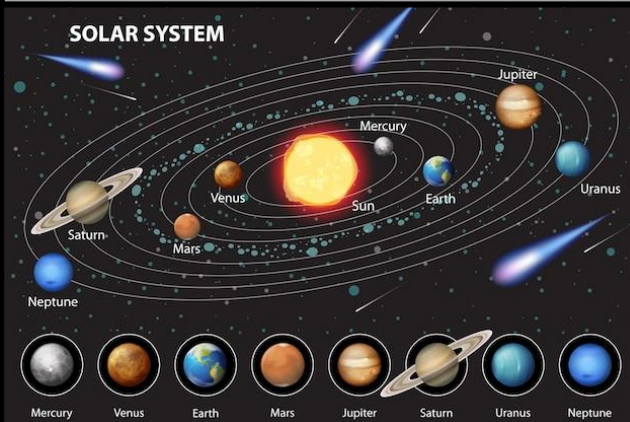




# Phase 3 – Earth and Space



## The Solar System

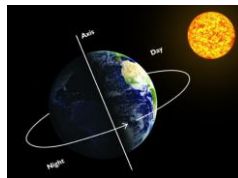


The Earth is a planet and is approximately spherical. The Sun is the nearest star and is also a sphere. The Sun is at the centre of the solar system which has 8 planets orbiting around it. Pluto has been reclassified by scientists as a dwarf planet. The planets can be ordered based on their distance from the Sun (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune). The first four planets nearest the Sun can be described as 'rocky' and the next four, gaseous. The further out from the Sun a planet is, the longer it takes to complete an orbit around the Sun and the colder it gets.

## The Earth

Aristotle was a philosopher in Ancient Greece. Most people believed that the Earth was flat because that's what they could see. Aristotle found evidence that it was round. He found that when he observed a ship sail across the ocean, the ship's hull disappeared below the horizon first. He found that you could see different stars in the northern skies than you could see in the southern skies. He observed that the shadow that the Earth made on the Moon during an eclipse was curved.

Earth rotates on its axis. It does a full rotation once every 24 hours. At the same time, it is also orbiting the Sun. It takes a little more than 365 days to orbit the Sun. Daytime occurs when the side of the Earth is facing towards the Sun. Night occurs when the side of Earth is facing away from the Sun. It appears to us that the Sun moves across the sky during the day but the Sun does not move at all. It seems to us that Sun moves because of the movements of Earth.

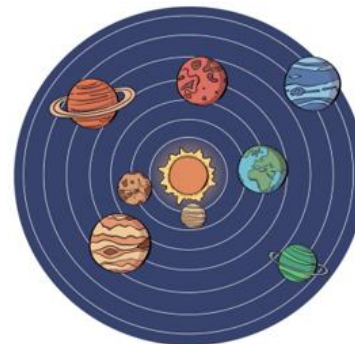


## Orbit

**Geocentric Model:** Ptolemy was an Ancient Egyptian astronomer who studied the planets and was one of the first people to describe the model of the solar system. He thought the Earth was in the centre of the solar system and that the Sun and other planets orbited around the Earth.



**Heliocentric Model:** Copernicus was another astronomer. He lived after Ptolemy. He disagreed and described a new model of the solar system. He thought the Sun was in the centre and that the Earth and other planets orbited around the Sun.



## Key Vocabulary



**ASTRONOMER:** Someone who studies or is an expert in astronomy (space science).



**AXIS:** An imaginary line that a body rotates around.



**GEOCENTRIC MODEL:** A belief people used to have that other planets and the Sun orbited around Earth.



**HELIOCENTRIC MODEL:** The structure of the Solar System where the planets orbit around the Sun.



**MOON:** A natural satellite which orbits Earth or other planets.



**ORBIT:** The curved path in space that is followed by an object going round and round a planet, moon, or star.



**PLANET:** A large object, round or nearly round, that orbits a star.



**ROTATE:** To spin.



**SUN:** A huge star that Earth and the other planets in the solar system orbit around.