

Willow Tree Academy - Year 5 - Stargazers

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.

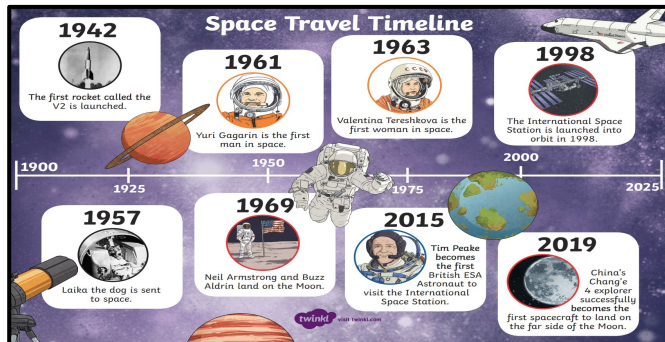
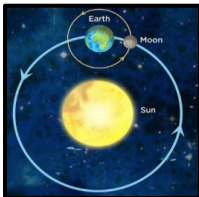
The Earth orbits the Sun, the Moon orbits the Earth. Many of the planets in our solar system have moons - Jupiter has over 80 moons.



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'.

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

Karen Rose - Artists who uses textiles and fabrics to produce space themed images.

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 and Space Story
- Biography - Hidden figures of space/black
- Poetry – Linked To Space
- Non – Chronological Report – Planets And Space
- Persuasion– Space Travel

Immersive Reading Text

- Cosmic - Frank Boyce
- The Jamie Drake Equation

Maths

White Rose Maths - Number

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

PE

- Gymnastics and hockey, Football and Fitness
- 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
- Significant British Astronauts
- Hidden Figures of NASA

Geography

Comparing UK & North America - Cape Canaveral and Rotherham using satellite images.

Science

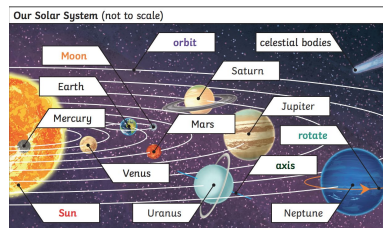
Term 1 - Earth & Space

- 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

Term 1

- E-Safety Update - Be internet Sharp
- Emails - How to use safely

Term 2

- Computer Science Scratch Space game
- Digital Literacy - Space Holiday Website

Music

- Rhythm and tempo including Holst's Planet Suite.
 - Singing - Spaceman and Look into the night
 - Composing 8 bar melodies to a backing track.
- Royal Opera House involvement

Art & Design

- Earth and space related art - Peter Thorpe
- Textiles Planets - Karen Rose and Margaret Nazon

DT/STEM

- Design and make a moving space vehicle with moving parts and electronics - Mars Rovers/Moon Buggy

NEMESIS

Development of initial ideas for whole year group project on social innovation

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

- Hidden Figures

MFL

- Time
- Numbers 0-50,
- Date and Months
- Modes of Transport

RE

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