

# Earth and Space: Night and Day International

<p><b>Aim:</b> Using the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky by predicting night and day in different places on Earth.</p> <p>I can investigate night and day in different parts of the Earth.</p> <p>Reporting and presenting findings from enquiries, including conclusions, in oral and written forms such as displays and other presentations in the context of investigating night and day.</p> <p>I can report and present findings from enquiries.</p>	<p><b>Success Criteria:</b></p> <p>I can make predictions about night and day in different places on Earth.</p> <p>I can support the idea that different places on Earth experience night and day at different times with evidence.</p> <p>I can explain why night and day occur at different times in different places on Earth.</p> <p>I can report and present findings from enquiries with support.</p> <p>I can report and present findings from enquiries.</p> <p>I can write a conclusion which explains my findings.</p>	<p><b>Resources:</b> <b>Lesson Pack</b> Globes</p>
	<p><b>Key/New Words:</b> Day, night, Sun, Earth, rotate, axis, shadow, time, countries, daylight, night time, distance, light, dark.</p>	<p><b>Preparation:</b> <b>Night and Day International Investigation Activity Sheet</b> - 1 per child <b>Time Zones By Country Map</b></p>

**Prior Learning:** It will be helpful if children have an understanding of seasonal changes and how the length of the day varies.

## Learning Sequence

	<p><b>Night and Day:</b> Why does night and day occur? How do you know? Does night and day occur at the same time everywhere on Earth? Why? Why not? Children discuss with talk partner and feedback.</p>	
	<p><b>Night and Day Investigation:</b> Click link to Google Maps and ensure that the map is zoomed in and out as appropriate. Model how to pick one country on the map. State that if it is 12:00 in the UK then the Sun is fully above them. Move the globe and complete the prediction table.</p>	
	<p><b>Predictions:</b> Children make predictions in mixed ability pairs using the differentiated <b>Night and Day International Investigation Activity Sheets</b> and globes. (This first part of the activity is the same on each sheet, ensure children only complete the first row).</p>	
	<p><b>Checking Predictions:</b> How can we check if our predictions are correct? Where would we get the information from? Children feedback and then discuss reliability of sources and feasibility of using a source of information.</p>	
	<p><b>Time Zones:</b> Model how to use the time zones map to calculate times in other countries. Give all children the <b>Time Zones By Country Map</b>.</p> <p><b>Time Zones Activity:</b> (Remind children to only complete the table on the <b>Night and Day International Investigation Activity Sheets</b> and not the conclusion which will be completed after the activity).</p> <div style="display: flex; justify-content: space-around;"> <div> <p> Children work in pairs. If needed children can use cubes/numbers lines, etc. to support with calculation.</p> </div> <div> <p> Children work independently.</p> </div> <div> <p> Children also pick another country and assume it is 12pm there, then calculate using the <b>Time Zones By Country Map</b> where the sun will be rising, setting and where it will be night time.</p> </div> </div>	
	<p><b>Conclusion:</b> Were your predictions correct? Why? Why not? What was the relationship between the time of day in one place and another with respect to distance? All children to write a conclusion on the <b>Night and Day International Investigation Activity Sheet</b>.</p>	

## Taskit

**Investigateit:** Investigate the differences between sunrise and/or sunset times for each month of the year – create a line graph to show how the time. Compare with a different country.

**Solveit:** Problem solve using the **Time Zones By Country Map** and **Time Zone Challenge Cards**.

**Researchit:** Find out about jetlag and why it occurs when we travel through time zones.