

Mars

The red frontier

Mars has giant volcanoes, enormous canyons and traces of ancient rivers. Rovers and orbiters investigate conditions that might once have supported microbial life.

Type	Rocky planet
Diameter	6,779 km
Mass (Earth = 1)	0.107 Earth masses
Average distance	1.52 AU · 227.9 million km
Orbital period	686.98 days
Rotation	24 h 37 min
Temperature	≈ -63 °C on average
Main orbiting bodies	Phobos and Deimos

Compare with Earth

Its diameter is about 53% of Earth's.

Understanding Mars

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Composition and interior

Mars consists of basaltic rocks rich in iron oxides, a silicate mantle and a core containing iron, nickel and sulphur. Iron oxides give its dust a reddish colour.

Atmosphere and environment

Its very thin atmosphere contains about 95% carbon dioxide, with nitrogen and argon. Today's low pressure prevents liquid water from remaining stable on the surface for long.

Exploration

Perseverance has explored Jezero crater and collected samples. Curiosity has studied Gale crater, while several orbiters have mapped the planet, its buried ice and its atmosphere.

A remarkable fact

Olympus Mons rises about 22 kilometres above its surroundings, and Valles Marineris stretches for several thousand kilometres. Mars also bears traces of ancient rivers and lakes.

Sources and limitations

NASA Science: <https://science.nasa.gov/mars/facts/>

Online fact sheet: <https://systeme-solaire-3d.fr/en/mars>

Values are rounded. The artistic view changes sizes and distances for readability. Check dated information before reusing it.