MARS FACT FILE

Mars is the fourth planet from the Sun and is often described as the most Earth-like of any other planet.
This is due to the solid surface, having surface temperatures of between **20 degrees Celsius and -140 degrees Celsius,** a thin atmosphere and indications that **water once flowed** on the surface. As such it is the next key target for human spaceflight.

Mars is named after the Roman god of war. This is because, when it is seen in the night sky, it looks like a star that has a reddish tinge, a little like a drop of blood. It has long been regarded as a place where life would be found but if life does exist there, it is only likely to be **very simple life forms** rather than the intelligent aliens so often portrayed in science fiction.

Though the red, dusty surface of **Mars** lacks the rich diversity of Earth, the Martian surface varies dramatically, from huge volcanoes to vast canyons. Some of the planet's geological features were very **probably formed by the action of water** and there is plenty to suggest that certain channels and plains were caused by flowing water, even extreme flooding. There are many indications that **Mars once had a warm, wet climate.** Today though it is a cold, dry planet. One of the big questions that planetary scientists are trying to answer is what happened to **Mars** to change it from a planet that may have been hospitable to life to one that is now only to be visited if you are wearing a spacesuit.

Did you know that...?

Though roughly half the size of the Earth, **Mars** has some features bigger than the equivalents on our planet. **Valles Marineris** or Mariner Valley is a canyon, over 3000km long and up to 8km deep. By contrast, America's **Grand Canyon** is 447km long and 1.5km deep.

Mars' largest volcano is **Olympus Mons.** This dome-shaped, dormant volcano is 24km high, three times **higher than Mount Everest**, and the base is 600km across.

MARS STATISTICS

Distance of Mars from the Sun:	227,900,000 km (average)
Distance from the Sun compared to Earth:	1.524 X
Length of Year:	686.98 days
Length of Day:	24hrs 37m 23sec
Diameter:	6794 km
Diameter compared to Earth:	0.532 X
Moons:	2-probably captured asteroids

Missions:

Mars has been the centre of attention for a vast array of planetary exploration missions for many reasons: It is one of the closest planets to Earth; it is the **most Earth - like** of any other planet; it may have liquid water and therefore may be another harbour for life and it is the next place after the Moon most likely to be visited by astronauts. At the moment there are several important missions at **Mars** from **NASA** and the **European Space Agency (ESA):** NASA's most famous current **Mars** mission is that using the **Mars Exploration Rovers, Spirit and Opportunity.** These are roaming the surface, studying the mineralogy and looking for evidence of water. The American space agency also has **Mars Reconnaissance Orbiter, Mars Global Surveyor** and **Mars Odyssey** surveying the planet from orbit.
ESA's **Mars Express** is also studying the surface of **Mars** in detail and searching for evidence of reservoirs of water beneath the surface. It did carry the lander **Beagle 2** to **Mars** that was to look for signs of life but Beagle was lost after it was released from Mars Express. ESA have a Solar System exploration programme called 'Aurora' in which Britain will play a big part. One of the objectives is to land an astronaut on **Mars** by the 2030s. The next stage of 'Aurora' is to **land a rover on Mars.**

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