

# 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 anticlockwise and 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.

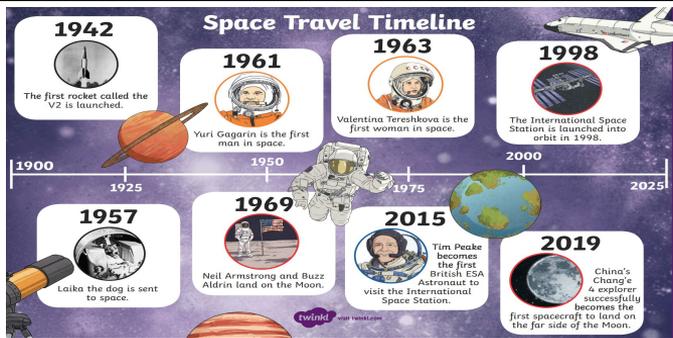
The Earth orbits the sun, the Moon orbits the Earth. Many of the planets in our solar system have moons - Jupiter has over 80 moons.



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 to set foot 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

- Non - Chronological Report - Planets And Space
- Poetry - Linked To Space
- Debate/Balanced Argument - Flat Earth Vs Sphere
- Explanation - How A Rocket Is Launched
- Biography - Neil Armstrong
- Newspaper report - moon landing
- Diary of an astronaut from the space station
- Narrative - Link to Jamie Drake Equation?

### Immersive Reading Text

The Jamie Drake Equation

## Maths

- SHAPE - Reflection and translation of constellations
- SHAPE - Drawing and measuring constellations (angles)
- MEASURES - Measuring the distance of rockets
- MEASURES - Weight and mass on different planets.

## PE

- Cricket
- Tennis
- Rounders
- Athletics

## Geography/History

### History Of Space Travel

- Timeline of significant events in space travel - first man on moon
- Discuss the first moon landing News report
- The History and development of NASA and the importance of space exploration.-Advert trip to space- space travel
- Pro and cons of space exploration.
- Diary entry/ postcard/ email- Day as an astronaut/ visit to actual planet.

## Computing

### Term 1

**Book Creator** - Literacy Link - Neil Armstrong. Who was he? Why is he an important historical figure?

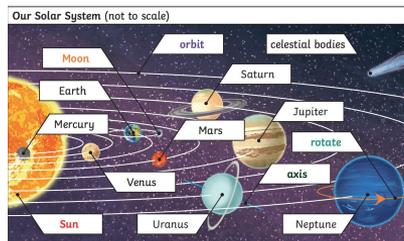
**Email** - Astronaut Launch Day

### Term 2

Sketchup- 3D image- Rocket/ base on another planet  
Twinkl Robotics app - design a moon buggy.

**Data** - Planet databases (maths)

## Big Question - What's out there? Visit - Leicester Space Centre



## Science

### 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.

## 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- mobile

## DT/STEM

- Design and make a moving space buggy
- Make a rocket

## PSHCE

**Term 1** - Personal safety- poster of legal/illegal age restrictions- drugs/mobile phone/keeping safe/sharing intimate messages.

**Term 2** - Relationships- Living and growing DVD, keeping clean, personal hygiene

## P4C

- Lucu's blue dau- It's ok to have a bad dau

## MFL

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

## RE

Islam- How do Muslims use the Qu'ran.