

Suggested Australian Curriculum Topics Years Prep to 10.

This is **guide only** based upon the Australian Curriculum. Suggested Cosmodome shows as part of the program are in bold. Please refer to the 'Quick Links' tab at www.starlab.net.au for a synopsis and alternative curriculum topics

Science Understanding	Suggested program / topics
<p>Prep:</p> <ul style="list-style-type: none"> Daily and seasonal changes in our environment, including the weather, affect everyday life. 	<p>What is Weather? What is weather made of? <u>Recommend:</u> 'Zula Patrol: Under the Weather'</p>
<p>Year 1:</p> <ul style="list-style-type: none"> Observable changes occur in the sky & landscape. Recording short and longer-term patterns of events that occur on Earth and in the sky, such as the appearance of the moon and stars at night, the weather and the seasons. 	<p>What is in the day sky? What is in the night sky? Earth's rotation. Why do we have weather? Why do we have seasons? Why do we see the moon and stars? Take a rocket to the moon and see Earth's landscape and stars from the moon. <u>Recommend:</u> 'Earth's Wild Ride' <u>Recommend:</u> Night Activity incorporating above and telescope viewing of the moon, planets and stars combined with a laser-guided tour of the sky.</p>
<p>Year 2:</p> <ul style="list-style-type: none"> Push or pull affects how an object moves or changes shape. 	<p>Rockets & Earth's gravity <u>Recommend:</u> 'Secret of the Cardboard Rocket'</p>
<p>Year 3:</p> <ul style="list-style-type: none"> Earth's rotation on its axis causes regular changes including day and night. 	<p>The sun is a source of light. Timescales for rotation of the earth. Sizes and movement of the sun, Earth and moon. Constructing and using sundials. <u>Recommend:</u> 'Secret of the Cardboard Rocket' 'Earth's Wild Ride' <u>Highly recommend:</u> Night Activity incorporating above and telescope viewing of the moon, planets and stars combined with a laser-guided tour of the sky.</p>
<p>Year 4:</p> <ul style="list-style-type: none"> Earth's surface changes over time as a result of natural processes and human activity. 	<p><u>Recommend:</u> 'Earth's Wild Ride' Earth's history, asteroid impacts, volcanoes, raging rivers.</p>
<p>Year 5:</p> <ul style="list-style-type: none"> The Earth is part of a system of planets orbiting around a star. Light from a source forms shadows and can be absorbed, reflected and refracted. 	<p>Identifying planets in the solar system and comparing their orbits. Sizes and distances within our solar system and beyond. The sun. Planets & moons reflect light, Stars as a source of light. Colours of stars & planets indicate their properties. <u>Recommend:</u> 'Oasis in Space' <u>Highly recommend:</u> Night Activity incorporating above and telescope viewing of the moon, planets and stars combined with a laser-guided tour of the sky.</p>
<p>Year 6:</p> <ul style="list-style-type: none"> The growth and survival of living things are affected by the physical conditions of their environment. Sudden geological changes or extreme weather conditions can affect Earth's surface. 	<p>Natural and man-made causes of environmental changes occurring daily, seasonally and long-term. Impact on life in extreme environments including Antarctica. <u>Recommend:</u> 'Ice Worlds'</p>



Suggested Australian Curriculum Topics Years Prep to 10 (cont'd)

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Science Understanding	Suggested program / topics
<p>Year 7:</p> <ul style="list-style-type: none"> Predictable phenomena on Earth, including seasons and eclipses, are caused by the relative positions of the sun, Earth and moon. Earth's gravity pulls objects toward the centre of the Earth. 	<p>Simulate and describe lunar and solar eclipses, the reason for seasons and phases of the moon. Comparing times for rotation of Earth, Sun and moon and the times for orbiting bodies. Gravity keeps planets in their orbits and how gravity affects objects on the Earth's surface. <u>Recommend:</u> 'Oasis in Space' 'Black Holes' (gravity to the max!)</p> <p><u>Highly recommend:</u> Night Activity incorporating above and telescope viewing of the moon, planets and stars combined with a laser-guided tour of the sky.</p>
<p>Year 8:</p> <ul style="list-style-type: none"> Cells are the basic units of living things and have specialised structures and functions. Multi-cellular organisms contain systems or organs that carry out specialised functions that enable them to survive and reproduce. General astronomy programs available. 	<p><u>Recommend:</u> 'Origins of Life', <u>Alternative:</u> 'Natural Selection'</p> <p>General astronomy presentation.</p>
<p>Year 9:</p> <ul style="list-style-type: none"> Chemical reactions, matter & energy General astronomy programs available. 	<p><u>Recommend:</u> 'Black Holes' for energy, chemical reactions & matter.</p> <p>General astronomy presentation.</p>
<p>Year 10:</p> <ul style="list-style-type: none"> The universe contains features including galaxies, stars and solar systems. The Big Bang Theory can be used to explain the origin of the universe. Global systems, including the carbon cycle, rely on interactions involving the biosphere, lithosphere, hydrosphere and atmosphere. The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence. 	<p>Evidence of Big bang theory. Radiation. Blue shift & red shift. Age of the universe. Formation of galaxies and stars. <u>Recommend:</u> 'Origins of Life'</p> <p>How human activity affects global systems. Causes and effects of greenhouse effect. Effect of climate change on sea levels and biodiversity. Investigating currently occurring changes to permafrost and sea ice and the impact of these changes. Examining the factors that drive the deep ocean currents, their role in regulating global climate, and their effects on marine life. <u>Highly recommend:</u> 'Ice Worlds'</p> <p><u>Highly recommend:</u> 'Natural Selection'</p>