

# Willow Tree Academy - Year 5 - Are we alone in the universe?

## Key Knowledge

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

The **Sun** doesn't move, the Earth's rotation causes day and night.

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, which is a star. The planets in our solar system are held in orbit by the sun's **gravitational field**.

Our Solar System is in a **galaxy** called the **Milky Way**.

The Moon orbits the Earth **anti-clockwise**, this takes approximately 28 days. The Moon has different phases depending on where it is in its orbit. The Moon's gravity causes high and low tides.

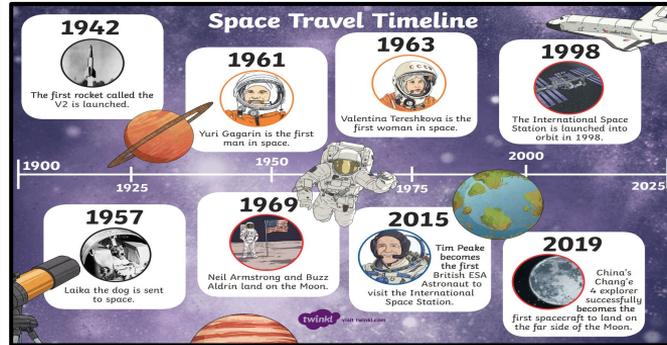
The Earth orbits the Sun, the Moon orbits the Earth. Many of the planets in our solar system have moons - Jupiter has over 80 moons.



**American Flag**



**United Kingdom Flag**



## Key People

**Galileo** - (1564-1642) Discovered that the sun was the centre of our solar system.

**Nicolaus Copernicus** - This astronomer (1473-1543) made accurate observations of the Moon and planets.

**Isaac Newton** - proposed the theory of gravity.

**Neil Armstrong** (Born August 5, 1930 – Died August 25, 2012) American astronaut/aeronautical engineer, also the first person to walk on the Moon.

**Michael Collins and Buzz Aldrin** - Astronauts also helped land on the moon in the Apollo 11 mission (1969). Collin's was the pilot, and Aldrin was the second man on the moon.

**Tim Peake** - the first UK citizen in space.

**Gustav Holst** (Born 21 September 1874 – 25 May 1934) An English composer, arranger and teacher. Best known for his orchestral suite called 'The Planets'. He composed many other works across a range of musical genres.

**Sir Richard Branson** - Entrepreneur currently making space travel accessible in the future.

## Vocabulary

**Asteroid** - A rock that orbits the Sun in a belt between Mars and Jupiter.

**Axis** - An imaginary line through the middle of something.

**Comet** - A bright object with a long tail that travels around the sun.

**Galaxy** - An extremely large group of stars and planets. Our galaxy is called the Milky Way.

**Gravity** - The force which causes things to drop to the ground.

**Orbit** - The curved path in space that is followed by an object going round a planet, moon, or star.

**Planet** - A large, round object in space that moves around a star.

**Star** - A large ball of burning gas in space.

**Solar system** - A collection of planets and their moons in orbit around a star.

**Sun** - The star around which the earth orbits.

**Moon** - The natural satellite of the earth visible (mainly at night) by reflecting light from the sun.

**Night** - The period from sunset to sunrise in each twenty four hours.

**Day** - Each of the twenty-four hour periods, from one midnight to the next, into which a week/month/year is divided.

**Month** - Each of the twelve named periods into which a year is divided.

**Lunar** - Month a period of 28 days in which the moon orbits the earth.

**Year** - Time taken by earth to make one revolution around the sun (365 days, 366 in leap years).

## Literacy

- Narrative -Setting description/ lost in space
- Non – Chronological Report – Planets And Space
- Debate/Balanced Argument – Flat Earth Vs Sphere
- Diary - linked to immersive reading text
- Performance Poetry – Linked To Space

### Immersive Reading Text

The Jamie Drake Equation

## Maths

### White Rose Maths - Number

- Place Value
- Addition and Subtraction
- Statistics
- Multiplication and Division

## PE

- Gymnastics and hockey
- To learn structured movement patterns and to create and perform short dance sequences
- Developing specific skills linked to the invasion game

## History

### History Of Space Travel

- Timeline of significant events in space travel
- Hidden Figures/ significant women in space linked to Black History Month

## Geography

### Space Tourism

Advert trip to space - Pro and cons of space exploration.  
Comparing UK & North America

## Science

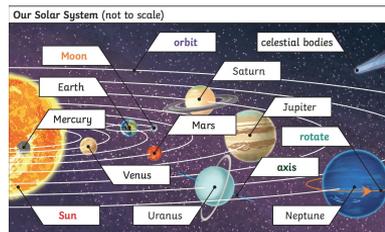
### Term 1 - Earth & Space

- Movement of the Earth, and other planets, relative to the Sun in the solar system
- Movement of the Moon relative to the Earth
- Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

### Term 2 - Forces (Observation)

- Force of gravity acting between the Earth and the falling object
  - Air resistance, water resistance and friction
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

## Big Question - Are we alone in the universe?



## Computing

E-Safety Update - Be internet Sharp  
E-mal- Communications  
Digital Literacy - Comic Life

## Music

- Rhythm and tempo including Holst's Planet Suite.  
Comparing and contrasting music from different periods of time- Charanga Music - Dancing in the street/Drumming (GPS), Singing with style (RPS)

## Art & Design

- Earth and space related art - Pastel Planets
- Pen and Ink astronauts
- Sewing - Solar system mobile

## DT/STEM

- Design and make a moving space rocket- Rocket launch  
Mars Rovers

## PSHCE/SRE

### Term 1

- Building new relationships, Classroom rules
- Expectations, Classroom procedures

### Term 2

- Developing empathy
- Reflecting on experiences (scenario work)
- Respecting choices of others
- Sex and Relationships Education - Part 1 (compulsory)

## P4C

- Should we explore space?

## MFL

- Time
- Numbers 0-50,
- Date and Months

## RE

How and why do Christians try to live by the Bible?  
Christmas