



The movement of planets



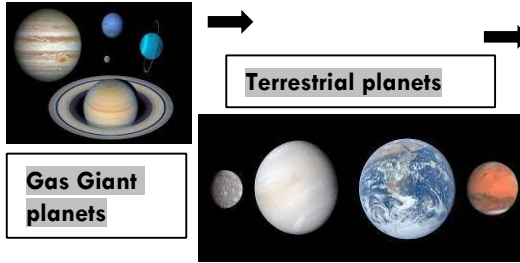
The solar system consists of objects that move around the Sun (a star) but it is a very small part of space and our Milky Way Galaxy. So far 50 galaxies and 500 solar systems have been observed in our Milky Way galaxy but scientists predict there to be billions.

Approximate spherical bodies



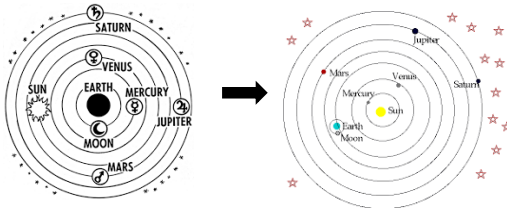
The Sun, the Moon and Earth are approximately spherical objects, however it has only been in the last 50 years that there has been photographic evidence to support Aristotle's observations.

Planet classification



Planets can be categorised as Terrestrial (rocky), Gas Giants and Ice Giants based on what they are made of. They can be ordered by size, distance from the Sun, and length of orbit around the Sun.

Geocentric/Heliocentric



The Geocentric model placed the Earth at the centre of the solar system; the Heliocentric model places the Sun at the centre. Copernicus and Galileo proved this model to be correct.

Day/Night



What causes night and day on Earth? It is the Earth that orbits the Sun but it also spins on its axis. One full rotation takes a day and it spins anti-clockwise, making the Sun appear to rise in the East and set in the West.

Moon phases



The Moon reflects light from the Sun.



The Moon orbits the Earth.

The area of the Moon illuminated by the Sun changes as the Earth rotates, these are called phases. There are 8 phases of the Moon.

Ordering planet mnemonic: **My Very Easy Method Just Speeds Up Naming Planets**; Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto (Pluto is classified as a dwarf planet).

Vocabulary Tier 2

Planets axis
Earth
Sun
Moon
Rotates
Solar system
Star
Rotation

Vocabulary Tier 3

Heliocentric Eclipse
Geocentric Aristotle
Spherical bodies
Orbit
Celestial body
Terrestrial (rocky), Gas Giant, Ice Giant
Phases
Constellation

Pattern seeking Does the size of a planet affect the length of its orbit? Does every planet take the same time to orbit the Sun? Is there a relationship between the orbit of a planet and its size?

Identify and classify How could you organise all the objects in the solar system into groups?

Research Understanding how the knowledge of the solar system has evolved and how it has changed. How have our ideas about the solar system changed over time? Copernicus

Comparative testing How does the length of daylight hours change in each season? Does having more moons result in more light hitting a planet? How could you test this?

Observe over time Can you observe and identify all the phases in the cycle of the Moon.