

LEVEL	KNOWLEDGE AND UNDERSTANDING - SCIENCE	CORRELATIONS TO “Out Of this World”
<p>Levels 1 – 5</p> <p>Years 1-10</p> <p>Ages 5-14</p>	<p>SCIENCE</p> <p>Nature of science - Investigating in science</p> <ul style="list-style-type: none"> • Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models. (L1 & L2) <p>Nature of science - Participating and contributing</p> <ul style="list-style-type: none"> • Explore and act on issues and questions that link their science learning to their daily living. (L1& L2) <p>Planet Earth and beyond - Earth systems</p> <ul style="list-style-type: none"> • Explore and describe natural features and resources. (L1& L2) <p>Planet Earth and beyond - Interacting systems</p> <ul style="list-style-type: none"> • Describe how natural features are changed and resources affected by natural events and human actions. (L1& L2) <p>Planet Earth and beyond - Astronomical systems</p> <ul style="list-style-type: none"> • Share ideas and observations about the Sun and the Moon and their physical effects on the heat and light available to Earth. (L1 & L2) <p>Nature of science - Understanding about science</p> <ul style="list-style-type: none"> • Appreciate that science is a way of explaining the world and that science knowledge changes over time. (L3 & L4) • Identify ways in which scientists work together and provide evidence to support their ideas. (L3 & L4) <p>Nature of science - Participating and contributing</p> <ul style="list-style-type: none"> • Use their growing science knowledge when considering issues of concern to them. (L3 & L4) • Explore various aspects of an issue and make decisions about possible actions. (L3 & L4) <p>Living World - Ecology</p> <ul style="list-style-type: none"> • Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced. (L3 & L4) <p>Planet Earth and beyond - Earth systems</p> <ul style="list-style-type: none"> • Appreciate that water, air, rocks and soil, and life forms make up our planet and recognise that these are also Earth’s resources. (L3) • Develop an understanding that water, air, rocks and soil, and life forms make up our planet and recognise that these are also Earth’s resources. (L4) <p>Planet Earth and beyond - Interacting systems</p> <ul style="list-style-type: none"> • Investigate the water cycle and its effect on climate, landforms, and life. (L3 & L4) 	<ul style="list-style-type: none"> • Squishy, Fishy Robot Explorers • Web-Spinning Space Spiders • Printable Probes and Cosmic Confetti • Laser-Sailing Starships • Land-Sailing Venus Rover • Asteroid-Harpooning Hitcher • Solar-Wind-Riding Electric Sail • Alien Cave Explorers



OUT OF THIS WORLD - MEETING STEM OBJECTIVES IN THE NATIONAL CURRICULUM

STEM OBJECTIVES

MEETING STEM OBJECTIVES through “Out of this World”

Expose students (and their teachers) to a wide range of career options and information early to help increase STEM aspirations and engagement, ideally in primary school and continuing throughout high school, and involving parents and school communities where possible.

Students are exposed to exemplary role models from a diverse field of careers as they learn about the innovative research and development undertaken by acclaimed physicists; mechanical engineers; professors; NASA engineers and even theories posed by a science fiction writer. These experts share their enthusiasm and explain “how they caught the science bug.”

Build on students’ curiosity and connect STEM learning to solving real world problems, including through collaborative and individual learning experiences that are hands-on and inquiry-based and support the achievement of deep knowledge.

“**Out of this World**” has been developed through World Book’s collaboration with the NASA Innovative Advanced Concepts (NIAC) program. The series provides real life learning opportunities through interactive activities that challenge the student to think creatively and promotes inquiry-based learning.

The books in the “**Out of This World**” series feature projects that have won grants from the NASA Innovative Advanced Concepts program (NIAC). The program provides funding to teams working to develop bold new advances in space technology.

Encourage teachers to prioritise STEM content knowledge when determining their professional learning needs, given the rapidly changing nature of science and technology.

Through World Book’s signature clear writing style and explanation of complex space science concepts, “**Out of this World**” equips teachers with the knowledge and understanding of the latest advances in space technology to keep pace with the rapidly changing nature of this subject area.

Use school demographic data and the local context to guide choices about partnership and outreach programs, and consider how best to target student cohorts less likely to do STEM subjects or see the relevance of STEM-related skills.

“**Out of this World**” provides the basis of understanding on how partnerships and outreach programs can be successfully implemented. The collaborative partnership between NASA Innovative Advanced Concepts (NIAC) program and World Book provides inspirational examples that will motivate the most reluctant STEM learner.