

<p><b>Year Group:</b> 5</p> <p><b>Name of project:</b> A New Home in Space</p> <p><b>Term:</b> Spring</p>	<p><b>Summary of current hook:</b></p> <p>Winchester Science Centre. Presentation in Planetarium gives introductory tour of the night sky, our Solar System and the wider Universe. In workshops, children explore choice of materials in satellite design and the motion of electromagnetic light. Centre provides opportunities to explore associated concepts, including gravity, forces and orbiting.</p>	<p><b>Summary of current celebration:</b></p> <p>Using the understanding they have gained in the learning journey, children will work with their parents to design and make a model to demonstrate the relative movements of Earth, Sun and Moon. They will select materials from selection provided and use the model to articulate their understanding of the orbits of the 3 bodies.</p>
<p><b>Learning Journey</b></p> <ul style="list-style-type: none"> <li>• Pupils explore ancient observations and understanding of the cosmos and are introduced to humanity’s quest to know more about it.</li> <li>• We learn how the application of scientific reasoning and the development of early telescopes led to geocentric models of the solar system giving way to more accurate heliocentric models.</li> <li>• We consider how humans first began to explore the Solar System during the Space Race between 1950-1970, culminating in NASA’s moon landings. We reflect on the challenges humans in space face.</li> <li>• We learn about recent exploration of the Solar System through probes and landers on various planets, moons, comets and asteroids before finding out about NASA’s goals to return to the Moon (2027) and on to Mars (2030s).</li> <li>• We consider what essential needs a permanent base on the Moon or Mars would need to provide and use our new learning to design our own Mars colonies.</li> <li>• We debate our critical question, first developing our arguments in teams before actively debating the question. Arguments and counter arguments are developed.</li> </ul>		
<p><b>What are the current curriculum links to maths and English?</b></p> <ul style="list-style-type: none"> <li>• Writing a response to the question, <i>Were the moon landings the greatest of all human achievements?</i></li> <li>• Writing a job application to become an astronaut</li> <li>• Persuasive language is exercised in debating our critical question, <i>‘Should we seek a new home in space?’</i></li> <li>• Scale model of the Solar system will involve measurement, scale, multiplication.</li> </ul>	<p><b>Curriculum Facilities</b></p> <p>Drama Studio - Filming BBC Bitesize-style videos about the heliocentric model  Art Studio - Pastel and chalk drawing of planets/solar systems  Field/Outdoor Learning – exploring how conditions on Planet E support life</p>	
<p><b>Integrity</b></p> <p><i>What opportunities are there for children to develop integrity and moral principles within the project?</i></p> <ul style="list-style-type: none"> <li>• On our school trip, the children will be expected to be great role models when representing our school.</li> <li>• The human cost of space exploration will be considered, particularly the ethical issues raised by the space race and the moon landings.</li> <li>• Collaborative skills will be highlighted during our Celebration Days when pupils will work with parents to develop instructive models.</li> <li>• Pupils will be encouraged throughout to show respect for and value each person’s contribution.</li> <li>• We conclude by debating the ethical dilemma of human energy and resources should be channelled towards developing plans to leave Earth or caring for our current home in space.</li> </ul>	<p><b>Ambition</b></p> <p><i>How are all children encouraged to struggle? Question? Make discoveries? Have a voice?</i></p> <ul style="list-style-type: none"> <li>• Open-ended questions encourage children to question, hypothesise and express their own opinions – particularly on the issue of whether space exploration is worth the human and material cost.</li> <li>• Consideration of the requirements of astronaut training highlights the importance of collaborative skills, having resilience and being problem solvers.</li> <li>• Children’s own research into milestones in the Space Race give them the opportunity to explore and discover.</li> <li>• For our debate finale, all children develop points for or against the proposition and are encouraged to listen carefully to the contributions of others to develop counter arguments.</li> </ul>	<p><b>Respect</b></p> <p><i>How does the project currently address wider world matters and celebrate differences?</i></p> <ul style="list-style-type: none"> <li>• A variety of astronomers and astronauts of different nationalities, ethnicities and genders is highlighted, including Valentina Tereshkova, Maggie Aderin-Pocock, Sunny Williams and Stephen Hawking.</li> <li>• Mars and Earth are compared, highlighting Earth’s uniqueness and inestimable value.</li> <li>• Themes of respect for our planet, environmental crises and humanity’s common challenges will underpin the key question and the concluding debate.</li> <li>• The debate explicitly weighs colonising other celestial bodies against the need to invest in preserving and restoring our home planet.</li> </ul>
<p><b>Growth Mindset</b></p> <p><i>How does the project currently encourage children to have growth mindset?</i></p> <ul style="list-style-type: none"> <li>• Children will learn how progress in understanding of the Universe was made through both success and failure. (e.g. <i>Achievements in the space race were made despite tragic failures.</i>)</li> <li>• Children will consider their own potential as prospective astronauts, identifying their own strengths and weaknesses.</li> <li>• Open-ended questions will encourage children to question, struggle and debate.</li> </ul>	<p><b>Critical Thinking</b></p> <p><i>What are the opportunities for critical thinking throughout the project?</i></p> <ul style="list-style-type: none"> <li>• Consideration of the question, <i>Were the moon landings the greatest of all human achievements?</i> leading to written response.</li> <li>• Children will consider whether the human cost of space exploration is justified – both in exploring the space race and in reflecting on the dangers inherent in space travel and colonising other bodies.</li> <li>• The learning journey will conclude with debating the key question, <i>‘Should we seek a new home in space?’</i> considering the pros and cons of exit plan vs emergency repairs.</li> </ul>	<p><b>A school within a garden</b></p> <p><i>How are the school gardens being used effectively and meaningfully within your project?</i></p> <ul style="list-style-type: none"> <li>• Brian Young sundial visited to explore apparent movement of the sun in the context of BPS grounds. Own sundials calibrated from top of mound.</li> <li>• Scale model of the solar system constructed on school field.</li> <li>• School grounds used in investigation of our home planet in style of planetary probe. <i>What planetary features can we identify? What elements essential to life are present?</i></li> </ul>