

## TIME ZONES: CAN WE TIME TRAVEL ON PLANET EARTH?

In this unit pupils will learn:

- The prime meridian time zones (day and night) around the world
- The position and significance of the lines of latitude and longitude

- How time zones can impact travel

### NATIONAL CURRICULUM

#### Locational knowledge

- identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)

#### Geographical skills and fieldwork

- use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied
- use the 8 points of a compass

Lesson	Brief Overview	INK	Vocabulary
<b>DAY AND NIGHT</b> Why do we have night and day? What are lines of longitude?	In this lesson children will learn why we have day and night and what lines of longitude are.  Use 8 point compass during this unit to locate places of interest	<ul style="list-style-type: none"> <li>• Day and night result from Earth's rotation in relation to the sun, which appears to rise in the east and set in the west.</li> <li>• Lines of longitude are all the same length and give our position in degrees east or west of the Prime Meridian.</li> <li>• The Prime Meridian (0° longitude) runs through London; the Antimeridian (180° longitude) runs through the Pacific Ocean.</li> </ul>	Globe, rotation, longitude, latitude, axis, Prime Meridian, Antimeridian
<b>LONGITUDE AND TIME ZONES</b> What is the Prime Meridian? What are time zones?	In this lesson children will learn to identify the Prime Meridian and understand time zones.  Use 8 point compass during this unit to locate places of interest	<ul style="list-style-type: none"> <li>• Time zones are measured from the <b>Prime Meridian</b> at 0° longitude, where the time is <b>Universal Co-ordinated Time (UTC)</b>.</li> <li>• Earth is divided into 24 standard meridians, at intervals of 15° ,</li> </ul>	Time zones, Antimeridian, border

		<p>which are the basis for delineating 24 time zones.</p> <ul style="list-style-type: none"> <li>• Time zones to the east of the <b>Prime Meridian</b> are 'UTC (or GMT) plus'; time zones to the west are 'minus UTC (or GMT)'.</li> </ul>	
<p><b>THE INTERNATIONAL DATE LINE AND TIME</b></p> <p>How can date maps and the International Date Line be used to explore time zones around the world?</p>	<p>In this lesson children will learn how to use time and date maps and the International Date Line to explore time zones around the world</p> <p>Use 8 point compass during this unit to locate places of interest</p>	<ul style="list-style-type: none"> <li>• The <b>Antimeridian</b> forms the basis for the International Date Line, with some deviations for national <b>borders</b>.</li> <li>• The International Date Line is 180° east and 180° west of the Prime Meridian and is the place where the date changes.</li> <li>• Meridians are the basis for the <b>24 time zones</b>; many do not follow the meridian lines to allow for national/state <b>borders</b>.</li> <li>• West of the Prime Meridian, you 'lose' four minutes for every degree of longitude and east you 'gain' four minutes.</li> </ul>	<p>Co-ordinated universal time, Greenwich Mean Time, Prime Meridian</p>
<p><b>TRAVEL AND TIME</b></p> <p>What effect do time zones have on travel?</p>	<p>In this lesson children will learn how to understand that time zones can have an effect on travel.</p> <p>Use 8 point compass during this unit to locate places of interest</p>	<ul style="list-style-type: none"> <li>• Many flights cross time zones leading to discrepancies between the time in the air and the time at destination airports.</li> <li>• Some flights cross the International Date Line moving between the <b>Western</b> and <b>Eastern Hemispheres</b> of the globe.</li> <li>• Some countries, including the UK, adjust their time in certain</li> </ul>	<p>Eastern hemisphere, western hemisphere, Daylight saving time</p>

		seasons to maximise the hours of daylight.	
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