



Year 5 – Autumn 2 – Knowledge Organiser

Enquiry Question: Why is the Earth's position in the solar system important?



Subject Specific Vocabulary	
Asteroid	A rock that orbits the sun in a belt between Mars and Jupiter.
Axis	An imaginary line through the middle of something.
Celestial body	A natural object which is located outside the Earth's atmosphere such as a comet, asteroid, moon, star, moon or the sun.
Comet	A bright, celestial object with a tail that travels around the sun.
Gravity	The force that attracts objects to the centre of the Earth.
Meteorite	A rock from outer space which has landed on Earth.
Moon	The natural satellite of the Earth, visible (mostly at night) by reflected light from the sun.
orbit	The curved path of a celestial object or spacecraft round a star, planet or moon.
planet	A large, rounded celestial body that is not a star.
rotate	To move or cause to move in a circle round an axis or centre.
shadow	A dark area or shape produced by a body coming between rays of light and a surface.
Solar system	The collection of 8 planets and their moons in orbit around the sun, together with smaller bodies in the form of asteroids, meteoroids and comets.
Sphere	An object that is round in shape like a ball.
space	The area that contains the entire material world and its events.
star	A fixed, luminous point in the night sky which is a large, remote, incandescent body like the sun.
Time zone	Areas of the world where time is calculated as hours behind or hours ahead of GMT.
universe	The whole of space, all the stars and all the planets.
waning	Where the moon has a progressively smaller part of its visible surface illuminated so that it appears it is getting smaller.
waxing	Where the moon has a progressively larger part of its visible surface illuminated, increasing its apparent size.

Key Knowledge

There are 8 planets in our solar system: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Pluto is a dwarf planet. They all orbit the sun and all have moons.

The Earth rotates on its axis anti-clockwise and makes a complete rotation over 24 hours.

The Earth's rotation causes day and night.

Different parts of the Earth experience daylight at different times – this means that it is day and night in different places at different times.

As a result of the Earth's tilt, the poles experience 24 hours of sunlight in the summer and very few hours of sun in the winter.

The Earth takes 365 and a quarter days to orbit the sun.

As a result of the extra quarter of a day, every 4 years on Earth is a leap year.

It is the Earth's tilt that causes the seasons.

The moon orbits the Earth anti-clockwise and takes approximately 28 days.

The moon rotates once on its axis every time it orbits Earth.

The moon has different phases depending on where it is in its orbit.

Key images and diagrams



English

Main text: Cosmic by Frank Cottrell Boyce (Sci-Fi) If possible, please provide a copy of this book to support your child's learning in school

To know the main features of a sci-fi narrative and write our own version.

To know how to integrate speech and action to move a narrative along.

To know how to write descriptions of different planets.

To know how to write weather reports coming from different planets.

To know how to read and discuss a range of poems.

To know how to draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence.

Maths

Multiplication and division – factors, multiples, prime and square numbers.

Fractions – recognising equivalent fractions, converting fractions, ordering fractions.

PSHE

Know what culture means

Know that differences in culture can sometimes be a source of conflict

Know what racism is and why it is unacceptable

Know that rumour spreading is a form of bullying on and offline

Know external forms of support in regard to bullying e.g. Childline

Know that bullying can be direct and indirect

Know how their life is different from the lives of children in the developing world.

Religious Education

Why are there 4 gospels and how are they relevant for Christians?

To know how to describe events that occur in more than one gospel, recognise why there may be differences in accounts of the same event and describe what a Christian might learn from the gospels.

Earth and Space

Why is the Earth's position in the solar system important?

Physical Education

Handball

To know how to gain possession by working as part of a team.

To know how to pass in different ways.

To know how to choose tactics for attacking and defending.

To know how to use a number of techniques for passing and dribbling.

Dance

To know how to explore and improvise ideas for a dance in a particular style.

To know how to working on their own or with a partner, to compose dances by using, adapting and developing steps, to combine movement ideas fluently and effectively.

To know how to begin to use compositional principles when creating dances, such as listening and responding to music's expressive qualities.

French

Getting to Know You

To know how to introduce parts of the body in French.

To know how to write descriptions using the 1st and 3rd person singular.

To know how to talk about clothes, feelings and illnesses.

To know how to ask and answer questions about everyday actions in the classroom.

Music

Guitar - Delivered by OCM using First Access programme.

Computing

Online safety: To know how to think critically about the information children share about themselves and others online.

To know how to maintain secure passwords.

To know how to consider reliability when using different methods of communication.

Spreadsheets: To know how to use spreadsheets to create tables of data,

To know how to format cells in order to perform calculations.

To know how to create tables and graphs and to make practical use of spreadsheets to help them plan actions.

Science

To know how to describe the movement of the Earth and other planets relative to the Sun in the solar system.

To describe the movement of the Earth relative to the Moon.

To describe the Sun, Moon and Earth as approximately spherical bodies.

To use the idea of the Earth's rotation to explain day and night, and the apparent movement of the sun across the sky.

Art and Design

To know how levers work.

To know how pulleys work.

To know how gears work.

To know how to design and make a product using a combination of levers, pulleys or gears.

To know how to evaluate our product and consider what might be done differently next time.