

You are going to read a magazine article about the planet Mars. Six sentences have been removed from the article. Choose from the sentences A–G the one which fits each gap (1–6). There is one extra sentence which you do not need to use.

Mars update

Progress test 2

How our knowledge of the Red Planet is changing fast

Mars, the second smallest planet in the solar system, is commonly known as the 'Red Planet', thanks to the iron oxide covering its surface (this is in fact rust, the same material you see covering a piece of iron or steel exposed to air and water). **(1)** And although Mars has a thinner atmosphere and its surface is covered with similar features to those on the Moon, there are many other features present – volcanoes, valleys, deserts and even polar ice – found here on Earth.

Among the more well-known features found on Mars is Olympus Mons, one of the highest mountains in the solar system, and the Valles Marineris, one of the deepest valleys. **(2)** Phobos and Deimos, the two Martian moons, are small and strangely shaped and may be made up of the remains of this impact.

Before the first spacecraft, Mariner 4, reached Mars in 1965, there was a continuing debate about the existence of water on its surface. In the 18th century, long, straight lines seen by telescope were said by some to be canals full of water, perhaps constructed by the planet's Martian residents. **(3)** Could they be continents, surrounded by seas?

Although the Martian canals were later found to be optical illusions, visiting spacecraft found that Mars did indeed once have surface water. (4) The Mars rover Spirit detected water molecules in March 2007, and the Phoenix mission discovered water ice in 2008.

There have been up to three spacecraft orbiting Mars – the Mars Odyssey, Express and Reconnaissance Orbiter. (5) A further two are operating on the planet's surface – Mars Exploration Rover Opportunity and the Mars Science Laboratory Curiosity. Non-operational spacecraft also litter the surface, such as the MER-A Spirit and the 2008 Phoenix lander.

In terms of its size in the sky, only Jupiter, Venus, the Moon and the Sun appear bigger to us, and are visible with the naked eye. (6) Because of the effect of the Earth's atmosphere, normal telescopes can only really see the larger features of the surface like giant craters when Earth and Mars are closest. No matter how powerful, Mars won't look anything like images you see in the magazines.

- A** One, the giant Borealis basin in the northern half of Mars, covers 40% of the surface and could be the result of the planet being hit by a huge meteorite.
- B** It was observations by the last of these that revealed possible flowing water during the warmer months.
- C** One surprise is the strange pale yellow-pink sky, so different to the blue we are all used to seeing.
- D** Its orbit around the Sun, the speed at which it spins, and the angle at which it turns, produce seasons which are similar to our own.
- E** More recently, observations of light and dark shapes in the polar regions seemed to suggest land.
- F** However, many new stargazers are disappointed by their first view of it through a telescope.
- G** Seven years ago, the analysis of highly sophisticated radar data appeared to confirm its presence.