



# Year 5

# Spring

# How do we fit in to the universe?





## Year 5

# Autumn – How do we fit into the universe?

## Intent: The Why Behind our Topic

### Rationale

*How do we fit into the universe? will give children an in-depth insight into historical and modern discoveries about space and about how our understanding of the universe is constantly changing. It will allow children to explore what we know about the Earth and other planets in our solar system whilst also investigating the role forces play in keeping our solar system together. Through these aims the children will experience becoming: a scientist, a historian, a geographer, an artist and a designer.*

**Key Curriculum Areas:** Science, Art, DT, History & Geography.

**We will meet the S&L needs of our children by:** *Providing opportunities for debates and discussions, giving children relevant key scientific vocabulary – names of planets, specific forces, universe, galaxy, solar system see word bank for further topic related words.*

**We will allow children to understand cultural differences and break down stereotypes by:** *Acceptance of different religions and beliefs over how the universe was created. Exploring different religious, cultural and historic beliefs about what stars are and what they are thought to represent.*

**We will meet the SEMH needs of our children by:** *Acceptance towards peoples beliefs of how we fit into the universe, how the universe was formed and what the stars represent. Exploring how we can look after the Earth to help the environment.*

**We will meet the socio-economic disadvantages of our children by:** *Trip/experience – Planetarium experience day at Hunslet Carr Primary School.*

### Purposeful Outcome:

**Most children will be able to** *describe the movement of the Earth, moon and other planets in the solar system.*

**Some children will be able to** *explain the role forces play in the movement of the planets and moon in the solar system.*



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### Intent: Topic-developed NCS Requirements

Subject	NCS Requirements
Science	<ul style="list-style-type: none"> <li>describe the movement of the Earth, and other planets, relative to the Sun in the solar system</li> <li>describe the movement of the Moon relative to the Earth</li> <li>describe the Sun, Earth and Moon as approximately spherical bodies</li> <li>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</li> </ul>
Geography	<ul style="list-style-type: none"> <li>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> <li>recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</li> </ul>
Art	<ul style="list-style-type: none"> <li>To develop drawing techniques through:</li> <li>Using a variety of techniques to add interesting effects e.g. reflections, shadows, direction of sunlight</li> <li>Using a choice of techniques to depict movements, perspective, shadows and reflection</li> <li>Choosing a style of drawing suitable for the work, e.g. realistic or impressionistic</li> </ul>
DT	<ul style="list-style-type: none"> <li>Design: use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</li> <li>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities</li> <li>Evaluate: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>Technical Knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> </ul>
TBC	
Writing	<p><b>Talk for Writing Units:</b> To be decided by the class teacher</p>



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### Implement: Topic-developed NCS Requirements

#### Term Skeleton Coverage

The key curriculum objectives will be met through:

Week 1:

**History & Geography:** *Children learn the different planets in the solar system and how their movement in relation to the sun. Explore the rotation of Earth and how that explains day and night? Describe the movement of the moon in relation to the moon and how this affects the moon we see from Earth. Explore how forces affect the movement of the Earth around the sun and how the force of gravity keeps things on Earth. Investigate other forces on Earth and how they affect the movement of objects on Earth.*

Week 2:

**Topic Week 2 – Art & DT:** *Develop drawing skills and techniques through sketching the planets in our Solar System and the stages of the moon cycle. Develop designing, making and evaluating techniques through the construction of a parachute that is fit for purpose: able to safely return a rocket (made from recycled materials) back to Earth using their knowledge of forces. Focus on the painting Starry night by Vincent Van Gogh and create their own similar style paintings of a night sky.*

Week 3:

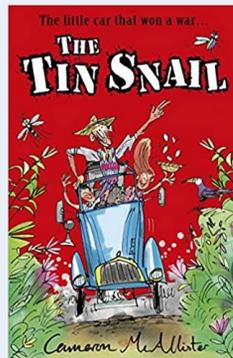
**TBC:** *Added as topic goes on, allowing for reflection and reviewal of how topic is going. What still needs to be done to ensure children can answer the question “How do we fit into the universe?” and achieve the purposeful outcome. Could include history around space missions from the Apollo space missions through to within their own history looking at Tim Peake.*

Experience:

Planetarium visit to school

Reading and Writing

**Class Books** – The Tin Snail, George’s secret key to the universe



**Shared Reading** – Extracts from: The Tin Snail & George’s secret key to the universe and Cosmic

**Talk for Writing Units:**

To be decided by the class teacher



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### Implement: Topic-developed NCS Requirements

Medium Term Plan	
Week 1:	<p><b>The key curriculum objectives will be met through:</b></p> <p><b>Science:</b>  <i>Lesson 1- hook lesson, video from alien</i>  <i>Lesson 2- solar system</i>  <i>Lesson 3- flat earth</i>  <i>Lesson 4- night and day</i>  <i>Lesson 5 – geocentric and heliocentric</i>  <i>Lesson 6- Phases of the moon</i>  <i>Lesson 7- What is a force?</i>  <i>Lesson 8- Gravity</i>  <i>Lesson 9- Air resistance</i>  <i>Lesson 10- Water resistance</i>  <i>Lesson 11- Friction</i>  <i>Lesson 12- Mechanisms</i></p> <p><b>Art &amp; DT:</b>            .</p>
Week 2:	
Week 3:	<p><b>TBC:</b></p>
Experience:	



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## Impact: Subject Leader and Teacher Evaluation

### How do we fit into the universe?

**Teacher General Review of Topic:**

**Subject Specific Review of Topic:**

**History:**

**Geography:**

**Science:**

**Art:**

**DT:**

**Curriculum Coverage – Assessment Evaluation**

**History:**

**Geography:**

**Science:**

**Art:**

**DT:**