

The fourth planet orbiting the Sun, Mars is part of the rocky planets family. The reason it is known as the "Red Planet" is because the iron minerals in the soil oxidize or rust, causing the soil and atmosphere to gain that reddish appearance. Its landscape, when not invaded by dust storms, looks like an endless horizon of arid terrain, full of mountains and inactive volcanoes. It lives accompanied by two moons, called Phobos and Deimos.

Mars captures everyone's attention, there's no escaping it. From the canals scattered across the planet, to the idea that it did sustain life at some point and may have the potential to be a second home for humans, the red planet arouses the curiosity of the scientific community and even society.

**What could it be hiding? Life?
The Unknown?**

We don't know yet, but we may be getting closer and closer to the answers with the launch of the new rover Perseverance in 2021. But did you know that this was not the first astromobile to set foot on the soil of Mars? Here are the 5 rovers that were sent by NASA!

START

Sojourner

The rover that carried out the first mission on Mars soil, Mars Pathfinder. Launched by NASA on 4 December 1996, and landed in the region of the red planet known as Ares Vallis, the little Sojourner began its great adventure of recognising the geological composition of the Martian soil. As well as giving us more than thousands of photos of the landscape and collecting chemical and atmospheric data, he discovered that, on this planet that we know today for its aridity, the Ares Vallis region had once been hot and humid. Sojourner's journey ended on 27 September 1997, but despite its short stay, the little 11 kg rover paved the way for future generations of mars rovers.



Ares Vallis

Spirit e Opportunity



In 2003, a new adventure began: Spirit and Opportunity were launched on the Mars Exploration Rovers mission. Spirit landed on 4 January the following year in Gusev crater, while Opportunity arrived 21 days later, landing at Meridiani Planum. What is so special about these two landing sites? It was suspected that the crater once held a large lake, and that the answer about Mars' liquid past lay in the mineral deposits of Meridiani. And somehow we got answers...

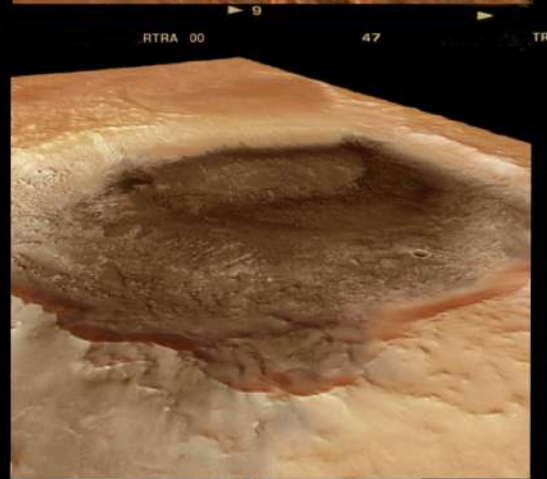
Spirit



Opportunity



Gusev Crater



Meridiani Planum



Spirit discovered rocks that told us impacts, explosive volcanic activity and groundwater had been reality of Early Mars, and founded some unusual patches of extremely salty soil. In turn, between the "Eagle" and "Endurance" craters, Opportunity found out there had been playa lakes between dunes, that evaporated and turned into sulphate-rich sands. Later, the sands solidified into rocks and soaked by groundwater. Planned to last 90 days, ended up being extended for many more years - Spirit finished its mission in 2010, and Opportunity in 2019, having reached an impressive 42 kilometres on its journey.

Curiosity



On board the Mars Science Laboratory mission, on 26 November 2011, Curiosity landed on the red planet, in Gale crater. This rover is like a kind of «small» big scientist: with the size of a car, it is equipped with a set of advanced scientific instruments. Curiosity looked for rocks that caught its attention, and analysed their composition and history, and continued the research carried out by its former companions on the journey, but now with more precision!

SELFIE TIME



@ "BIG SKY" SITE



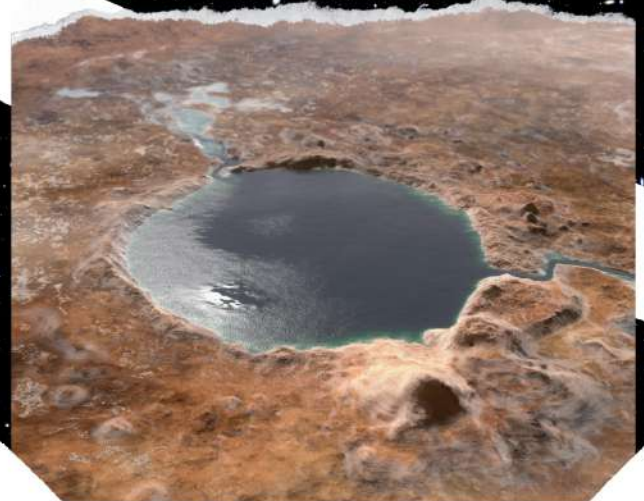
Characterise the climate of Mars by studying weather patterns, the distribution of water, carbon dioxide and hydrogen in the atmosphere and in the soil; studies the geological formation of Mars' crust, as well as continues to learn more about early Mars, and seeks for evidence of organic existence. Moreover, the fact that Curiosity, being such a large rover, has landed successfully has opened the door to a new dream: human exploration on Mars. But we still have a lot to find out: the levels of radiation, and all sorts of hazards that we don't know about yet.

Perseverance



Launched on July 30th 2020, landed in Jezero Crater on February 18th 2021, where scientists believe that the crater was once an ancient river delta, suspecting that there may have been microbial life in those periods of occupation by water. For this reason, the rover's mission is to understand the formation and evolution of this curious region, as well as to seek signs of past life and hypothetical habitability once upon a time, and to collect samples and rocks from the region and its soil, which may still contain signs of life.

What could have been Jezero Crater once...



Perseverance will continue Curiosity's work by carrying out further analysis of the planet's atmosphere to understand the chances it could support human life: understanding whether oxygen can be produced on Mars and how the atmosphere could affect human health



FINISH