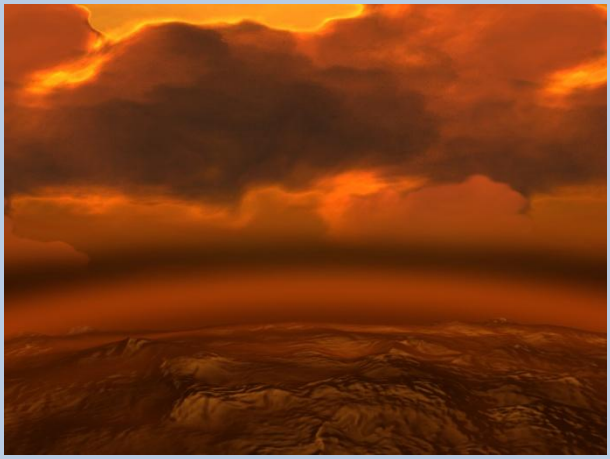
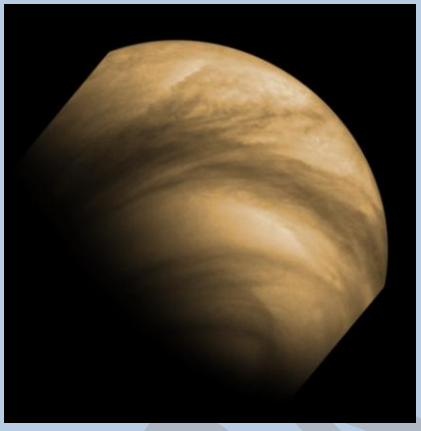
# Venus Factsheet



Artist's impression of the surface of Venus *Image Credit: ESA*



False-colour image of cloud features seen on Venus by the Venus Monitoring Camera (VMC) on Venus Express.

*Image Credit: ESA/MPS/DLR/IDA*

Venus is the second planet from the Sun. It is named after the Roman goddess of love and beauty. After the Moon, Venus is the brightest natural object in the night sky. It can be seen in the morning or in the evening, depending on the positions of the Earth and Venus in their orbits.

Venus has an extremely dense atmosphere, mostly consisting of carbon dioxide, and its surface is obscured by clouds of sulphuric acid. It has the hottest surface temperature of all the planets in the solar system, reaching up to around $500^0$C.

Venus takes around 225 Earth days to orbit the Sun, but it takes 243 days for one rotation of the planet! It also spins in the opposite direction to all the other planets, probably due to a large collision with another large object early in its history.

Galileo discovered, in the 17th Century, that Venus shows phases, like the Moon, which proved that Venus must orbit the Sun and not the Earth.

## *ACTIVITY – High pressure atmosphere*

This activity models the extremely high pressure on the surface of Venus. For this experiment you will need some pound coins and a meringue.

The meringue is your spacecraft and the pound coins represent the atmospheric pressure. Place the meringue in a clear plastic bag. Place four pound coins next to each other on top of the meringue - this models atmospheric pressure on the Earth. The pressure on the surface of Venus is 92 times as great. To model this, remove the coins, place you heal on the meringue and stand on it with your full weight. (You can now eat your spacecraft.)

The first lander that survived the extreme pressures and temperatures on Venus was Venera 9. It was made from a thick titanium hull - materials like aluminium can bend or break at these pressures.