metals and other elements that make up rock.

It has soil too with similar nutrients to those found in Earth's soil, such as magnesium, sodium and potassium. These elements are important for life and allow plants to grow on Earth.



**Cut and Paste:** It took 405 individual photos to make up this 360 degrees panoramic view of Mars, taken from Husband's Hill by NASA's Mars



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# Cosmic Caboodle

THE UNIVERSE IN THE PALM OF YOUR HANDS

A fresh sample of gravel from Mars. This sample contains the building blocks of life with trace elements of hydrogen and water. Grab your magnifying glass and start the hunt.

## DIFFICULTY FACTOR



- **One** out of **three** cheeky aliens.
- Requires a keen eye
- It takes about **5 minutes** to make and hunt.



## INSTRUCTIONS

1. Print this page and grab a pen.
2. Start the hunt and count how many hydrogen and oxygen elements are in this sample. **Hint**, to make water you need **2 hydrogen** elements for every **1 oxygen** element. This means your answer should have double the amount of hydrogen versus oxygen.



-  Hydrogen
-  Oxygen

