



# Written in the stars



Rationale – Space is a topic that provokes many questions and much wonderment amongst the children. Many of the physical processes that occur daily pass by un-noticed but why do the stars only appear at night? What place does Earth take in our solar system? Does the moon really change shape? The aim of this topic is to ignite the pupils' curiosity to answer some of these questions. Throughout history astronomers have studied the stars which appear in many stories. At the end of our topic we aim to study the theme of light and hope through three festivals of light celebrated Diwali, Hanukkah and Christingle.

Creativity	Independence	Aspiration
<ul style="list-style-type: none"> <li>We made rockets and had a competition to see how far they would fly.</li> <li>Pictures were created in the style of Peter Thorpe using oil pastels</li> </ul>	<ul style="list-style-type: none"> <li>Independent enquiry, research questions that they genuinely have an interest to know the answer to.</li> <li>Selecting their own planet to research.</li> </ul>	<ul style="list-style-type: none"> <li>To become astronomers and develop our understanding of our solar system.</li> </ul>

<p><u>Spark</u></p> <ul style="list-style-type: none"> <li>We watched a video clip of Space shuttle launch with the sound turned up loud.</li> <li>Pupils brainstormed what they already knew about space.</li> <li>We made something go BANG! (50 things to do) by creating and flying our own rockets.</li> <li>Pupils wrote questions to initiate their own line of enquiry about a chosen planet.</li> </ul>	<p><u>Learning Celebration</u></p> <ul style="list-style-type: none"> <li>Gallery opening</li> <li>Press release for Crocus planting as part of Stamford's Rotary Club Eradicate Polio campaign</li> <li></li> </ul>
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<p><u>Role Playing/Life Skills/Real Learning</u></p> <ul style="list-style-type: none"> <li>Visit to the National Space centre Leicester.</li> <li>Crocus planting</li> </ul>	<p><u>Community Cohesion</u></p> <ul style="list-style-type: none"> <li>Crocus planting Eradicate Polio Campaign</li> <li>Carol singing at Morrisons to raise money for their Christmas Present Appeal</li> </ul>
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<p><u>Out of Classroom Opportunities</u></p> <p>We went into the playground- observed and measured shadows.          We fired rockets in the playground.          Hall – Modelling orbit of Earth round Sun and Moon around Earth.          National Space Centre Visit</p>	<p><u>Home Learning Activity</u></p> <p>Observing the phases of the moon.          Who was Galileo Galilee?          Calculating time difference across world time zones.</p>
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Computing and E-safety  
 Thinking SMART. We watched video clips from the SMART gang, revising our understanding of how to stay safe on line. Safe, Meeting, Accepting, Reliable, Tell.  
 We used apps to locate different star constellations in the sky.

Links to discrete subjects:  
**English:** To use a variety of organisational features in a non-chronological report. The children wrote what they already know about space, by formulating questions to research about a chosen planet. Reference books and the internet were used to find further information which was written in the form of a non-chronological report and using presentational features such as bullet points and headings.





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*We have used our research at home and school plus our visit to the National Space Centre to write a report about constellations. This included the origin of the stories from Greek Mythology which the children very much enjoyed; especially how the Plough (Ursa Major and Ursa Minor) were created.*

*To recognise features of the genre science fiction. We used the Literacy Sci-Fi shed to watch short animations and videos to inspire our story writing. Other texts and short stories were annotated to identify technical vocabulary to inform their own writing. Our stories are displayed in the new Gallery.*

*To read a wide variety of poetry and learn some by heart*

*As part of our home learning, the children were challenged to find space themed poem that was of interest to them. These poems were shared during a guided reading session. Some children who had chosen the same poem collaborated effectively to read their poem together.*

*The children have been exposed to a variety of different texts from a variety of genres to develop comprehension and vocabulary: **Fiction** 'The Boy From Far Away' **Non-Fiction** 'The Moon', 'Space Tourism', 'Diwali', 'Hanukkah' and 'Christingle' **Poetry** 'The Wind and the Moon'.*

*Speaking and Listening*

*The children read and performed play scripts which explained how our understanding of the solar system evolved through time from a geocentric model (Earth at the centre) to the Heliocentric model (Sun at the centre) we know to be true today.*

**Maths:**

*To understand how the moon phases relate to our calendar, (month and year). To solve problems involving time (World time zones). Pupils learnt that a month was named when historically, people counted moons and observed the seasons. Links were made to science work about day and night so an interactive World map was used to solve problems involving the world's time zones.*

**Science:** Earth and Space

- To know that the Sun, Earth and Moon are approximately spherical.
- To know their relative sizes and the relative distances between them.
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. *Make observations of the sun during the course of one day. Pupils drew the sun's position in the sky, and the intention was to measure shadows using a metre stick and consider how this proves that the Earth rotates round the sun. A netball and strong light source was used to model how the sunlight hits the Earth.*
- Plan scientific enquiries. *See above.*
- Record data and results of increasing complexity using graphs. *See above.*
- Describe the movement of the Moon relative to the Earth. *Using a netball, skipping rope and rotating chair, the pupils observed how the moon **doesn't** rotate but orbits the Earth. A torch and ball were used to observe how the sun's light is blocked by the Earth casting a shadow onto the moon's surface. Pupils kept a moon phase diary for homework and created a moon phase spinner.*
- Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. *See link to history.*

**History:**

- The pupils enjoyed learning about the first lunar landing, using the questions who, what, where, when why.
- The children independently researched a chosen scientist in response to work about geocentric and heliocentric models of the universe. This included answering 'Who was





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Galileo Galilee and why is he important to what we know about space?

- We read a play involving early humans, The ancient Egyptians, Aristotle, Ptolemy, Copernicus and Galilleo.

**Geography:** To name and locate the northern / southern hemisphere, equator line using photos taken from the Hubble telescope. To understand about the seasons.

**Design/Food Technology-** *Pupils saw examples of rockets during their visit to The National Space Centre and designed a rocket with similar features.*

**Art:** To develop drawing techniques – *We studied works by American born artist Peter Thorpe to create rocket pictures using oil pastels for depth of colour. We practised how to make our drawing appear 3D by using curved lines and create a sense of movement by changing pressure and direction of our marks.*

**Music:** We listened to Holst’s Planet suite discussing where the names were derived from Roman Gods. We focussed mainly on Mars ‘Bringer of War’ and Venus ‘ Bringer of Peace’.

**Computing:** *Pupils were discerning in evaluating digital content cross checking facts on several websites. They selected and use a variety of software including internet services to research facts about the solar system, lunar landing, Newton, Galileo and Kepler.*

*Pupils began creating a control program using coding on Purple Mash. We covered ‘Random Words and Wizards’, ‘Traffic Lights’, ‘Vehicles’, ‘Guard the castle’ and ‘Genie’.*

**RE:** *We thought about the theme of light and hope and how this features in several different religions. We studied three different festivals of light (Diwali-Hindu, Hanukkah – Jewish and Christingle- Christian). The children enjoyed listening to the stories of Rama and Sita and how the Maccabees defeated the Greeks to reclaim their temple. They then experienced some of the celebrations such as creating Henna hand patterns, Rangoli patterns and making clay diva lamps for Diwali. For Hanukkah the children research how to play Dreidel making their own paper version. An assembly was conducted by Christchurch about Christingle and the children followed this up by researching the symbolism of each part.*



Steps to success – Science – Solar system work

History – How has our understanding of the Solar System changed over time?

Constellations – the stories behind the stars

R.E – Festivals of light.

How will the project be evaluated?

Successful completion of written work to be displayed on the gallery.

Science assessment.





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