



## EARTH AND SPACE – STAGE 2

Outcomes	Content	Skyworks Planetarium Content Links
<p>Students describe how relationships between the sun and the Earth cause regular changes (ST2-9ES)</p>	<p>Earth's rotation on its axis causes regular changes, including night and day. (ACSSU048)</p> <p>Students:</p> <ul style="list-style-type: none"> <li>• demonstrate that the rotation of the Earth on its axis is the cause of night and day, eg by using models of the Earth and sun</li> <li>• describe local seasonal changes that occur as a result of the Earth's movement around the sun</li> <li>• observe and record changes in the length and direction of a shadow during the day to show how the movement of the Earth around the sun can be used to measure time, eg by using a shadow clock or sundial 📏</li> <li>• investigate how change in the environment is used by Aboriginal and Torres Strait Islander peoples to develop seasonal calendars 🖐️⚙️</li> </ul>	<p>The concept of night and day forms an integral part of the presentation. 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.</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>• day and night which can be effectively displayed using a specialised Earth globe as well as an Earth projection that surrounds the students.</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> <p>Presentations are supplemented with extremely useful resources in the form of blackline masters. They include relevant reference material and practical activities including sundial and star map kits the students can construct.</p>