

Earth Sun and Moon Knowledge Organiser

Year 5 and 6 - Science

Key Vocabulary

Sun	A huge star that Earth and the other planets in our solar system orbit around
Star	A giant ball of gas held together by its own gravity
Moon	A natural satellite which orbits Earth or other planets
Planet	A large object, round or nearly round that orbits a star
Spherical bodies	Astronomical objects shaped like spheres.
Satellite	Any object or body in space that orbits something else, for example: the Moon is a satellite of Earth.
orbit	To move in a regular, repeating curved path around another object.
Rotate	To spin. E.g. Earth rotates on its own axis.
Axis	An imaginary line that a body rotates around. E.g. Earth's axis (imaginary line) runs from the North Pole to the South Pole.
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.

Astronomer	Someone who studies or is an expert in astronomy (space science).
Waxing	A gradual increase in magnitude or extent. (of the moon) pertaining to the period during which the visible surface of the moon increases
Waning	Have a progressively smaller part of its visible surface illuminated, so that it appears to decrease in size.

What are we going to be learning about?

- Heliocentric and geocentric solar system: Research how the representation of our solar system has changed over years
- Modelling the solar system and learning the order of the planets through creating Mnemonics. Thinking about a scale-model of the solar system and recreating this
- Tracking the Earth's movement to understand shadows, day and night
- Scientific exploration - measuring how the lengths of shadows change over time. Children to write a scientific report to show their findings.
- Understanding the phases of the moon. Children to create their own phases of the moon using Oreos
- Changes of the season: understanding how the Earth's tilt on its axis results in a changing of the seasons



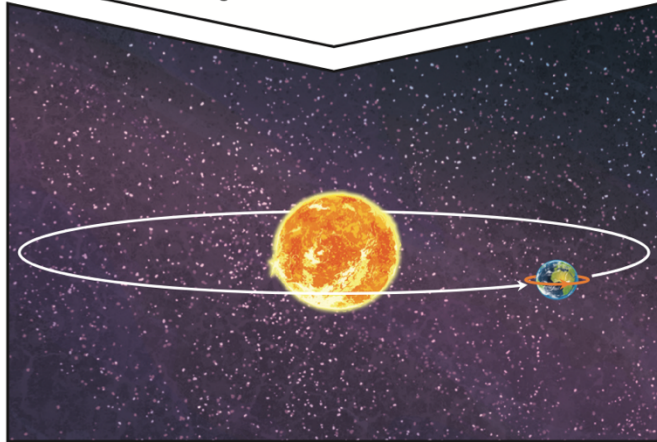
Phases of the moon



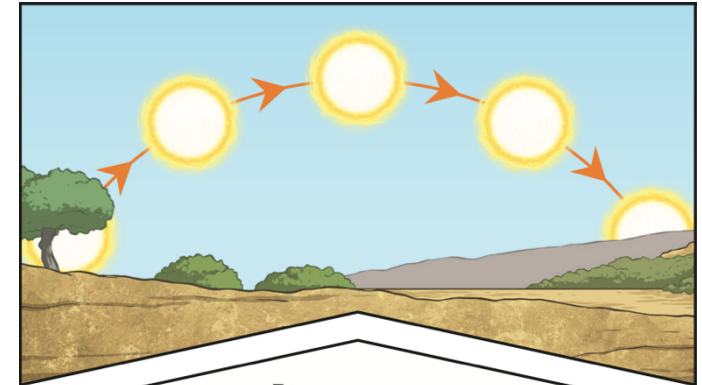
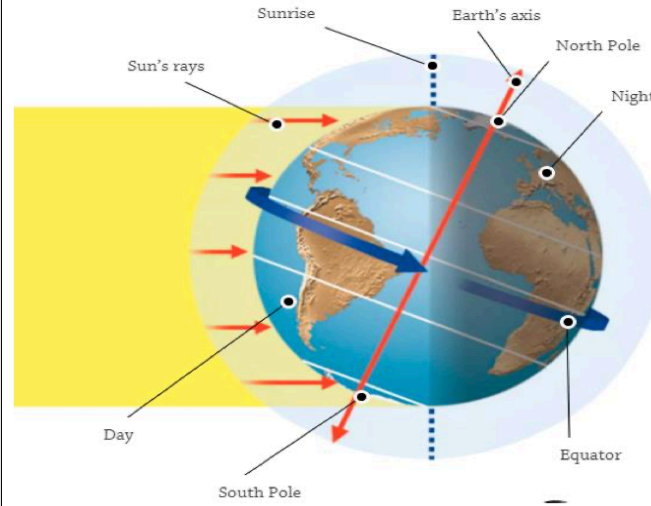
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Earth **rotates** (spins) on its **axis**. It does a full **rotation** once in every 24 hours. At the same time that Earth is **rotating**, it is also **orbiting** (revolving) around the **Sun**. It takes a little more than 365 days to **orbit** the **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**.



DAY and NIGHT - Earth rotates (spins) on its axis, it does a full spin once every 24 hours, which is our day and night. Daytime occurs when the side of the Earth is facing the sun and night occurs when the side of the 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 the **Sun** moves because of the movements of 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.

Geocentric model

Years ago people believed that **planets** moved around the Earth.



Nicolaus Copernicus

The work and ideas of many **astronomers** (such as Copernicus and Kepler) combined over many years before the idea of the **heliocentric model** was developed. Galileo's work on gravity allowed **astronomers** to understand how **planets** stayed in **orbit**.

