

KS2 Geography: What Time Is It?

The Earth completes one rotation every 24 hours. When it's light outside, our part of the world is facing the Sun. When it's dark outside, our part of the world has turned away from the Sun.

Another place, another time

It can't be daytime everywhere on Earth at the same time, because the whole of the Earth can't face the Sun at the same time. This means when it's daytime on one side of the world, it's night-time on the opposite side.

When you go to bed tonight, there will be people in other countries eating their lunch, sitting in class or just waking up. That's because it's not the same time everywhere in the world.

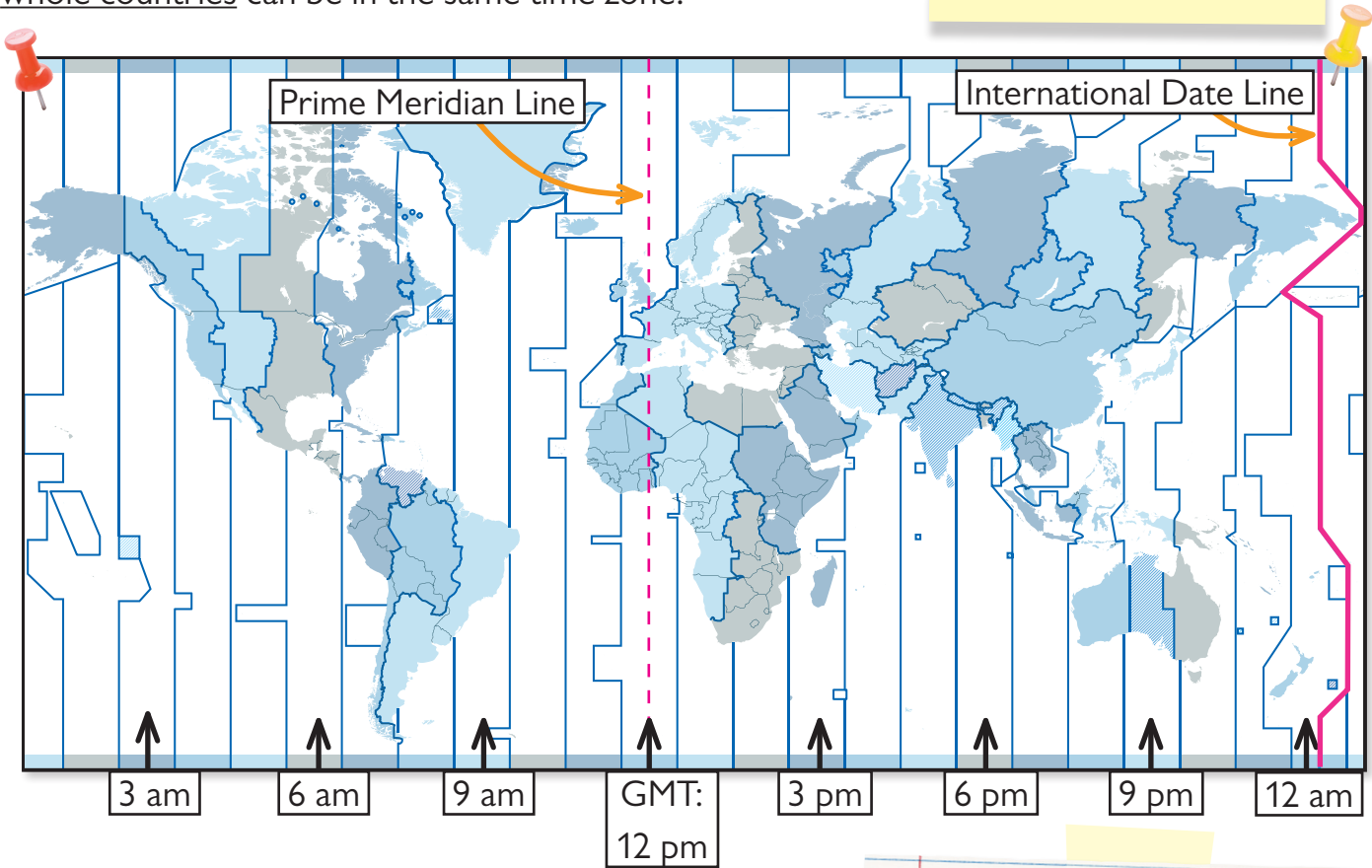


No matter where they live, everyone wants 12 pm (noon) to be the middle of the day for them. This means different places on Earth need to have their own **time zones**.

Getting in the zone

Each blue line on this map separates the world's time zones — each 'zone' is an hour apart. The lines are more or less straight, but sometimes they have to wiggle about so that whole countries can be in the same time zone.

At the bottom of the map you'll see the times in different zones when it's 12 noon in the UK.



A land before time

In the past, each town in the UK used the position of the Sun to tell the time. That meant it was a slightly different time in every town, which became too confusing when people started to travel more.

They decided to choose one standard time that everyone would use — the time at the Royal Observatory in Greenwich, London. This is called Greenwich Mean Time (GMT).

The imaginary north-south line through Greenwich is called the Prime Meridian Line and it's used as the basis for our time zone system.

Can you spot a country that has more than one time zone?



You can be a time traveller...

The International Date Line is exactly half way around the world from the Prime Meridian Line. It marks the point where one day ends and the next one begins. If you stand on the west side of the line and then cross over it, you will go back in time by 24 hours.

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The previous two pages from the Study Book are about the world's time zones and why they're important. Read both pages then answer the questions below.

1. Read the first page from the Study Book. Use the words below to complete these sentences to explain why different places have different time zones.

midnight time zones 12 pm twenty-four axis

The Earth spins on its once every
..... hours, so when it's midday on one side
of the Earth, it's on the other side.
We have different so that every country
can have midday at

2. Before standard time was agreed, people used the position of the Sun to tell the time. Why could this be a problem for people living in different parts of the UK?

This could be a problem for people living in different parts of the UK because

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Taken from CGP's KS2 Discover & Learn Geography: Living Planet — The Activity Book (GLW21).
See the full KS2 Discover & Learn range at cgpbooks.co.uk.

3. If it's 12 pm in London what time is it in these cities?

Istanbul

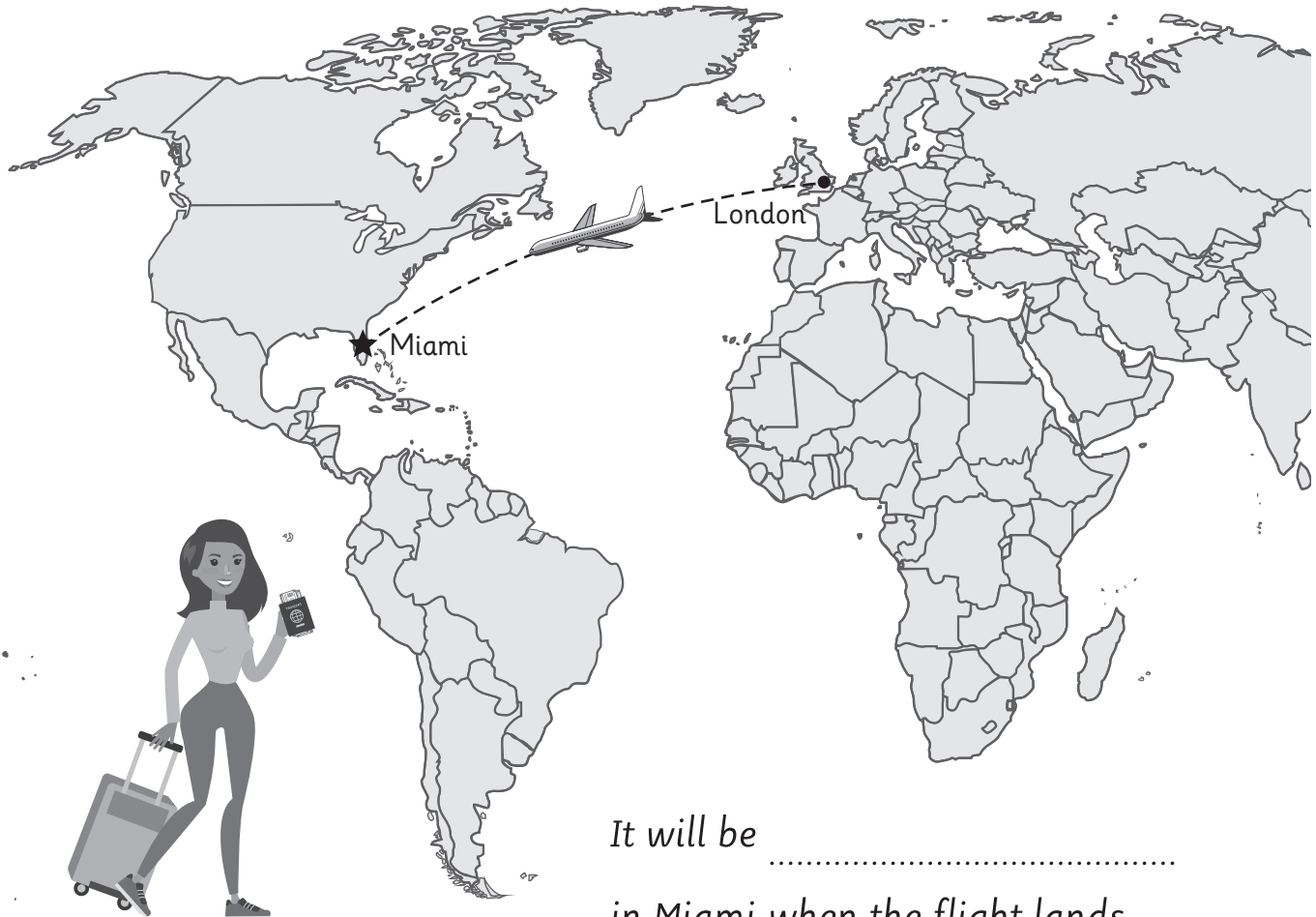
Tokyo

New York

You can use the time zone map in the Study Book for help. You can also use an atlas to help you find out which countries these cities are in if you're not sure.

4. Noa is flying from London in the UK to Miami in Florida. Her flight takes off at 2 pm and takes 10 hours. What time will it be in Miami when she lands?

Look at the time zone map in the Study Book again for help.



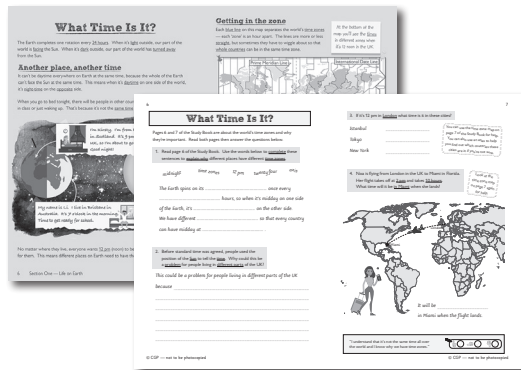
It will be
in Miami when the flight lands.

"I understand that it's not the same time all over the world and I know why we have time zones."



KS2 Geography: What Time Is It?

Study Book



Activity Book

National Curriculum Aims

- Identify the position and significance of the Prime Meridian Line and Greenwich Mean Time.
- Understand the significance of time zones.
- Understand that day and night are a result of the Earth's rotation.

Introduction

Before Greenwich Mean Time was established, settlements across the UK used sundials to determine the time. Slight differences and inaccuracies across the UK meant that no two places used exactly the same time. When people began travelling by rail, these slight differences made it difficult to make an accurate timetable. In 1840, Railway time was introduced. Most railway companies used GMT as Railway time, but it wasn't until 1880 that GMT was adopted as standard time in the UK.

This topic introduces pupils to time zones and standardised time and explains why we need them. Once pupils have read the pages from the Study Book, ask them if they have ever been abroad on holiday. If so, can they find where they went on the world map? Is it in a different time zone? Do they remember noticing the time difference? (They might have had to put their watches forward or remember having jet lag.)

Answers to Activity Book Questions

1. *The Earth spins on its axis once every twenty-four hours, so when it's midday on one side of the Earth, it's midnight on the other side. We have different time zones so that every country can have midday at 12 pm.*
2. Pupils should recognise that different places in UK will have been using slightly different times. This was a problem when people began to travel more, particularly by train, and the time wasn't the same everywhere.
3. Istanbul: 3 pm (+ 3 hours), Tokyo: 9 pm (+ 9 hours), New York: 7 am (– 5 hours)
4. *It will be 7 pm in Miami when the flight lands.*

Extra Activities

- Get pupils to make clocks to display in class that show what the time is in different cities or countries when it's 12 pm in London/the UK.
- Get pupils to cut out an image of the world's time zones (as on the example page from the Study Book) and attempt to wrap it around a small ball. Alternatively, they could look at a globe with time zones marked on it. They could then see how the zones apply to the spherical nature of the Earth.
- Using a football (the Sun), a tennis ball (the Earth) and a torch (the light from the Sun), ask pupils to explain to their peers how day and night occur. Higher level pupils could attempt to explain how the Earth's tilt results in the seasons.
- Ask pupils to imagine that they are trying to set up a group video call which must include them, as well as someone living in New York, and someone in Beijing. Ask them to work out what time they should organise the call to give them the best chance of everyone being awake. If they complete this, get them to write their own questions of a similar type and use them to test each other's understanding.

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