

# VENUS

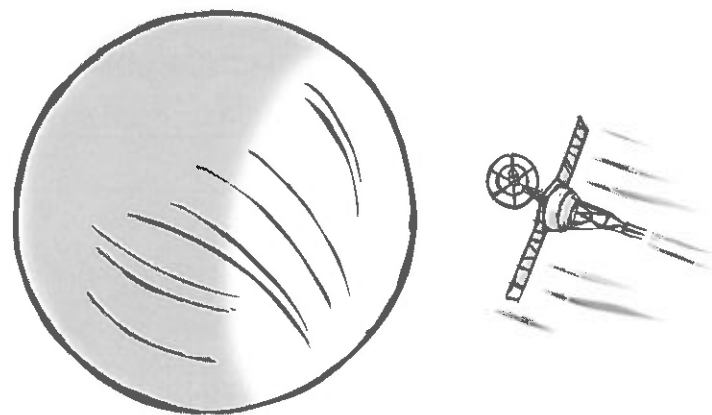
The hottest planet in the solar system is a hostile world. A thick choking atmosphere surrounds a rock planet with a surface shaped by volcanic activity.

Venus is a rock planet, second from the Sun and similar in size to Earth. It appears as a bright star in Earth's sky, either after sunset or before sunrise, and is so called the 'morning star' and 'evening star'. It shines brightly because sunlight is reflected from its cloud tops, but the rock world below is hidden from view.

Venus spins slowly, taking 243 days to turn once, and is the only planet to turn clockwise when viewed from its north pole.

Venus's dense atmosphere contains mainly carbon dioxide. It contains so much material that it would feel denser than water and the pressure is 90 times greater than the Earth. The atmosphere also contains sulphur dust, and droplets of sulphuric acid from erupting volcanoes from when the planet was young. Sunlight penetrates the atmosphere and warms the surface of the planet. The ground radiates heat, but the atmosphere traps the heat, warming the planet still more. The average surface temperature reaches 464°C.

Space probes sent by the former Soviet Union have travelled through Venus's dense atmosphere to land on the surface. However, the planet's physical features have been mapped using radar, working from above the thick clouds. Probes reveal a surface about half a billion years old and formed by volcanic activity. Venus is a smooth planet; 85 per cent of its surface is volcanic plain, dotted with hundreds of volcanic craters and lava flows. There are also over 900 impact craters that were formed when rocks collided with the planet.



## Remember

- 1 How does Venus appear in Earth's sky?  
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- 2 How much greater is Venus's atmospheric pressure than Earth's?  
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- 3 How have the planet's physical features been mapped?  
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## Understand

- 4 Why is Venus known as the 'morning star' or 'evening star'?  
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- 5 Give two reasons why humans couldn't live on Venus.  
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- 6 Explain what 'penetrate' means in the 4th paragraph.  
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## Apply

- 7 What question would you ask a scientist about Venus?  
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- 8 How are Venus and Earth similar?  
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## Analyse

- 9 What are some of the problems of exploring other planets? Explain why.

## Evaluate

- 10 Could governments spend money on more valuable research than space exploration? Explain.

## Create

- 11 Pluto is now not considered a planet. However, scientist believe they have discovered other planets. Create a system for naming newly discovered planets. Consider how other planets have been named.

## Hands on



Use the information in the text to paint a detailed landscape of the planet Venus.