



Vocabulary and definitions

The Invisible Lines (Grid System)

Lines of latitude relate to the horizontal, parallel lines that circle the Earth. They tell you how far **North** or **South** you are in the world.

Lines of longitude relate to the vertical lines that run from the very top of the Earth to the very bottom - they intersect at both Poles: North and South. They help you find out how far East or West you are.

A **horizontal** line is a flat line that goes from left to right. (Think of the **horizon** where the sun sets.)

A **vertical** line is a line that stands straight up and down, like a flagpole.

Splitting the World (Hemispheres)

The **Equator** is an invisible belt around the middle of the Earth. It's the hottest part of the world.

The **Northern Hemisphere** is everything **above** the Equator (where the North Pole is).

The **Southern Hemisphere** is everything **below** the Equator (where the South Pole is).

The main divide line that separates the **Eastern** and **Western Hemispheres**, cutting **Earth** into two halves, is the **Prime Meridian**, which is the line of **0° longitude**. Everything to the right of the Prime Meridian from **0° to 180° longitude** is the **Eastern Hemisphere**, and everything to the left of the Prime Meridian from **0° to 180° longitude** is the **Western Hemisphere**.

Special Circles and Tropics

The **Arctic Circle** is the very cold area right at the top of the Northern Hemisphere.

The **Antarctic Circle** is a very cold area located right at the bottom of the Southern Hemisphere.

The **Tropics of Cancer** and the **Tropics of Capricorn** are two special lines of latitude: the **Tropics of Cancer** is located above the **Equator** and the **Tropics of Capricorn** is located below the **Equator** where the sun shines directly overhead. The area between the two lines is called **The Tropics**, and it's where rainforests can be found.

Keeping Track of Time

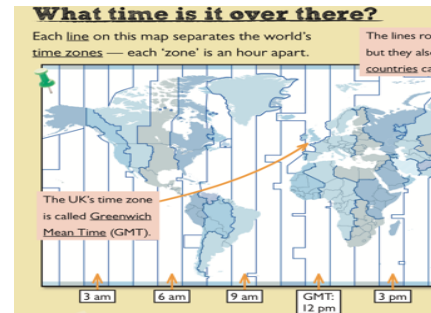
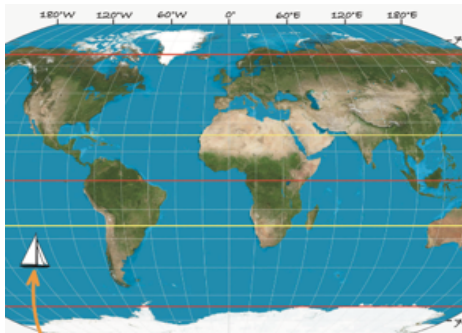
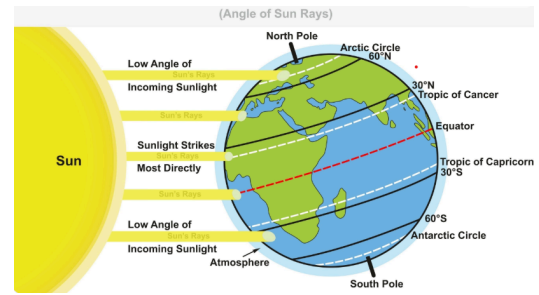
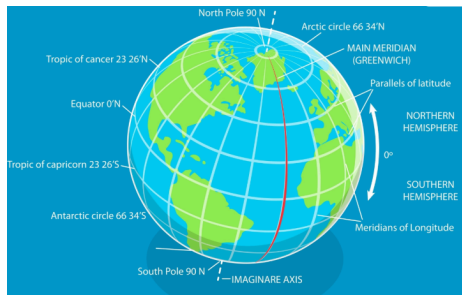
Earth is divided into **24 time zones** because as the Earth spins, the sun hits different places at different times.

Meridian is the technical word for a line of longitude.

Greenwich Mean Time (GMT) is the *starting line* for time. It's named after a place in London called Greenwich. Every other time zone in the world is measured by how many hours ahead or behind GMT they are.

Analogue time is displayed on a clock with a round face and moving hands.

Digital time is displayed on a clock using only numbers - it does not have moving hands.



Key Substantive Knowledge: Navigation

I know the position and significance of lines of latitude and longitude, including the position of special lines: the Equator **0° latitude**, Tropic of Capricorn, **23.5°N**, the Tropic of Cancer, **23.5°S** and the Prime Meridian, **0° longitude**.

I can describe the climate in the tropics: the tropics are warm all year, averaging 25 to 28°C. This is because the tropics get more exposure to the sun. Because the tropics experience high levels of sunshine, they only experience two seasons: **the wet season** and **the dry season**. The amount of rain can vary greatly from one area of the tropics to another. Some areas, like parts of the Amazon Basin in South America, get almost 3 meters of rain per year whereas other areas in the tropics have a drier climate such as the Sahara Desert in northern Africa, which only gets 2-10 centimetres of rain per year.

I understand the Earth is a sphere that rotates 360° on its axis every 24 hours. Because of this, Earth is divided into **24 time zones**. **Each time zone represents 15° of that rotation ($360^\circ \div 24 = 15^\circ$) which equals one hour of time.** (Links to science)

I know that some larger countries have **more than one time zone**. I understand that some **time zone lines do not necessarily follow the exact line of longitude** due to country boundaries; this also ensures that for a smaller country, the entire country has the same time zone.

I know **each small interval on an analogue clock represents one minute** and that there are **60 seconds in one minute** and **60 minutes in one hour**. I know there are **24 hours in a day** and that **Earth takes 24 hours to complete one full spin on its axis**. I know there are **seven days in one week** and there are **52 weeks in a year**. (Link to maths and science)

Key Disciplinary Knowledge

I can record the location of a country, quoting lines of latitude and longitude.

I can use **Greenwich Mean Time (GMT)** to calculate the time difference between different countries.

I can read, write and convert time between analogue and digital 12 and 24 hour clocks.

I know when to use **am** and **pm** when using a 12 hour clock.