



What I should already know:

The seasons determine how 'our changing world' varies.

I can describe the impact that seasonal change has on our lives and how they change throughout the year.

The weather varies at different seasons of the year.

The Sun is a light source

The moon is not a light source; it is reflected from the sun.

When the sunlight is blocked by an opaque object, it creates a shadow

By the end of this unit I will:

Recognise that the Earth and other planets and the Moon are spheres and they move around the Sun, which is a star.

Explain how the length of a year was determined in ancient times.

Explain what a leap year means and why we have them.

Know why the Sun appears to move across the sky from east to west and how night changes to day and back to night.

Use lines of longitude on a map to find the time in different places around the world and be able to explain how people around the world use time zones to organise their clocks and calendars.

Describe how the Earth orbits around the Sun while turning on its axis.

Explain how the tilt of the Earth's axis causes seasons and know that are not exactly the same on different parts of the same hemisphere and how the tilt causes changes in the hours of daylight in different seasons.

Name the phases of the moon, explain why the Moon appears to change shape and say how long the Moon takes to orbit the Earth and how the calendar is linked to this.

Investigation:

Why does the Moon appear to change shape over a month?



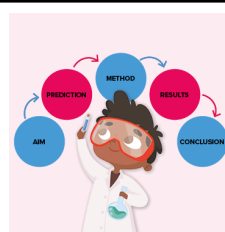
YEAR 5: The Earth and Beyond

Science: Physics



Working Scientifically

Planning different types of enquiries to answer questions including recognising and controlling variables where necessary



Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate

Using test results to make predictions to set up further comparative and fair tests

Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays or other presentations; identifying scientific evidence that has been used to support or refute ideas

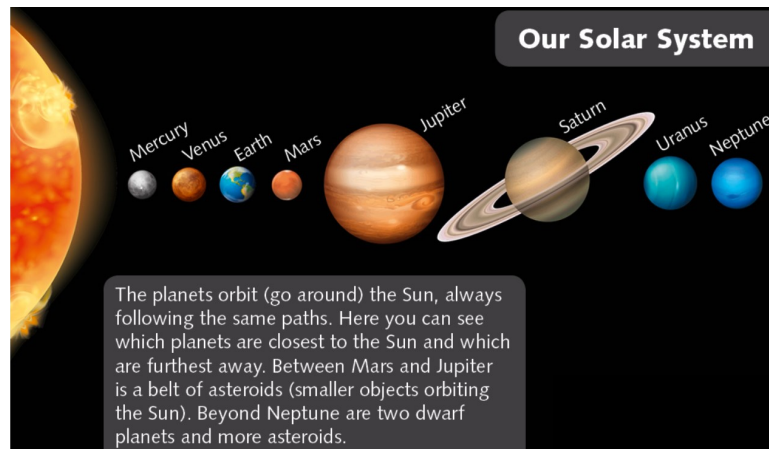
Identifying scientific evidence that has been used to support or refute ideas

Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs

Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations

Vocabulary

Asteroid	A minor planet
Axis	An imaginary line about which an object rotates or spins
British Summer Time	Time as advanced one hour of Greenwich Mean Time for daylight saving in the UK between March and October
Greenwich Meridian	The longitude line of zero which passes through Greenwich in London
International Date Line	The international line that defines the boundary between calendar dates
Longitude	The measurement east or west of the prime meridian. It is measured by imaginary lines that run around the earth vertically and meet at the North and South Poles
Lunar Month	The time between one new moon and the next—usually 29.5 days
Moon	The natural satellite of the Earth, visible by reflected light from the Sun
Orbit	The repeating path of the movement around something
Solar System	The solar system is made up of the eight planets that orbit our Sun; it is also made up of asteroids
Star	A luminous ball of gas
Sun	The star round which the Earth and planets orbit



The planets orbit (go around) the Sun, always following the same paths. Here you can see which planets are closest to the Sun and which are furthest away. Between Mars and Jupiter is a belt of asteroids (smaller objects orbiting the Sun). Beyond Neptune are two dwarf planets and more asteroids.