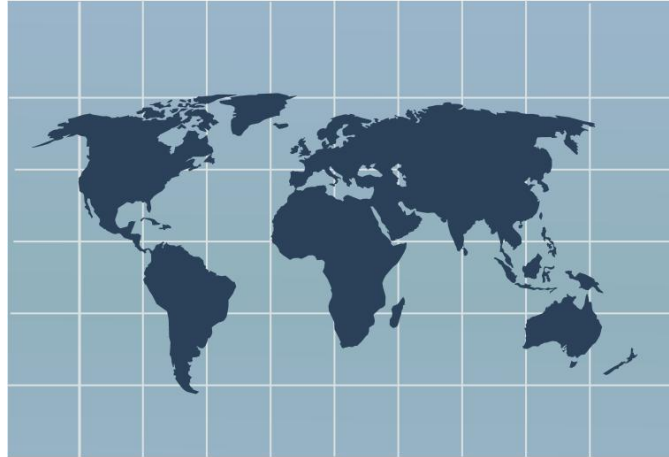




Time Zones - Teacher's Notes

Time Zones



If students have access to iPads or you have a Smart Board or data projector with Internet access, visit timeanddate.com and click on the time zone interactive map.

1. Students may be surprised to see how economics and politics have created time zones around the world which are not 24 vertical strips as might be expected. They will see that WA stretches across its time zone.
2. The International dateline is not a straight line running North to South but zigzags about to include and exclude national boundaries.
3. Daylight saving affects some countries and not others
4. Western Australia stretches across a whole zone. The west coast of our state is almost in the next time zone. (this will cause some problems when they make their sundials as the solar time on the dial may be different from the zone time).

Traditionally time was calculated as a deviation from *GMT*, *Greenwich Mean Time*. *Greenwich* lies close to London on the River Thames. It was a great seafaring center and so time was calculated from a spot near the Royal



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Observatory there. You can stand with one foot officially in the Eastern Hemisphere and the other in the Western Hemisphere. A recent more accurate estimation involves not only solar observations but also atomic clocks spaced round the globe. This is known as UTC or Coordinated Universal Time (in the original French Temps Universel Coordonné) UTC times can be seen across the base of the map and can be used to estimate time differences around the world. If students know the location of a city on the map, they can click on the red dot to check their answer. If not they or you can type the location into the space above the map.

If it is noon (12 am) at Greenwich, what time is it in:

Perth WA (or their own town)	$12 + 8 = 20\text{h}$ or 8pm
Adelaide SA	$12 + 9 = 21\text{h}$ or 9pm
Sydney NSW	$12 + 11 = 23\text{h}$ or 11pm
Washington USA	$12 - 5 = 7\text{h}$ or 7am

Students may be encouraged to name the nearest city close to where relatives may be. They can then count the difference in time between where they live and where their relatives live.

If your granny lives in Rome in Italy, is this a good time to call her on the telephone from school? **Usually not as it is too early in the morning!**

