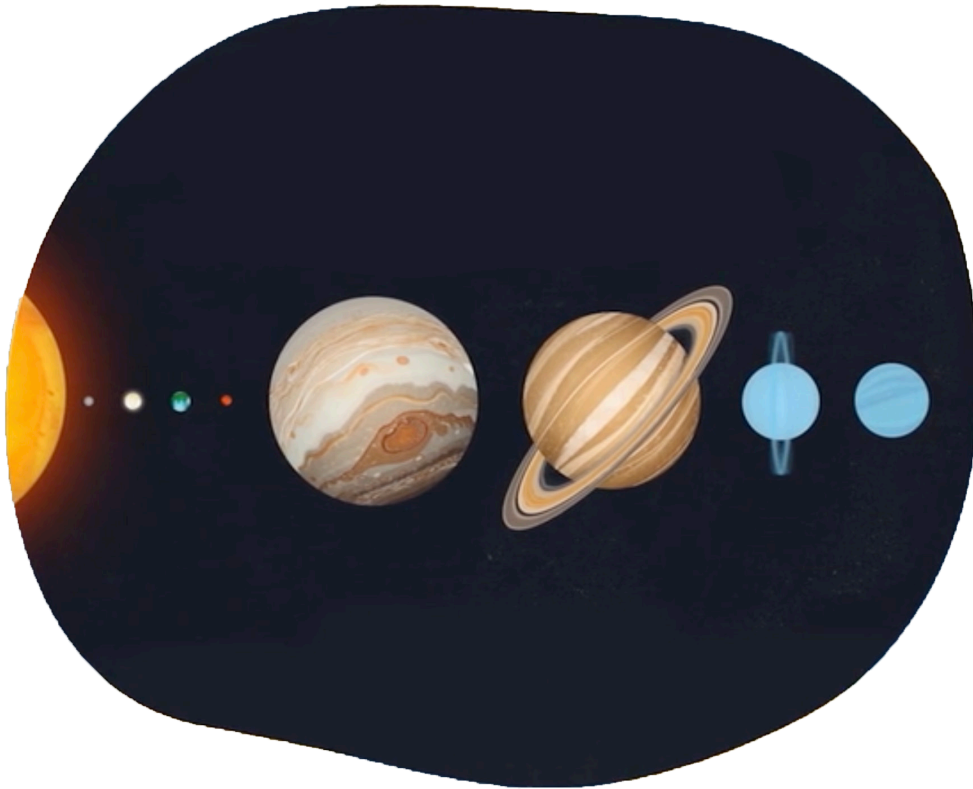


KS1 Science:

SPACE



Introduction

In this series of short videos a group of children explore the KS1 topic Space. The themes covered include the Earth's orbit of the sun, the planets within our solar system and the history of space exploration. The videos are narrated by Maddie Moate with expert input from astrophysicist Dr Becky Smethurst, and each combines live action and animation to explore the topic in a clear, age-appropriate manner.

1. How does the Earth travel around the sun?

The children discover that the Earth orbits the sun and that each complete orbit takes almost exactly one year.

2. What is the solar system?

Exploring the planets that make up our solar system and some of their characteristics.

3. How do we explore space?

An introduction to the history of space exploration, the International Space Station (ISS) and the possible future direction of space travel.

1. How does the Earth travel around the sun?

Discussion points:

1. The Earth

- What colours make up the Earth and what does each colour show?
- How does the Earth move around the sun and what does this cause?
- Ask pupils to think about why facing the sun causes warmer, brighter times and facing away causes cooler, darker times.

2. The moon

- What is a moon? Do all planets have a moon or moons?
- How many moons does the Earth have?
- Discuss reflection of the sun's light and how the moon reflects this which makes it visible at night.

3. Gravity

- What is gravity and what does this do?
- Which item pulls the Earth and causes it to orbit around it?
- How long does it take the Earth to orbit the sun and why do we have a leap year every four years?

4. Seasons

- Discuss why we have seasons and why the tilt of the earth causes these.
- What are the key characteristics of the seasons and what do humans do differently during each season?

Suggested activities:

1. Investigating gravity

- After discussion gravity and what it does, consider how we can stop things falling to the ground, how can we create stronger push than pull forces.
- Can pupils use magnets and paperclips to defy gravity and make a small paper rocket clipped onto the paper clip float?

2. Diary of Earth

- Following learning from the video about planet Earth, can pupils write a diary entry as the planet, exploring what it feels and looks like as the seasons and time of the year changes.
- Pupils to share their diary entries and discuss key messages from these.

3. Earth art

- Following discussions about the colours that make up the Earth, can pupils create their own collage/piece of artwork based on the Earth, showing the colours of the planet.
- Discuss and share these pieces of work and why the colours used were chosen.

4. Seasonal poetry

- After watching the video and seeing the explorer's example, can pupils create their own poem on the seasons.
- Share and appraise works and discuss interpretations of these poems created.

2. What is the solar system?

Discussion points:

1. The solar system:

- What things make up our solar system?
- How do the things within the solar system connect and link?
- What is the role of our planet within the solar system?

2. Planets:

- Discuss what a planet is.
- What are the different types of planet, and what are they made of?
- Do pupils recognise any key characteristics of certain planets, can they group them at all?

3. The sun:

- Discuss the role of the sun within the solar system.
- How does the sun sit at the centre of the solar system and what role does it have in relation to gravitational pull?

4. The Earth:

- What makes the Earth special to us?
- How does planet Earth compare to other planets within the solar system?
- How does the position of the Earth within the solar system make life on Earth possible?

Suggested activities:

1. Make your own 'planetarium':

- Using their understanding of the solar system, pupils to use a cereal box, shoe box or similar to create their own planetarium.
- Pupils to re-focus on the characteristics of the key features and how these can be replicated in their design.

2. Planet sorting activity:

- Use flash cards with planet names and images.
- Pupils to discuss and talk about the characteristics of each planet, consider how these could be grouped and how they could be sorted, giving reasons for choices made.

3. Solar system poetry:

- Use visual imagery and knowledge from the video; what key words come to pupils' minds when they think about the solar system?
- Develop and capture word clouds and begin to develop creative poetry.

4. Solar system soundscape:

- Consider the sounds that come to pupils' minds when they think of the planets within the solar system, the sun and other items in space such as a moon.
- How do the sounds tell a story of the colour, size etc. of the thing being considered?
- Can pupils create a 'sound scape' to capture their ideas and can other pupils then guess what the 'sound scape' represents?

3. How do we explore space?

Discussion points:**1. Space explorers:**

- What challenges do people travelling into space have and how are these overcome?
- What do pupils think travelling into space feels like and why?

2. The space station:

- What is the International Space Station (ISS)?
- Discuss how humans can get there and what life is like on board.
- What do we learn and find out from the work of the ISS?

3. Using space:

- What do humans use satellites sent into space for?
- How do pupils think satellites sent into space stay there, what stops them from coming back to Earth?

4. Space junk:

- Over time, humans have sent a large number of satellites and other items into space. Discuss how pupils think we can get these back down to Earth?
- What is the danger of leaving 'space junk' in space and not bringing it back to Earth?

Suggested activities:**1. Space explorers:**

- After watching the video, discuss key people who have been involved in space exploration.
- Can pupils research into some of these key people and create profiles to highlight their life and legacy.

2. Space station diary:

- Following learning from the ISS, can pupils write a diary entry as an explorer working on the ISS, describing what it feels and what life looks like on board.
- Pupils to share their diary entries and discuss key messages from these.

3. Recycled artwork:

- After learning about the issue of 'space junk', can pupils create a space-scape of the solar system using recycled materials?

- What key messages does such recycling give and how can we ensure we reduce, reuse and recycle, both on planet Earth and in space?

More from KS1 Topic Resources:

If your class has enjoyed this content about Animals you may also be interested in these videos which all adopt a similar style and approach.



Minibeasts



Oceans and seas



Plants



Weather and seasons

