

As historians, we will:

Magic of Invention

- Know how and when human beings reached beyond Earth's orbit (Dating events of the Space Race between USA and USSR on time lines) incl. first moon landing.
- Know about the development and significance of the NASA Space Shuttle
- Understand the progression in human missions to Mars (NASA/SpaceX)

Home Life

- Know what is involved in training to become an astronaut
- Know what life is like for an astronaut living in Space (e.g. Tim Peake living on the International Space Station)

Rulers and Kingdoms

- Know which key political figures were involved in historical events of the period (e.g. Eisenhower, JFK, Krushchev, Nixon)

Famous Faces and Places

- Know the role and contributions of Apollo Astronauts and scientists (e.g. Neil Armstrong, 'Buzz' Aldrin, Michael Collins, Jim Lovell, Alan Shepherd, Wernher Von Braun, Gene Kranz)
- Know the role and contributions of Soviet Cosmonauts and scientists (e.g. Yuri Gagarin, Sergei Kolarov)

Emerald Class, Spring 2024

How has our view of the universe developed?

As communicators, we will:

- Use pronouns to avoid repetition
- Maintain tenses accurately
- Use possessive apostrophes accurately
- Add more detail in character and setting descriptions
- Evaluate our own and others' writing and suggest improvements
- Draw inferences such as characters' feelings, thoughts and motives for their actions
- Identify and summarise main ideas from a section of text
- Identify how language, structure and presentation contributor to meaning.
- Participate in discussions about books listened to and read for selves, showing good listening skills when others talk.

As designers, we will:

- Apply principles of a healthy and balanced diet to create a meal suitable for an astronaut living on the International Space Station

As scientists, we will:

- Explain how gravity acts between Earth and falling objects
- Understand how some mechanisms allow a smaller force to have a greater effect
- Describe the movement of the Earth related to the solar system
- Describe the movement of the Moon compared to the Earth
- Understand the Sun, Earth and Moon as spherical bodies
- Explain day and night through the Earth's rotation

As geographers, we will:

Exploring the world (Field work)

- Identify and use the 8 points of a compass
- Read four and six-figure grid references
- Read symbols and keys on Ordnance Survey maps

Where places are in our world (Map work)

- Locate significant locations of space-based events from around the world (e.g. Kennedy Space Centre, Baikonur Cosmodrome, Cape Canaveral), using maps.

What our world is like and why (Physical)

- Identify regions of North America and Europe, with specific relevance to space exploration.
- Consider reasons for locations of space centres around the world

Understanding our changing world (Human)

- Understand how land is used within the UK
- Identify locations and distribution of natural resources in the UK

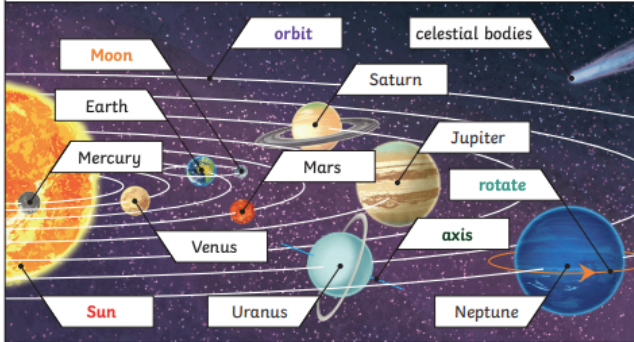
Key Vocabulary	
Sun	A huge star that Earth and the other planets in our solar system orbit around.
star	A giant ball of gas held together by its own gravity.
moon	A natural satellite which orbits Earth or other planets .
planet	A large object, round or nearly round, that orbits a star .
sphere	A round 3D shape in the shape of a ball.
spherical bodies	Astronomical objects shapes like spheres .
satellite	Any object or body in space that orbits something else, for example: the Moon is a satellite of Earth.

Pluto used to be considered a **planet** but was reclassified as a dwarf **planet** in 2006.



Key Knowledge
Mercury, Venus, Earth and Mars are rocky **planets**. They are mostly made up of metal and rock. Jupiter, Saturn, Uranus and Neptune are mostly made up of gases (helium and hydrogen) although they do have cores made up of rock and metal.

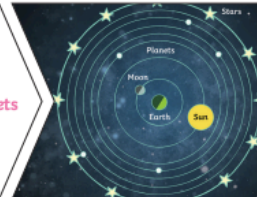
Our Solar System (not to scale)

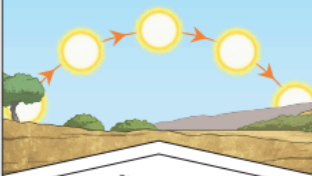



The **Moon** orbits Earth in an oval-shaped path while spinning on its **axis**. At various times in a month, the **Moon** appears to be different shapes. This is because as the **Moon rotates** round Earth, the **Sun** lights up different parts of it.

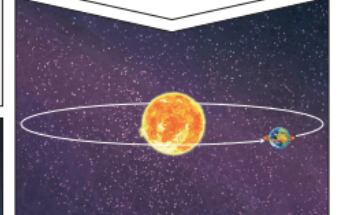
Key Vocabulary	
orbit	To move in a regular, repeating curved path around another object.
rotate	To spin. E.g. Earth rotates on its own axis .
axis	An imaginary line that a body rotates around. E.g. Earth's axis (imaginary line) runs from the North Pole to the South Pole.
geocentric model	A belief people used to have that other planets and the Sun orbited around Earth.
heliocentric model	The structure of the Solar System where the planets orbit around the Sun .
astronomer	Someone who studies or is an expert in astronomy (space science).

Geocentric model
Years ago people believed that **planets** moved around the Earth.

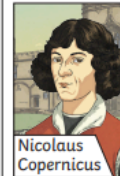


Key Knowledge	
	
It appears to us that the Sun moves across the sky during the day but the Sun does not move at all. It seems to us that the Sun moves because of the movements of Earth.	
	

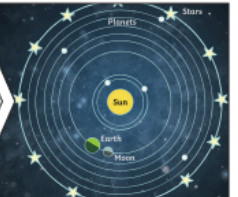
Earth **rotates** (spins) on its **axis**. It does a full **rotation** once in every 24 hours. At the same time that Earth is **rotating**, it is also **orbiting** (revolving) around the **Sun**. It takes a little more than 365 days to **orbit** the **Sun**. Daytime occurs when the side of Earth is facing towards the **Sun**. Night occurs when the side of Earth is facing away from the **Sun**.



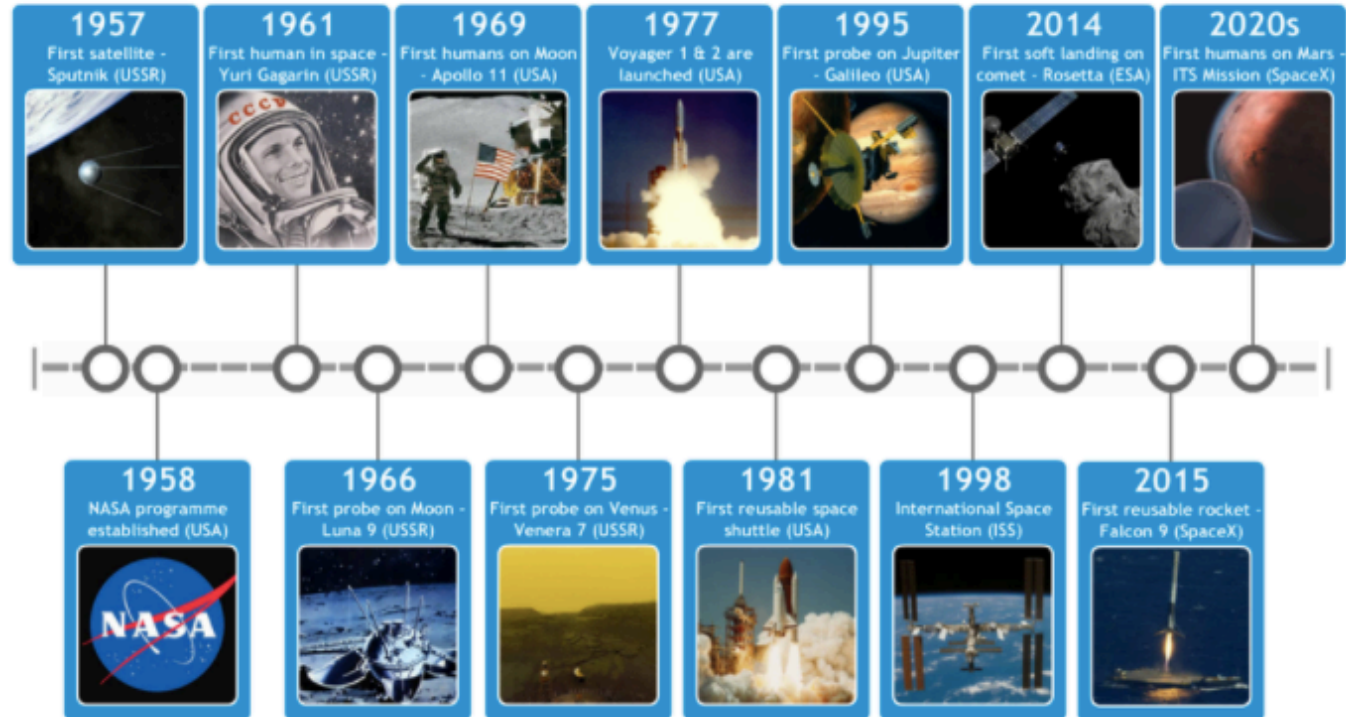
The work and ideas of many **astronomers** (such as Copernicus and Kepler) combined over many years before the idea of the **heliocentric model** was developed. Galileo's work on gravity allowed **astronomers** to understand how **planets** stayed in **orbit**.



Nicolaus Copernicus



Space Exploration - Timeline Overview



As mathematicians, we will:

- Sort measures into the correct families
- Convert between different units of measure
- Estimate, compare and calculate different measures
- Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
- Find the area of rectilinear shapes by counting squares
- Explain why a shape is a quadrilateral.
- Know there are different types of triangles, beyond the right angled triangle.
- Draw and measure angles using a protractor (Y5)
- Compare and classify geometric shapes
- Identify acute and obtuse angles and compare and order angles up to two right angles by size. (Y5 also reflex angles)
- Identify lines of symmetry in 2-D shapes presented in different orientations.
- Complete a simple symmetric figure with respect to a specific line of symmetry.
- Plot coordinates in the first quadrant using
- Know what translation means
- Know that fractions have a decimal equivalent.
- Recognise and write decimal equivalents of any number of tenths or hundredths.
- Recognise and write decimal equivalents to $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$.
- Find the effect of dividing a one- or two-digit number by 10 and 100.
- Round decimals
- Recognise thousandths (Y5)
- Recognise the percent symbol (Y5)

In French, we will:

- Write short sentences using familiar topics (including family and friends, playground games, birthdays, animals, and weather)
- Express personal opinions
- Take part in discussions

As computer scientists, we will:

- Research purpose of online blogs; create own blog about Space (revise e-safety)
- Use simple formula in numerical data software to present information
- Use IPADS and desktop software to group and present numerical data
- Create online group blogs to share information safely

As artists, we will:

- Blend paintings to show mixing secondary and tertiary colours
- Recreate artwork in the style of Pater Thorpe (space themed)
- Create a collage to describe a planet in the Solar

In PE, we will:**Gymnastics:**

- Perform balances
- Take weight on different body parts while maintaining con tool
- Plan and perform sequences of movements

Dodgeball:

- Develop throwing techniques
- Catch in games
- Throw accurately
- Develop team tactics

Handball/Tag Rugby:

- Create and use space in games
- Pass a ball accurately in game play
- Use tactics to benefit the team

In PSHE, we will:

- Recognise risks, hazards and dangers
- Understand the risks of following dares
- Keeping ourselves safe in different scenarios
- Understanding the risks of sharing photos online
- Staying safe around medicines
- Know who helps us stay safe
- Recognise our rights and responsibilities
- Understand the importance of rules
- Understand influences of media and differing opinions

In RE, we will:**What is it like to follow God?**

- Make clear links between the story of Noah and the idea of covenant.
- Make simple links between promises in the story of Noah and promises that Christians make at a wedding ceremony.
- Make links between the story of Noah and how we live in school and the wider world.

What did Jesus do to save human beings?

- Outline the timeline of the 'big story' of the Bible, explaining how Incarnation and Salvation fit within it.
- Explain what Christians mean when they say that Jesus' death was a sacrifice, using theological terms.
- Suggest meanings for narratives of Jesus' death/resurrection, comparing their ideas with ways in which Christians interpret these texts.
- Make clear connections between the Christian belief in Jesus' death as a sacrifice and how Christians celebrate Holy Communion/Lord's Supper.
- Show how Christians put their beliefs into practice.
- Weigh up the value and impact of ideas of sacrifice in their own lives and the world today.