



## EARTH AND SPACE – STAGE 3

Outcomes	Content	Skyworks Planetarium Content Links
<p>Students describe how discoveries by people from different cultures and times have contributed to advancing scientific understanding of the solar system</p> <p>ST3-8ES</p>	<p>The Earth is part of a system of planets orbiting around a star (the sun). (ACSSU078)</p> <p>Students:</p> <ul style="list-style-type: none"> <li>research the key features of the planets of the solar system and compare how long each takes to orbit the sun 🎓📊</li> <li>demonstrate using models that the Earth revolves around the sun and the moon revolves around the Earth</li> <li>research the important contributions made by people from a range of cultures and organisations, using technologies of the time, to advancing scientific understanding of the solar system such as Aryabhata, Copernicus, Galileo, CSIRO and NASA (ACSHE082, ACSHE099) 🌐⚙️🌍🌟</li> <li>describe how Aboriginal and Torres Strait Islander peoples use observations of the night sky to inform decisions about some everyday activities, eg food gathering and ceremonies 🙌</li> </ul>	<p>Night time observations by astronomers such as Copernicus were key to understanding the true nature of our Solar System. Similar observations are made within the planetarium. Students learn through practical demonstrations within the darkened environment of the planetarium dome. Concepts demonstrated include:</p> <ul style="list-style-type: none"> <li>• our daytime star, the Sun, and our place in space. Earth and planet revolution is reinforced using various projections.</li> <li>• the effects caused by the rotation of the Earth as well as those observed at night. These changes include the apparent movement of the Sun, stars, visible planets and the Moon if visible.</li> <li>• moon phase cycles due to orbital motion.</li> <li>• orbital motion of the planets in the sky. These motions were observed by ancient peoples and cultures and eventually led to the understanding of Solar System structure.</li> <li>• the effects that seasonal changes have on the night sky. Differing constellations are shown throughout the various seasons. The changing position of the iconic Southern Cross was important to ancient Australian Indigenous people.</li> <li>• interpretations of some of the constellations by Aboriginal and Torres Strait Islanders including “The Emu in the sky”. The development of seasonal calendars were largely based on these observations.</li> </ul>