# Out Of This World A Science Based Topic

**What do you need to know before this topic?**

Light from the sun can be dangerous and we need to protect our eyes.
The sun is in the centre of our solar system and planets orbit around it.
There are 8 planets in our solar system.
The planets in our solar system are in a certain order.
The sun is a star.
Planets can be made from either rock or gas.
Gravity is a force that pulls objects towards the Earth.

**Key Assessment Questions**

What is the solar system?
What is the universe and what are galaxies?
What are the names of the planets in our solar system?
How does the Earth move in space?
What are the phases of the Moon?
What is gravity?
How does the Earth's rotation explain day and night?
What are the geocentric and heliocentric models of the solar system?

**Sticky Knowledge**

- The solar system is a system of objects in space including at least one star, planets, their moons, asteroids, comets and other space debris.
- Planets in our solar system: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
- Earth is the only planet to have one moon.
- The first four planets are rocky, the other four are gas giants.
- A galaxy is a collection of dust, gas, stars and our solar system
- The universe is all existing matter and energy in space.
-The Earth rotates once each day; it takes one year for the Earth to orbit the Sun
- In a solar eclipse, the moon comes between the Earth and the Sun; in a lunar eclipse, the Earth comes between the moon and the Sun.
- Unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- The Moon has eight different phases.

**Key Vocabulary**

galaxy, solar system, universe, ellipse, elliptical, planets, orbit, planet, revolution, revolve, terrestrial, satellite, space station, telescope, black hole, Milky Way, light pollution, axis, sphere, spherical, lunar eclipse, solar eclipse, shadow, gravity geocentric, heliocentric.

**Key Skills**

-Describe the movement of the Earth, and other planets, relative to the Sun in the solar system
-Describe the movement of the Moon relative to the Earth.
-Describe the Earth, Sun and Moon as approximately spherical bodies
-Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky
-Understand why the geocentric model of the solar system has given way to the heliocentric model
-Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

## Curriculum Drivers

**Caring Community**

I am the child who can appreciate how small we are in the context of the universe and that we all have a duty to care for and protect our planet.

**Learning & Leading**

I am the child who can understand that knowledge about the world around me empowers me to make my own decisions about our school community.

**British & Global Values**

I am the child who can recognise how different countries working together can achieve great things for our entire planet and tackle some of the biggest challenges facing us.

**Wellbeing & Being Well**

I am the child who can respect the hard work, perseverance, resilience and physical health needed to become an astronaut. I can embody these values in my own approach to my learning.

**Enterprise & Effort**

I am the child who can appreciate that great scientists were not afraid to challenge existing thinking about our solar system to extend everyone's knowledge.

**Identity and Uniqueness**

I am the child who can understand that our planet is unique and that we are all linked by our common identity as humans.

| Writing | Maths | Art/DT | PE | RE | Computing | Music | French | PSHE - Jigsaw |
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| **Narrative story** Creating a story from a different perspective based on the short film One Small Step.<br><br>**Newspaper report** Creating reports of an alien landing on Connaught school field. | **Place Value** - read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit | **Electronic Greeting Card** The children will be looking at what components come together to make an electronic greeting card and design one themselves. | **Hockey** | **Christianity** We will be focussing on how Jesus' teachings challenged people. | **Online Safety**: Knowing how to use the internet responsibly.<br><br>**Computer systems and networks**. Learners will develop their understanding of components working together to make a whole. They will explore how digital systems might work and the physical and electronic connections that exist | **Space Composition** Composing music based on two movements in 'The Planets Suite' by G.Holst (Mars and Venus), showing contrasting elements of dynamics and rhythm, including 5/4 time. Improvising a count-down and lift-off, creating a rocket theme using the pentatonic scale and ordering the music in such a way as to revise the meaning of 'structure'. | Buying food at the supermarket | **Puzzle 1: Being Me in My World** We will be looking at the year ahead, a child's rights and rewards and consequences |