

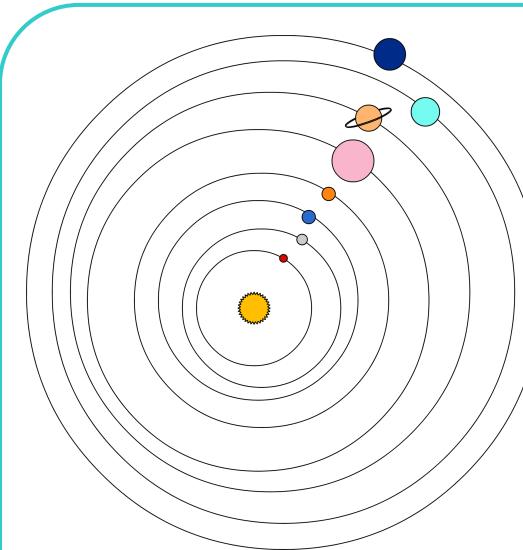
It takes the Earth 365.25 days to orbit the sun, which is why every four years we have a leap year of 366 days, to catch up with the orbit!

Knowledge Organiser Earth and Space

The Earth takes 24 hours to spin on its axis and complete one rotation, which is why our days are 24 hours long.



Key Word	Definition
heliocentric	The modern model of the solar system, which places the sun at the centre.
geocentric	The old solar system model, which thought the Earth was at the centre.
solar system	The name for the sun and all the planets, asteroids, meteors and comets that orbit it.
astronomy	The study of space, planets and the universe as a whole.
Big Bang Theory	The most widely accepted scientific theory of how the Universe was made.
gravitational force	The force that causes two particles to pull towards each other.
orbit	The path of one celestial object around another i.e. the Moon around the Earth.
hemisphere	On Earth, there are two of these – the North and South, separated by the equator.



FROM THE SUN OUTWARDS:

Mercury

Venus

Earth

Mars

Jupiter

Saturn

Uranus

Neptune

This diagram is a good, simple way to remember the order of the planets and also to understand **planetary motion** and the way the planets **orbit** the sun. **Copernicus** developed the **heliocentric** theory that the sun was at the centre of the **solar system**. However, the **ellipses-shaped orbit** was an idea that was discovered by **Johannes Kepler** in the 17th century.

gravitational force

We are constantly attracted to the Earth by its gravitational force. The reason the Moon doesn't fall to Earth because of gravity is because it constantly moves around us. Without the Earth's gravity, it would float away into space.

Comets, asteroids, and meteors

Comets are chunks of ice and rock with tails that orbit a long way around the Sun. Asteroids are chunks of rock and metal that orbit more closely to the Sun. Meteors are fragments of Asteroids that fly into the Earth's atmosphere and catch fire, leaving a bright streak in the sky.

Lesson Sequence

- 1 Describe Nicolaus Copernicus' ideas about planetary motion
- 2 Describe the movement of Earth in space
- 3 Learn about the planets in our solar system
- 4 Describe the Big Bang Theory
- 5 Learn about gravitational force
- 6 Learn about comets, asteroids and meteors