



Science – Year 5 Earth and Space

Vocabulary

Tier 1	Tier 2	Tier 3
Sun	Axis	Geocentric
Star	Sphere	Heliocentric
Moon	Solar system	Spherical Bodies
Week	Orbit	Astronomer
Month	Rotate	Satellite
Year	Planet	Celestial Bodies

Useful Resources

- Models of the Earth and the sun that enable them to explain day and night.
- Materials to create their own model planets.
- Shadow clocks and sundials.

Key Scientists:

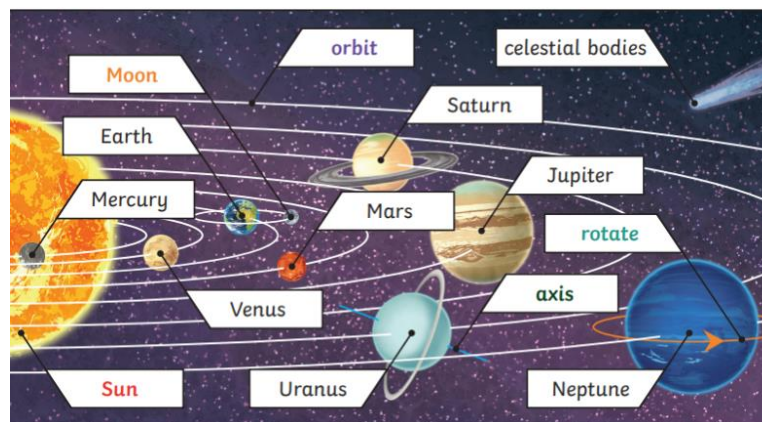
Nicolaus Copernicus (1473-1543) - was A Polish astronomer who formulated the heliocentric model of the solar system that placed the Sun at the centre of the universe.



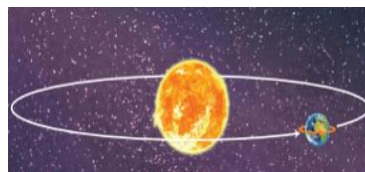
Maggie Aderin-Pocock (born 1968) - is a British space scientist. She is working on the observation instruments for the Aeolus satellite, which will measure wind speeds to help the investigation of climate change.



The Solar System (Not to Scale):



The moon orbits the earth



The earth orbits the sun

Key Questions/Facts

What is a planet?

- Mercury, Venus, Earth and Mars are rocky planets, mostly made up of metal and rock.
- Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen).

How does the moon orbit the Earth?

- The Moon orbits Earth in an oval shaped path while spinning on its axis.
- At various times in a month, the Moon appears to be different shapes. This is because as the Moon rotates round Earth, the Sun lights up different parts of it.

How does the Earth orbit the sun?

- The Earth rotates (spins) on its axis. It does a full rotation once in every 24 hours.
- At the same time that Earth is rotating, it is also orbiting (revolving) around the Sun. It takes a little more than 365 days to orbit the Sun.
- Daytime occurs when the side of Earth is facing towards the Sun.
- Night occurs when the side of Earth is facing away from the Sun.

How have ideas about the solar system developed?

- 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.