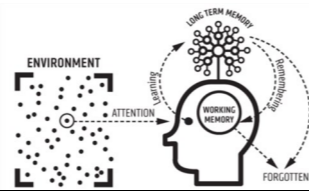




Lanercost C of E Primary School  
Science Knowledge Organiser  
Physics



Year 5 and 6

Autumn 1

Science Unit

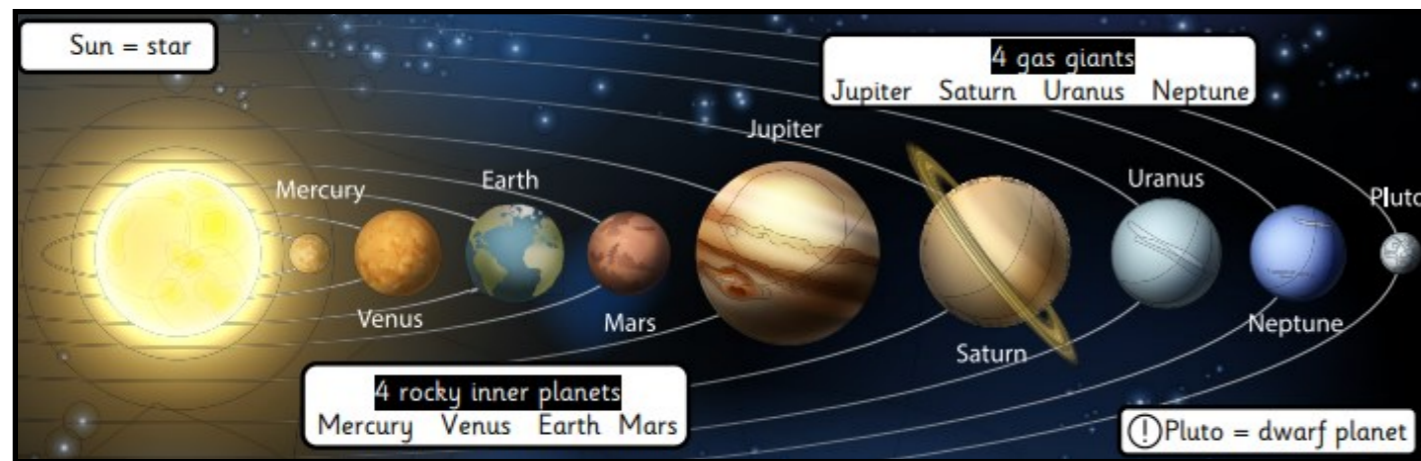
Earth and Space

The key vocabulary taught during this half term of Science sessions will appear in highlighted black. Frequent revisiting of this knowledge will aid fluency in Science.

In this unit, we are focusing on: being able to answer:

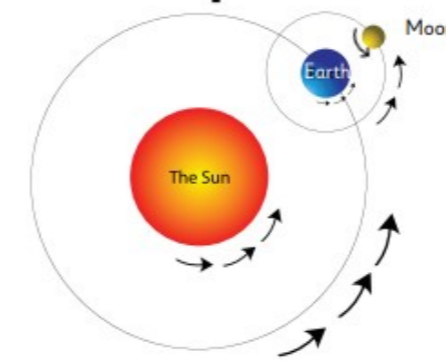
What are the planets in our solar system?  
How does our view of the Moon change in a lunar month?

Why does the rotation of Earth result in night and day?  
Why is the Earth's tilt (axis) responsible for the seasons?

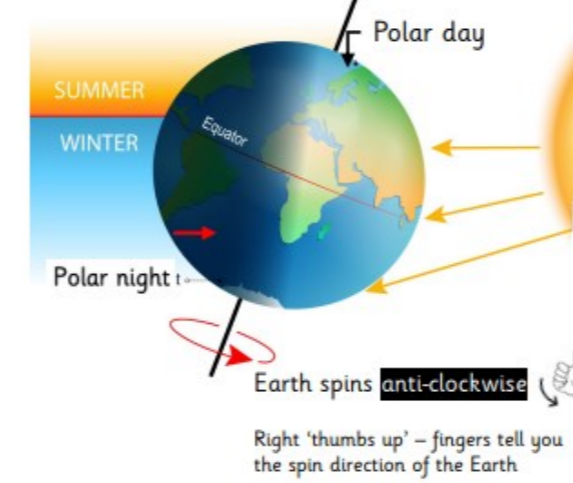


Misconceptions	Truth
The Moon changes shape.	The Moon appears to change shape as it orbits the Earth. On Earth, our view of the illuminated part of the Moon changes each night, depending on where the Moon is in its orbit, or path, around Earth. When we have a full view of the completely illuminated side of the Moon, that phase is known as a full moon. Following the night of each full moon, as the Moon orbits around Earth, we start to see less of the Moon lit by the Sun. Eventually, the Moon reaches a point in its orbit when we don't see any of the Moon illuminated. At that point, the far side of the Moon is facing the Sun. This phase is called a new moon. During the new moon, the side facing Earth is dark.
The Sun moves across the sky.	The Earth rotates on its axis once every 24 hours. As we rotate we turn away from the Sun, resulting in darkness we call night. As we continue the rotation we eventually begin to face the Sun, resulting in sunrise and daytime. The Sun does not move, our planet Earth rotates giving the impression of movement.

The Sun, the Earth and the Moon are approximately spherical bodies



The Earth is already tilted at 23.5 degrees. It spins whilst orbiting around the Sun. This means that at various points on its annual journey, different parts of the Earth are closer or further away.



Solar system

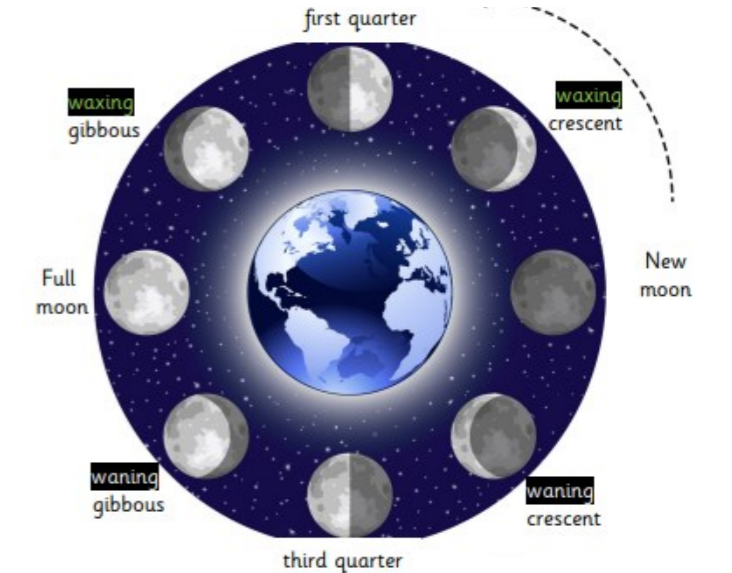
8 planets orbit the Sun. The Sun's gravitational force holds planets in orbit.

orbit = curved path around star or planet. Earth orbits the Sun once every 365 1/4 days.

Our view of the Moon changes as it orbits Earth. Moon phases - the changing shape of the Moon.

Lunar month - a complete cycle of the Moon's phases. The Moon doesn't change shape - the light reflected changes as the Moon orbits the Earth.

Waxing increase, Waning decrease. Moon phases. Gibbous - in between half and full moon.



Books linked to 'Earth and Space'

Earth and Beyond	Days, Nights, Seasons and how they change.	Earth and Moon	Solar System and Beyond