

## Queensland Years 7-10 Science Outcomes for Earth Quest

### Level Four

STRAND	OUTCOMES	EARTH QUEST EXHIBITS
<p>Science and Society</p> <p>Students understand that people of many cultures have contributed to the development of scientific knowledge. They understand what makes a fair test. They appreciate that the uses of science have implications for the community.</p>	<p>4.3</p> <p>Students present analyses of the short- and long-term effects of some of the ways in which science is used.</p>	<p>Ecosystems of Australia Food Pyramids Ozone Urban Jungle</p>
<p>Earth and Beyond</p> <p>Students understand that there are interactions between systems on Earth, in the solar system and in the universe. They understand that events occurring on Earth and those occurring in the universe are on different scales of time and space. Students understand that the Earth and solar system are used differently by different communities.</p>	<p>4.1</p> <p>Students recognise and analyse some interactions (including the weather) between systems of Earth and beyond.</p>	<p>Air Pressure Galaxy Gaze Making Mountains Ozone Seasons in a Spin Size of Planets Spinning Sun Swirled World The Air Up There The Solar System Turn the Tides Volcanoes What Weather?</p>
	<p>D4.4</p> <p>Students use models to demonstrate the relative positions of parts of the solar system.</p>	<p>The Solar System Size of Planets</p>
<p>Life and Living</p> <p>Students understand that living things have external and internal structures which enable them to survive and reproduce in their own environment. They understand the types of interaction occurring between living and non-living parts of the environment.</p>	<p>4.1</p> <p>Students examine the internal and external structure of living things.</p>	<p>Deep Sea Glow Food Pyramids Living Plants in Place</p>
	<p>4.3</p> <p>Students evaluate the consequences of interactions between the living and non-living parts of environments.</p>	<p>Evolution Landscape Journey Plants in Place Urban Jungle</p>

**Level Five**

STRAND	OUTCOMES	EARTH QUEST EXHIBITS
<p>Science and Society</p> <p>Students understand that scientific ideas have changed and will continue to change as new evidence is collected. They recognise the importance of believable evidence. They understand that applications of science have been influenced by changes in social attitudes.</p>	<p>5.3 Students analyse the relationship between social attitudes and decisions about the applications of science.</p>	<p>Ozone</p>
<p>Earth and Beyond</p> <p>Students understand that present-day features and events may provide clues to occurrences in the past. They understand that events at a particular time and place can have effects at other times and other places. Students understand that the Earth, the solar system and the universe are different types of resources which may be used for different purposes.</p>	<p>5.1 Students explain how present-day features and events can be used to make inferences about past events and changes in Earth and beyond.</p>	<p>Fossils Making Mountains Volcanoes</p>
	<p>D5.5 Students describe geological cycles that occur over time and identify links between aspects of these cycles.</p>	<p>Air Pressure Making Mountains Ozone Swirled World Tectonic Plates The Air Up There Volcanoes</p>
<p>Energy and Change</p> <p>Students understand that everyday situations can be analysed in terms of the motion of objects and energy transfer. They understand that ideas of energy transfer and transformation can be used to explain common phenomena and the ways of obtaining and using energy.</p>	<p>5.1 Students analyse situations where various forces (including balanced and unbalanced forces) act on objects.</p>	<p>Air Pressure Earthquake Exploring Earth Making Mountains Spinning Sun Swirled World Turn the Tides</p>
<p>Life and Living</p> <p>Students understand that the survival of living things is determined by interactions which occur within and between systems in living things. They understand that reproductive processes and strategies influence survival of individuals and species. They understand that there are consequences of the interactions which occur between living and non-living parts of the environment.</p>	<p>5.1 Students collect information about the structure (including cell structure) and function of living things and relate structure and function to survival.</p>	<p>Cells Evolution Food Pyramids Plants in Place</p>
	<p>5.3 Students evaluate the consequences of interactions between living and non-living parts of the environment.</p>	<p>Evolution Landscape Journey Plants in Place</p>

**Level Six**

STRAND	OUTCOMES	EARTH QUEST EXHIBITS
<p>Science and Society</p> <p>Students understand that ethical, cultural, economic and political considerations influence scientific endeavours. They understand the role of scientific investigation in the development of scientific knowledge. They understand that the applications of science have immediate and long-term consequences for society.</p>	<p>D6.5 Students discuss changes in attitudes towards particular applications of science this century.</p>	<p>Ozone Urban Jungle</p>
<p>Earth and Beyond</p> <p>Students understand scientific ideas about interactions within and between systems of the Earth, solar system and universe. They understand that changes may result from concurrent events in the past or as the culmination of a series of events taking place over long periods of time. Students understand that the Earth, solar system and universe are resources which humans use. .</p>	<p>6.1 Students use scientific ideas and theories about interactions within and between systems of the Earth and beyond to explain past and present features and events.</p>	<p>Air Pressure Fossil Finder Galaxy Gaze Making Mountains Ozone Seasons in a Spin Spinning Sun Swirled World The Air Up There The Solar System Turn the Tides Volcanoes What Weather</p>
<p>Life and Living</p> <p>Students understand that the effects of change can be recognised in systems within living things as well as within environments. They understand scientific ideas about how the variety of life forms has arisen.</p>	<p>6.1 Students seek reasons for and can explain why functioning and behaviour change in response to variations in internal and external conditions (including disease, temperature, water and light).</p>	<p>Deep Sea Glow Food Pyramids Landscape Journey Living Cells Plants in Place Urban Jungle</p>
	<p>6.2 Students use scientific ideas (including concepts of genetics and natural selection) to explain how variation in living things leads to change in species over time.</p>	<p>Evolution Plants in Place</p>

## Queensland Years 7-10 SOSE Outcomes for Earth Quest

### Level Four

STRAND	OUTCOME	EARTH QUEST EXHIBITS
<p>Place and Space</p> <p>Students understand how decisions of resource use and management affect environmental and economic sustainability and can use local field studies to identify how a place is valued and cared for. They also understand how to use a range of maps to analyse global patterns and can consider local and global factors to make decisions about resources.</p>	<p>PS4.1 Students make justifiable links between ecological and economic factors and the production and consumption of a familiar resource.</p> <p>PS4.2 Students predict the impact of changes on environments by comparing evidence.</p> <p>PS4.4 Students use latitude, longitude, compass and scale references and thematic maps to make inferences about global patterns.</p>	<p>Core Samples Dig a Hole Food Pyramids Plants in Place</p>

### Level Five

STRAND	OUTCOME	EARTH QUEST EXHIBITS
<p>Place and Space</p> <p>Students understand the relationships within and between ecosystems in different place settings and can use geographical and environmental inquiry processes to investigate these relationships. They also understand the patterns of environments in Queensland, Australia and the Asia-Pacific and can apply values to evaluate the effects of decisions related to industries.</p>	<p>PS 5.3 Students participate in geographical inquiries to evaluate impacts on ecosystems in different global locations.</p> <p>PS D5.6 Students apply ideas concerning sustainability to suggest how natural, social and built environments should interact in a preferred future.</p>	<p>Landscape Journey Ozone Plants in Place Urban Jungle</p>

### Level Six

STRAND	OUTCOME	EARTH QUEST EXHIBITS
<p>Place and Space</p> <p>Students understand the interactions of forces involve in the evolution of places and can apply criteria and geographical data to advocate decisions about these interactions. They also understand representations of spatial patterns and can develop strategies to confront issues in global environments.</p>	<p>PS6.4 Students use maps, tables and statistical data to express predictions about the impact of change on environments.</p>	<p>Dig a Hole Ozone Swirled World</p>