

## Year 5 Earth and Space

Solar system - our sun, Sol, and its planets and their satellites

**astronomy** - the study of planets, stars and space

**axis** - an imaginary line passing through the centre of a spinning object

**orbit** - the path taken by a moon around a planet or a planet around a star

**rotation** - the turning of an object such as the Earth on its axis - to **rotate** - verb

**planet** - a large object that orbit a star. Planets are not sources of light

**full moon** - the phase of the moon when the moon appears as a complete circle

**moon** - a large object which orbits a planet. Moons are not sources of light

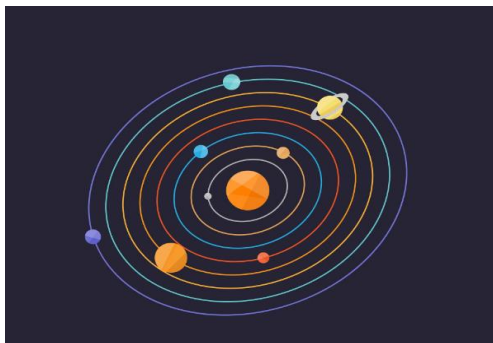
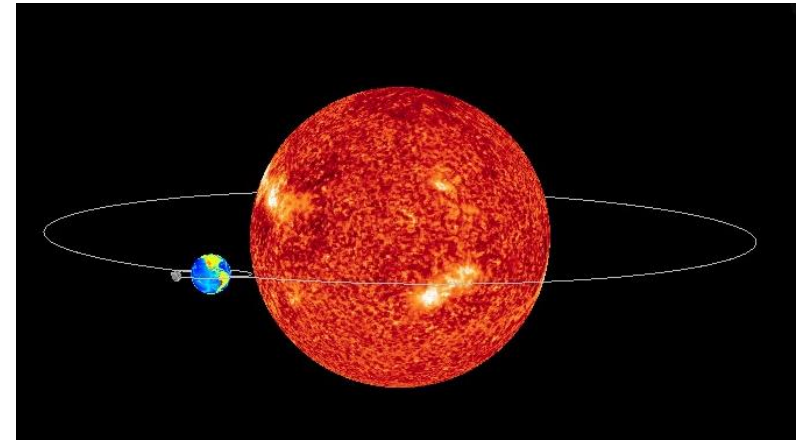
**sphere** - an object which is ball shaped

**satellite** - any object which orbits another. Moons are natural satellites. Man made satellites that orbit the Earth are used for tracking, astronomy and telecommunications

The Sun rises in the east and sets in the west. It looks as if it is moving but it is not. The Earth rotates on its axis which is why it looks like the Sun is moving.

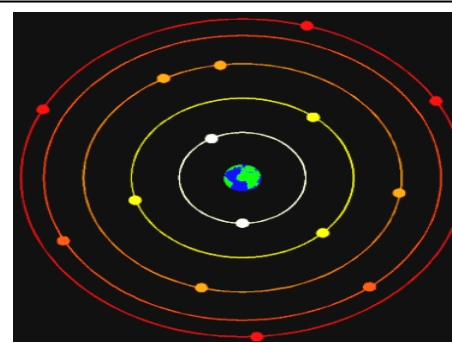


The Earth rotates on its axis. It rotates one complete turn every 24 hours. When we are facing the Sun, it is daytime. When we are facing away from the Sun, it is night. Earth takes 365 days to orbit around the Sun.



### Heliocentric Model

The planets in the solar system orbit the sun.



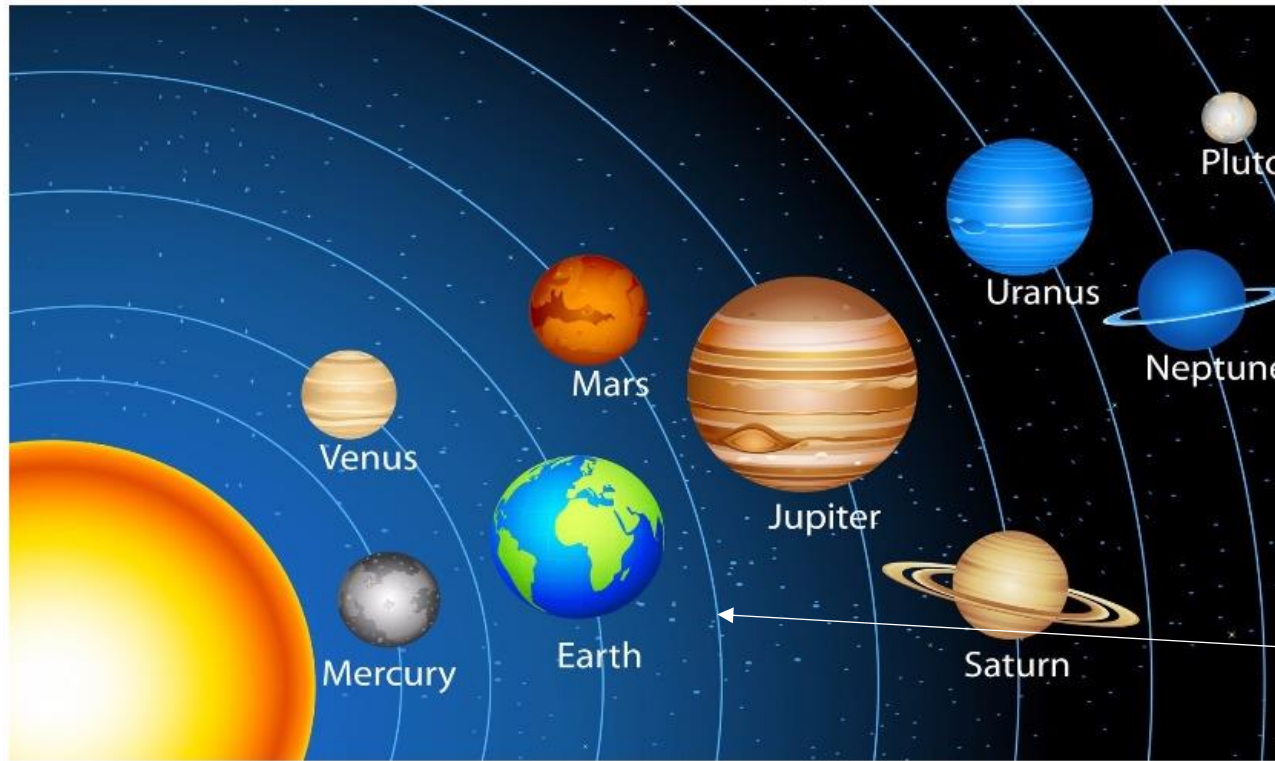
### Geocentric Model

A long time ago, it was believed that the planets orbited the Earth.

The Sun is a huge star that the Earth and the other planets in the solar system orbit around. It is a huge burning ball of gas held together by gravity!

Mercury, Venus, Earth and Mars are rocky planets. Jupiter, Saturn, Uranus and Neptune are planets made up of gas, mainly helium and hydrogen. They do have some rocky parts - their cores are made up of rock and metal

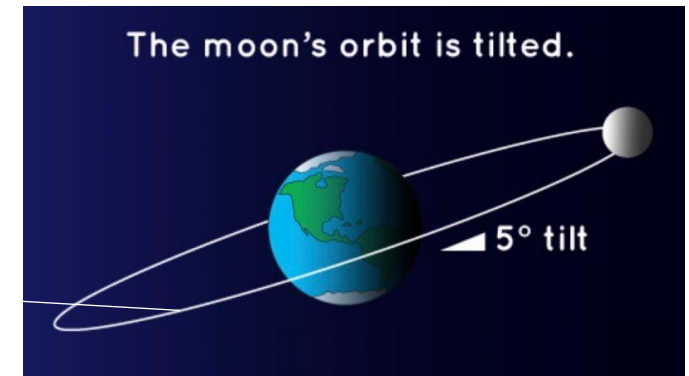
### The Solar System



There are 8 planets in the Solar System.

Pluto used to be classified as a planet but was reclassified as a dwarf planet in 2006.

The planets orbit the Sun and take different amounts of time to do a complete orbit.



## PHASES OF THE MOON



The Moon doesn't emit (give off) light itself, the 'moonlight' we see is actually the Sun's light reflected off the lunar surface.

So, as the **Moon orbits the Earth**, the Sun lights up different parts of it, making it seem as if the Moon is changing shape. In actual fact, it's just *our* view of it that's altering...

The Moon is **Earth's only natural satellite** (a celestial body that orbits a planet). It takes the Moon **27.3 days** to make a complete orbit around the Earth, but because the Earth is moving around the sun at the same time, it takes the moon **29.5 days** to go through its eight different 'phases' - a **lunar month**.