

Cosmic

Key Vocabulary	
Planet	<i>an object that orbits a star and does not emit its own light</i>
Star	<i>a burning mass of gas that makes heat and light energy (e.g. the sun)</i>
Gravity	<i>the force that attracts an object towards a larger object</i>
Solar system	<i>a star with objects (such as planets) orbiting it</i>
Orbit	<i>a curved path of a planet or satellite around an object</i>
Satellite	<i>an object either natural (moon) or man-made that orbits around a planet</i>
NASA	<i>the National Aeronautics and Space Administration, a US agency responsible for the exploration and study of space</i>
Universe	<i>all of space and everything in it</i>
Astronomy	<i>the branch of science that deals with space and the physical universe as a whole</i>
Asteroid	<i>a small rocky body orbiting the sun</i>

The Earth and the Moon

The moon orbits Earth in an oval-shaped path whilst it spins on its axis. At different times in the month the moon appears to be different shapes, this is because the sun lights up different parts of the moon as the moon moves around the Earth.

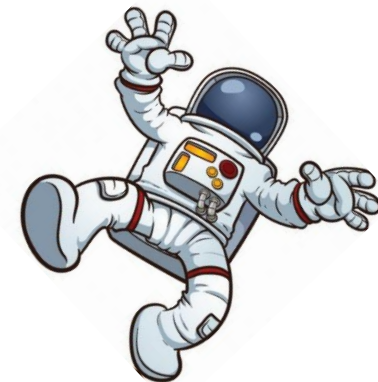
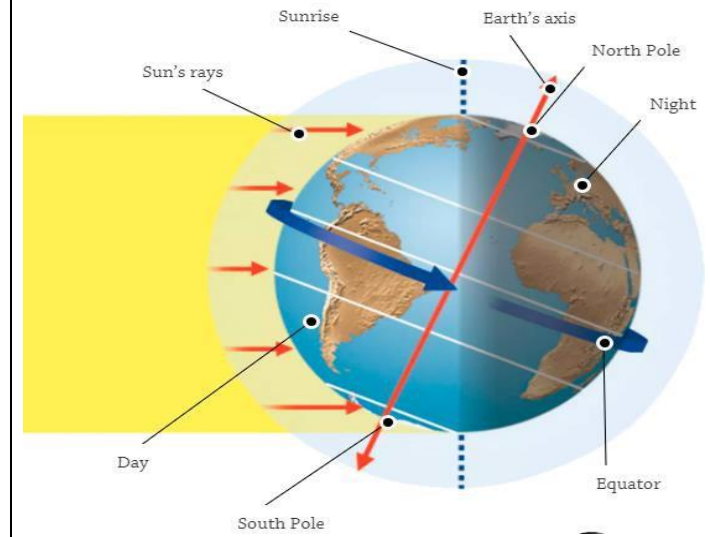


Astronauts and Space Missions

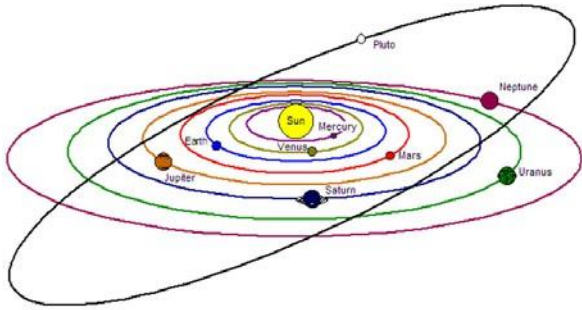
- The first man-made satellite to orbit Earth was called Sputnik and was launched by the Soviet Union in 1957.*
- Yuri Gagarin was the first human in space in 1961.*
- Neil Armstrong was the first person on the moon in 1969.*
- The International Space Station was launched in 1998 and is a joint project between 5 space agencies (USA, Russia, Japan, Europe and Canada). It is a research laboratory which is in Earth's orbit.*

Day and Night

Earth rotates (spins) on its axis, it does a full spin once every 24 hours, which is our day and night. Daytime occurs when the side of the Earth is facing the sun and night occurs when the side of the Earth is facing away from the sun.

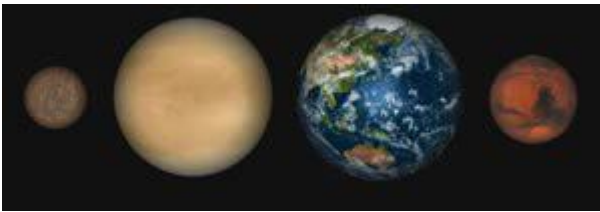


The Solar System



The Sun is the centre of our solar system. It is orbited by 8 planets, and one dwarf planet (Pluto).

Mercury Venus Earth Mars



The four inner planets are made of rock and are relatively small. Scientists have discovered that there was once water on Mars. This presence of water has been indicated by deep river channels, deltas and lake beds.

Venus has the highest temperature as its atmosphere traps the heat from the Sun.

The inner and outer planets are separated by an asteroid belt (between Mars and Jupiter)

The four outer planets are gas planets. They are much larger.

Jupiter Saturn Uranus Neptune

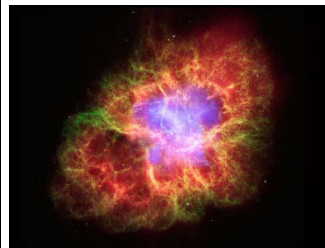


Pluto is classed as a dwarf planet – it is a small planet on the outer solar system. It has a different orbit to the other planets.

Planets orbit a central Sun. They do not emit their own light, but reflect that from the Sun. Planets are spherical, have a strong gravitational field which clears other material out of its orbit. A dwarf planet is spherical but has a weak gravitational field. A moon orbits a planet and does not emit light.

The Sun and other stars

The Sun is our nearest star. It is one of billions making up the Milky Way galaxy.



Space contains huge nebulae - clouds of dust, hydrogen and helium gas. These can be referred to as the birthplace of stars.

