

# Is Mars dead?

## Clouds over Mars

Mars photographed by the Hubble Space Telescope (a telescope which orbits the Earth) in 2003. The blue-ish white areas at the top and on the left hand side are water ice clouds.

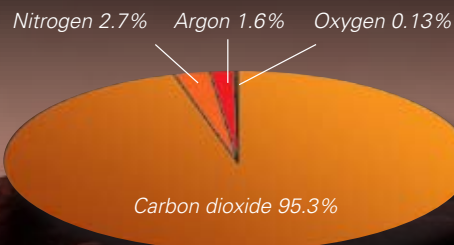
New data suggests that it is very unlikely that life ever existed on Mars. When the presence of water was confirmed a few years ago, there was a lot of speculation that at least simple life forms had once lived there as water is essential for every known living thing. The latest data gathered by Rover vehicles on the planet's surface suggests that the water was far too salty to support any life and that life on Mars would have been very challenging for even the toughest organisms at any time during the past 4 billion years.

## Ice on Mars

Water ice in a crater on Mars. The ice forms a thin crust on the sand dunes of the crater floor. In the polar regions of Mars, water ice can exist all year round. There is no liquid water on the surface of Mars, however, as the atmospheric pressure is too low. Instead, the water sublimates – it turns straight from a solid to a gas and back again. The crater shown is about 35 km in diameter.



NASA, J. Bell (Cornell U.) and M. Wolff (SSI)



## Martian atmosphere

Mars' atmosphere is thin; its pressure is about 1% of Earth's atmosphere. Only a tiny fraction is oxygen, suggesting that life is unlikely.

## Visitor from Earth

The Opportunity rover is one of two identical rovers sent to Mars in 2003. It can travel up to 100 metres in each Martian day (24 hours 37 minutes). One of the main aims of the mission is to look for water. It also analyses rocks and soils to find out what they were made of.



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## A watery past

This image was taken by the Mars Global Surveyor orbiting satellite in March 2001. It shows gullies on Mars, with meandering channels and fan-shaped aprons of debris located downslope. The gullies are thought to have been formed by erosion, both from a fluid (such as water) running downslope, and by slumping and landsliding processes driven by the force of gravity.