

# Space – Year 3

## What you have learnt already in year 2:

### Chronological understanding:

I have learnt to accurately order events that I learnt about from furthest away to most recent.

I have learnt to draw timelines and placed areas of study on them.

I have learnt to compare areas of study and identify similarities between them.

I have learnt to compare areas of study and identified differences between them.

### Vocabulary:

I have learnt a range of names and words specific to areas of study

I have learnt to and used words and phrases accurately to indicate periods of time e.g. a long time ago, ancient, centuries

### Questioning:

I have learnt to ask simple questions to develop my understanding.

I have learnt to accurately answer simple questions related to an area of study confidently

I have learnt to justify my answers using sources or stories

### Knowledge:

I have learnt to identify key events about the areas I have studied.

I have started to about how we know about past events.

I have learnt to identify different representations of history e.g. books, visual clips, letters.

## Key Historical Concepts:

- Chronology Empire
- Civilisation
- Wider World History
- Continuity and Change
- Cause and Consequence
- Similarity/difference/significance
- Local history
- Culture
- Economy
- Governance
- Vocabulary

## What you will learn by the end of this unit:

I will learn about the key events in the history of space exploration and place them on a timeline

I will learn about early missions and achievements such as the Space Race between the USSR and the USA

I will learn about the launch of Sputnik 1 and the achievements of Yuri Gagarin as the first human in space

I will learn about Apollo 11 and the first moon landing

I will learn about the role of the Hubble Telescope in expanding our understanding of the universe

I will learn about significant scientists and astronauts such as Stephen Hawking, Neil Armstrong, Valentina Tereshkova and Rosalind Franklin and the contributions they have made to space exploration and scientific discovery

I will learn about the ISS and Tim Peake

## Key Skills:

**Apply and analyse** - I will apply what I know about different historical events to what I know now and analyse these in ways which further my learning.

**Describe** - I will learn to use historical terminology to describe the impact of space exploration on history

**Connect ideas** - I will connect ideas about the history of space and science

**Consider** - I will consider what happened during this time period and how it has shaped the future. I will consider similarities and differences between then and now.

**Question** - I will question ideas and concepts that I am not sure of to gain further understanding of the history of space

**Discuss/ideas/points of view** - I will further my learning by discussing subjects in peer groups, seeing other's points of view and challenging my own.

**Respond thoughtfully** - I will learn to respond thoughtfully to questions and subjects using what I have learnt so far.

## What you will learn by the end of this Key stage:

I will be able to confidently analyse the consequences of key events, actions of significant figures and developments

I will be able to confidently describe in detail different societies and periods from history and make links between features within and across different periods.

I will be able to demonstrate that I can place significant events and figures into a chronological framework

I will be able to confidently describe and analyse why there are different interpretations of events in history

I will be able to construct informed responses that involve the selection and organisation of relevant information

## Opportunities for teaching diversity, equality and expanding cultural capital:

- Introduce diverse figures in history of space exploration such as scientists, engineers and astronauts from various cultural backgrounds
- Discuss how different countries and cultures have contributed to space exploration
- Incorporate literature and media that feature diverse characters involved in space exploration
- Invite guest speakers or conduct virtual interviews with professionals in the field of space exploration
- Use inclusive language and imagery

## Skills and knowledge I may use from other subjects:

**Geography:** Mapping work of the solar system. Label planets or judge distances away from the sun

**Maths:** To help me work out how long-ago events happened and order them.

**Literacy:** I can use my reading and comprehension skills to further my knowledge of the history of space.

**Art:** to use craft materials to create a futuristic rocket, to sketch/paint accurate representations of the planets

**Science:** modelling the solar system, exploring gravity, building a rocket or drawing on what the children know already about the planets

## Key Vocabulary:

**Astronaut** - A person who travels in outer space

**Cosmologist** - Someone who studies the science of the origin and development of the universe

**Cosmonaut** - A Russian astronaut

**Mission** - A specific task or journey, especially one for exploration or research

**Optical** - having to do with the sense of sight or the eye

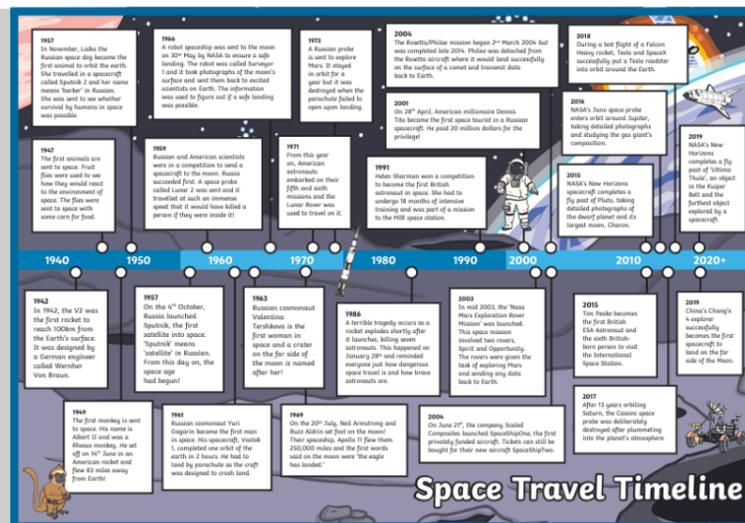
**Physicist** - An expert in the study of physics

**Satellite** - An object that orbits around a planet, such as the moon, or around a star, such as the Earth

**Space** - The area beyond Earth's atmosphere, where the stars and planets are located

**Spacecraft** - A vehicle designed for travel or operation in outer space

**Telescope** - An instrument that uses lenses and sometimes mirrors to make distant objects appear larger



## Early History of Space Exploration

Sputnik 1 was the first artificial satellite launched by the Soviet Union in 1957. It orbited the Earth for three months and carried a radio transmitter.



It did 1,440 orbits of the Earth during this time before it fell down into the Earth's atmosphere on 4<sup>th</sup> January 1958 and burned up. The USA was very surprised when the Soviet Union sent Sputnik 1 into space and didn't want to fall behind, They began spending more money on science and education. This was the start of the Space Race between the Soviet Union and the USA.

## Yuri Gagarin

Yuri Gagarin was a Soviet cosmonaut and became the first human to travel to space in 1961. His famous flight was aboard the Vostok 1 spacecraft. He orbited Earth in 1 hour and 29 minutes. Gagarin never went to space again. Instead, he trained other cosmonauts and toured around the world.



## Apollo 11

Apollo 11 was the first flight to send people to the moon. It was done by NASA, the American space group. It went up to space on 16<sup>th</sup> July 1969, carrying three astronauts: Neil Armstrong, Buzz Aldrin and Michael Collins. On 20<sup>th</sup> July 1969, Armstrong and Aldrin became the first humans to land on the moon, while Collins stayed in orbit around the moon.



## Hubble Space Telescope (HST)

The HST is the first big optical space observatory telescope. Being above the atmosphere means it can see the sky more clearly than a telescope on the ground. It was launched on 24<sup>th</sup> April 1990 by both NASA and the ESA working together. It is the size of a large school bus.



## Stephen Hawking

Stephen Hawking was a celebrated cosmologist and physicist who published ground breaking research. He was born in 1942 and died in 2018 at the age of 76. For most of his adult life, he had early onset Motor-Neurone Disease which caused a lot of mobility issues and made it hard for him to speak.



## The International Space Station (ISS)

The ISS is the biggest object ever flown in space. It travels around the Earth at an average speed of 27,700 KM/h, completing 16 orbits a day. At night it can be easily seen from Earth, as it flies 320 KM above us. 16 countries worked together to build the station.

Astronauts live and work on the ISS. They carry out scientific experiments both inside and outside of the space laboratory. An Automated Transfer Vehicle delivers food, fuel, equipment and other supplies to the astronauts on the ISS.

## Tim Peake

Tim Peake is a British astronaut who became the first British astronaut to walk in space in 2016.

He was born on 7<sup>th</sup> April 1972 in Chichester. He became interested in flying when his father took him to air shows. When he was just 13 years old, Tim joined a military program through his school. Through this program, he learned to fly with the air force on weekends.

In 2013, Tim was chosen to participate in a mission to the international space station. His mission launched on 15<sup>th</sup>



## Recall and Remember!

1. Who was the first person to walk on the moon?
2. Which country sent the first satellite, Sputnik, into space?
3. What is the name of the space telescope launched by NASA in 1990?
4. Who was the first woman to travel to space?
5. What was the name of the first artificial satellite launched into space?
6. Who was the first British astronaut to go to space?
7. What was the name of the first manned mission to land on the moon?
8. Why is Stephen Hawking significant?
9. What is the Space Race?
10. What does ISS stand for?

You might want to change this quiz to suit your class such as add multiply choice answers