

OURSPACE

DIGITAL ADVENTURES IN SPACE

The Earth

There are 8 planets in the Solar System: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

The Earth is the third from the Sun and is the fifth largest planet. We know that the planet is over 4.5 billion years old. It has an atmosphere composed of a mixture of gases, including oxygen and nitrogen and has a magnetic field which protects the surface from harmful radiation coming from the Sun and elsewhere in the universe.

The Earth orbits the Sun and one year is the time it takes for the Earth to make one orbit. Seasons occur on the Earth because the Earth is tilted at 23.4 degrees. Therefore for half of the year, the Northern Hemisphere is tilted towards the Sun (giving us Spring and Summer) whilst the Southern Hemisphere is tilted away (resulting in Autumn and Winter). For the second half the Northern Hemisphere is pointed away and the Southern Hemisphere is pointed towards the Sun.

The Moon is the only satellite of the Earth. It is responsible for the tides on the planet. It always shows the same face to the Earth.

Over 70% of the surface of the planet is water and the rest is land. Liquid water is essential for life on Earth. Water has been found in the form of ice on other planets and moons in the solar system. Earth is the only known place in the universe where life exists. However we have discovered over 400 planets in orbit around other stars in our galaxy but these are mainly like Jupiter. Although this is due to the methods we have used to find them. If an alien civilisation was looking at the solar system using the same methods as us to find planets they would only be able to see Jupiter and Saturn and not Earth. Our techniques are not yet sensitive enough to detect planets the same size as Earth.