

Time zones

Time zones help us know what time it is in different parts of the world. This is because when the Earth rotates, the sun shines on only one part of the Earth, so when it's the morning in your country, it's night-time in another country.

The Earth has got twenty-four time zones. The lines for each time zone go from north to south. These are called lines of longitude. The line on the map at 0° longitude is called the Prime Meridian. This line goes through Greenwich, in London. The time there is called Greenwich Mean Time (GMT).



The Earth rotates 15° of longitude every hour ($24 \times 15^\circ = 360^\circ$). Places east of the Prime Meridian are ahead of GMT. For example, Istanbul is about 30° east of the Prime Meridian, so the time there is GMT plus two hours. Places west of the Prime Meridian are behind GMT. For example, Rio is about 45° west of the Prime Meridian, so the time there is GMT minus three hours. So when it is 12 p.m. in London, it is 2 p.m. in Istanbul and 9 a.m. in Rio.

1) READ THE TEXT. WRITE THE MEANINGS OF THE FOLLOWING WORDS:

- a. Know:.....
- b. World:.....
- c. Earth:.....
- d. Sun:.....
- e. Shine:.....
- f. Morning:.....
- g. Night:.....
- h. North:.....
- i. South:.....
- j. East:.....
- k. Ahead:.....
- l. West:.....

2) Read the text again and match the words with the numbers in the picture.

Longitude PRIME Meridian Greenwich mean Time east west north south



3 Look at the clocks and answer the questions.



- 1 In which countries are cities 1–6?
- 2 Is New York ahead of or behind GMT?
- 3 How many hours ahead of GMT is Beijing?
- 4 How many hours behind GMT is Brasilia?
- 5 If it's 12 p.m. in London, what time is it in Brisbane?
- 6 You are in New York at 9 p.m. Is it a good idea to call your friend in London? Why / Why not?
- 7 How many hours ahead of or behind GMT is your country?

Answers:

- 1) London- Uk/ New York-
- 2)
- 3)
- 4)
- 5)
- 6)
- 7)