



# **Invisible Lines of the Earth**

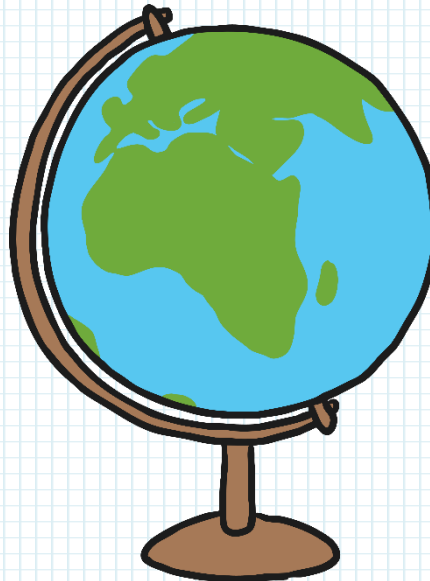
## **Lines of Longitude and Latitude**

### Resources

- 1 Orange between 3 people
- 1 black, red and blue pen
- A camera

# Learning Objective

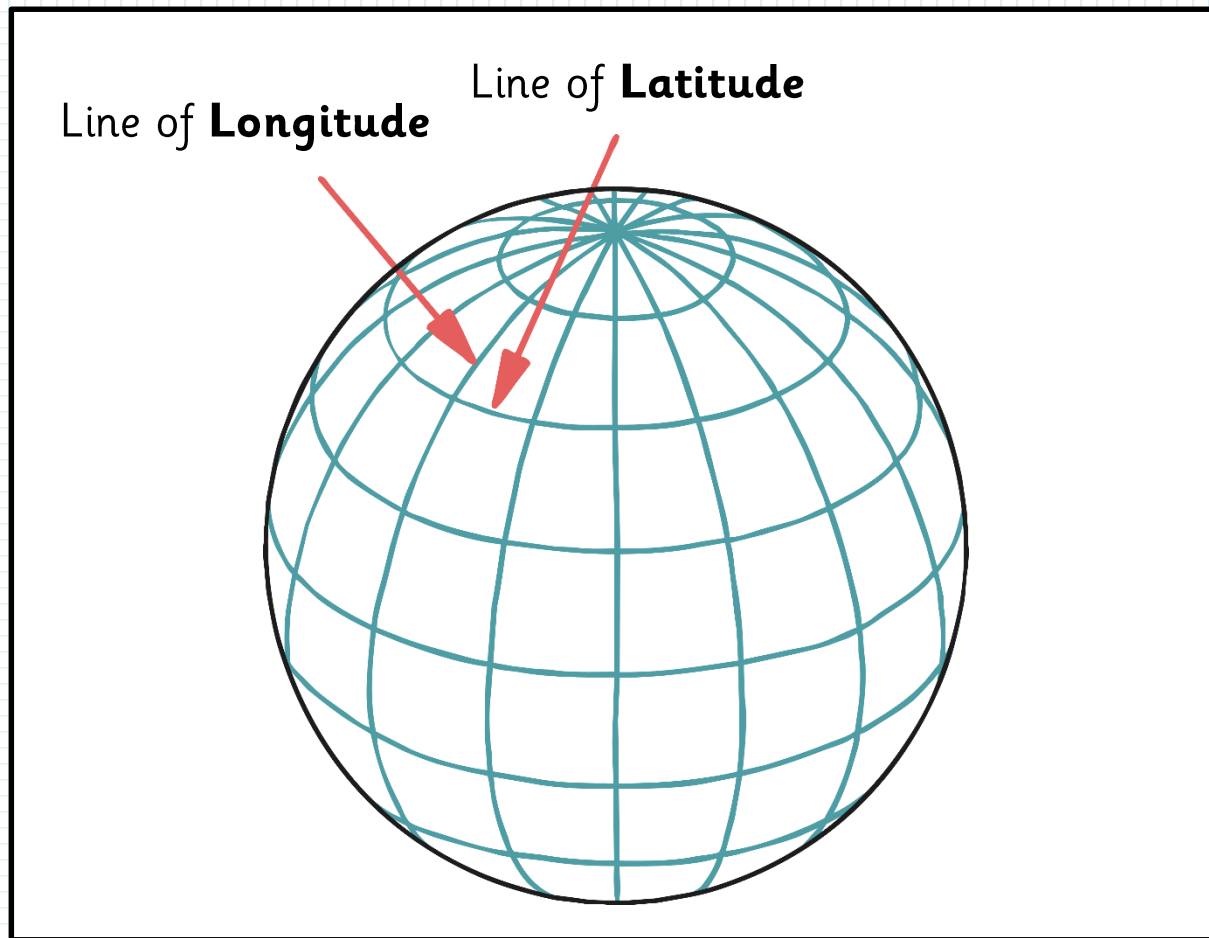
- To learn to identify the position and significance of latitude, longitude, Equator, the Northern Hemisphere, the Southern Hemisphere, the Tropics of Cancer and Capricorn, the Arctic and Antarctic Circles, the Prime/Greenwich Meridian and time zones (including day and night).



# How is it possible to find the exact location of a place on Earth?

## Latitude and Longitude

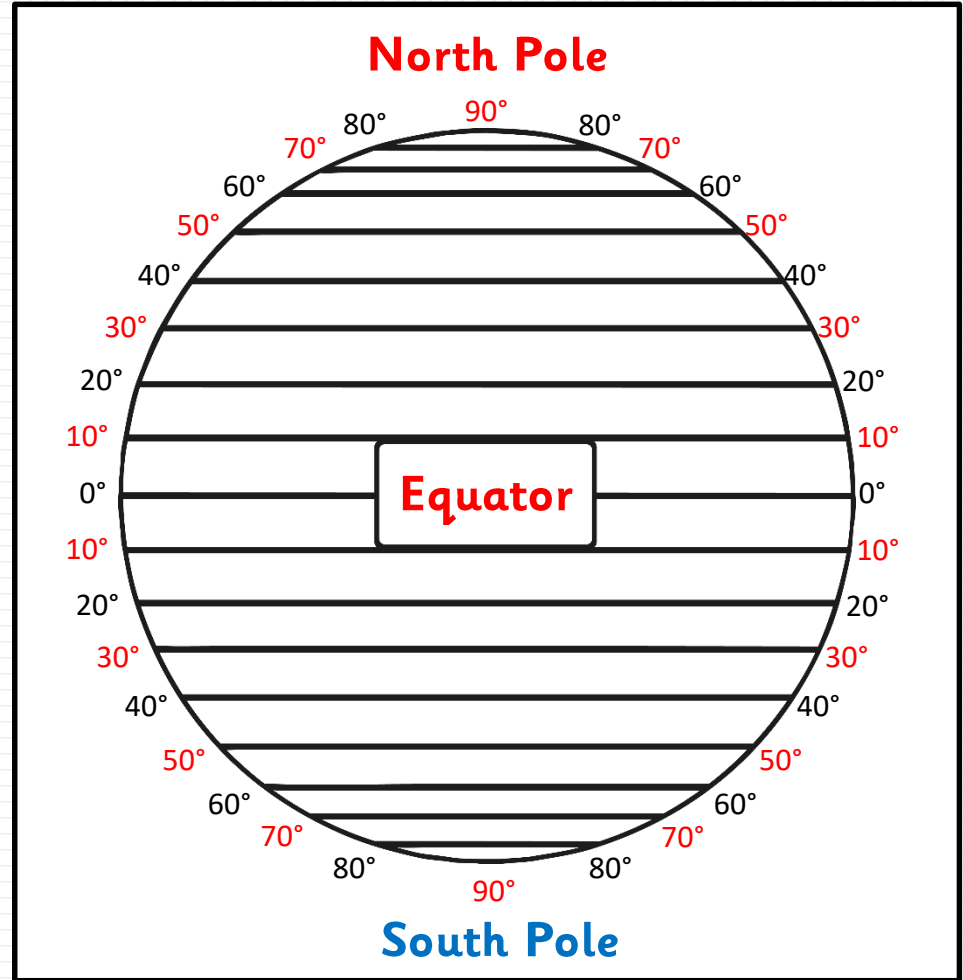
Invisible lines of latitude and longitude form a grid over the Earth. These lines help to create a co-ordinate to locate a place accurately.



# Latitude

Lines of latitude (also known as **parallels**) circle the Earth from east to west. These invisible lines are all the same distance apart. One line to the next is known as 1 degree.

- Each degree of latitude is separated into smaller divisions called minutes.
- There are 60 minutes in 1 degree.
- Each minute is divided into 60 seconds (not always included within the coordinate).
- As you can see from the diagram, the Equator lies at 0 degrees.



The Equator is an important line of latitude. It is an imaginary line half way between the North and South Poles. Countries near to the Equator are very hot as this is the Earth's closest point to the Sun.

# An Orange World

**Key**

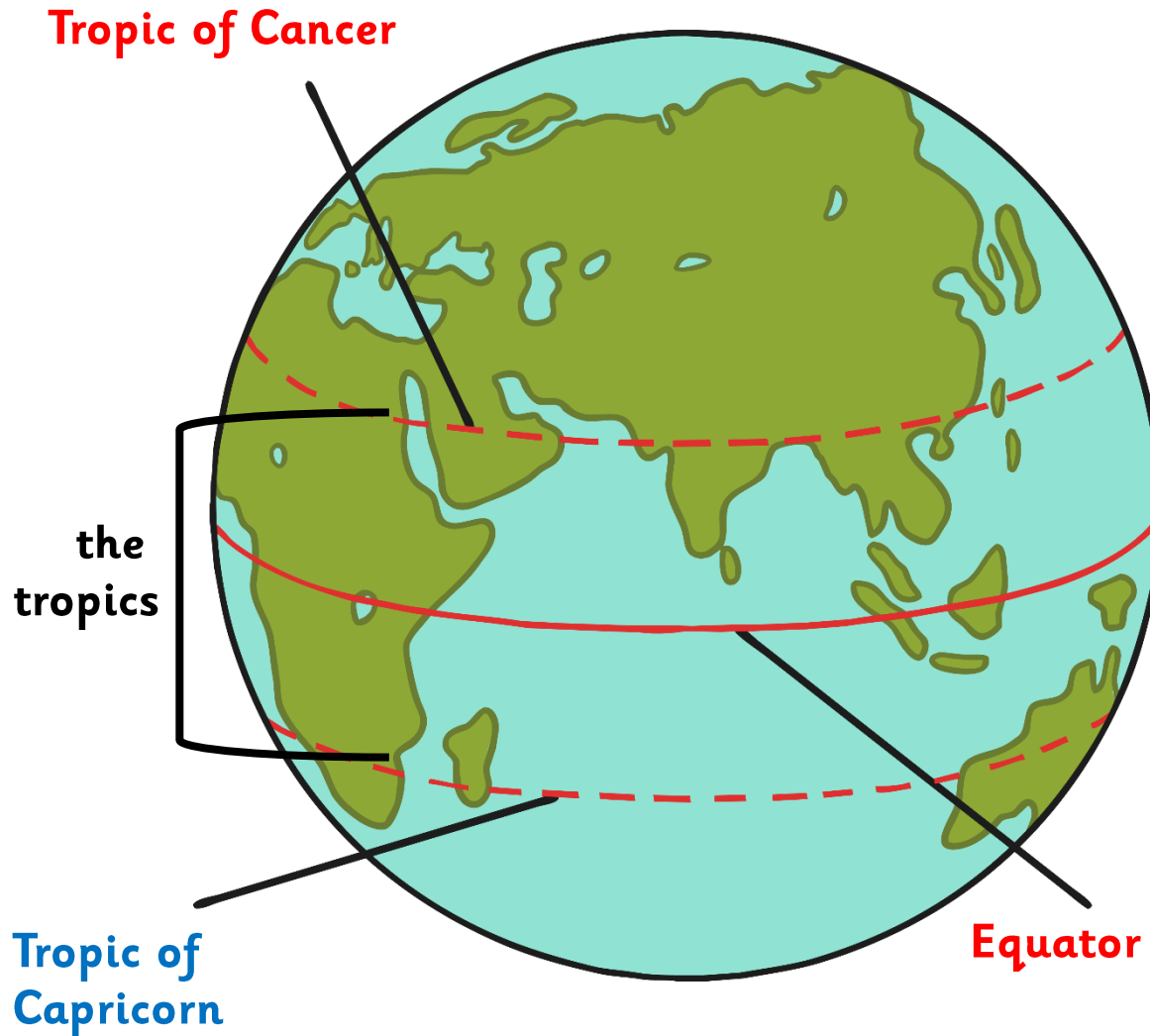


The Equator

# Other Important Lines of Latitude

The **Tropic of Cancer** lies at **23.5 degrees north** and the **Tropic of Capricorn** lies at **23.5 degrees south** of the **Equator**.

The area of the Earth which lies between both of these lines is called **the tropics**.



# An Orange World

## **Key**



The Equator

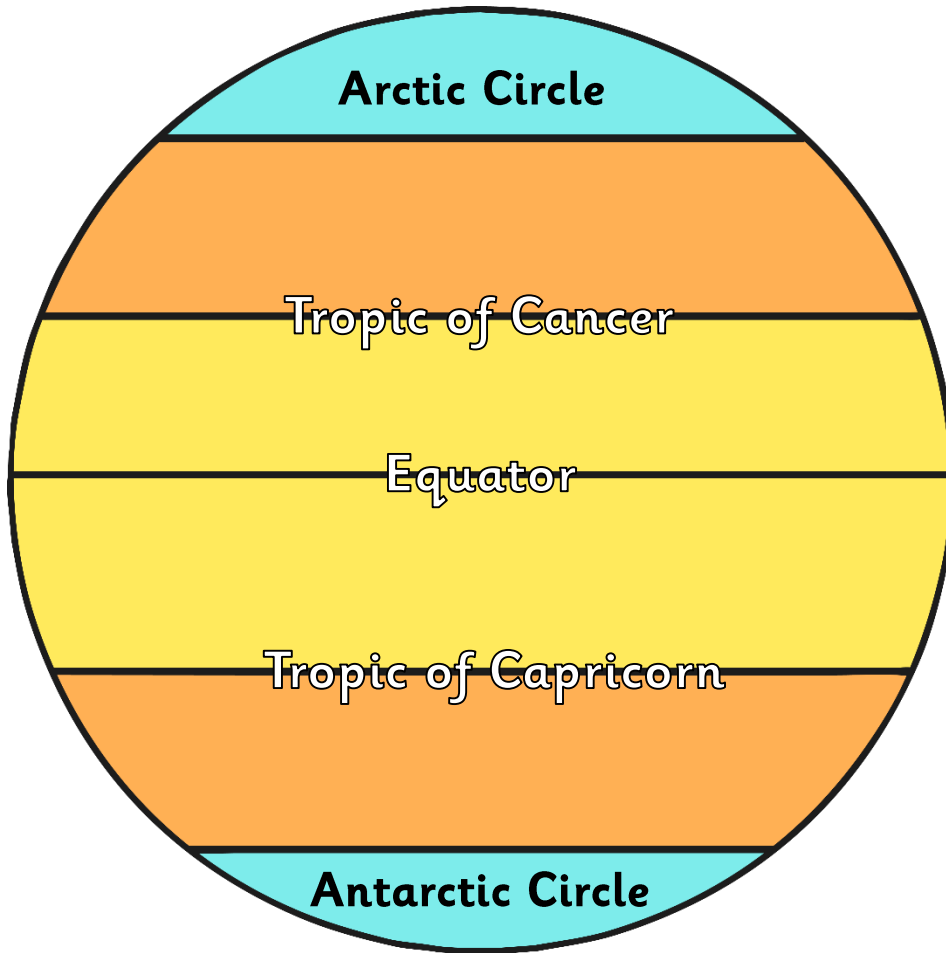


Tropic of Cancer and Tropic of Capricorn

# Other Important Lines of Latitude

The **Arctic Circle** lies at **66.5 degrees north** whilst the **Antarctic Circle** lies at **66.5 degrees south**.

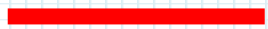
The areas in blue and orange are those which have 4 distinct seasons.





# An Orange World

## **Key**



The Equator



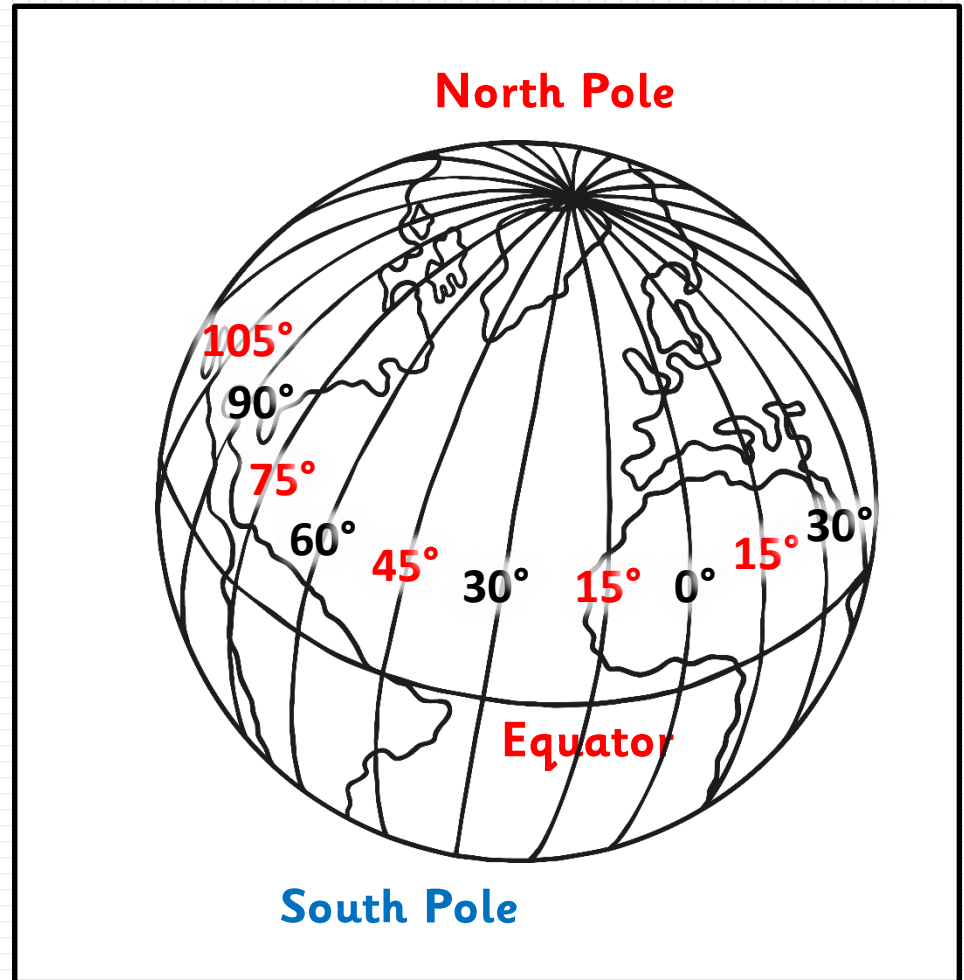
Tropic of Cancer and Tropic of Capricorn



The Arctic and Antarctic Circle

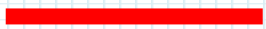
# Longitude

- These are the lines which run north and south and are known as lines of longitude or meridians of longitude. These lines are measured in the same way as the lines of latitude.
- **The Prime Meridian or Greenwich Meridian line** is a line of longitude at 0 degrees.
- It passes right through Greenwich in London.
- **International Date Line** is a line of longitude at 180 degrees.



# An Orange World

## **Key**



**The Equator**



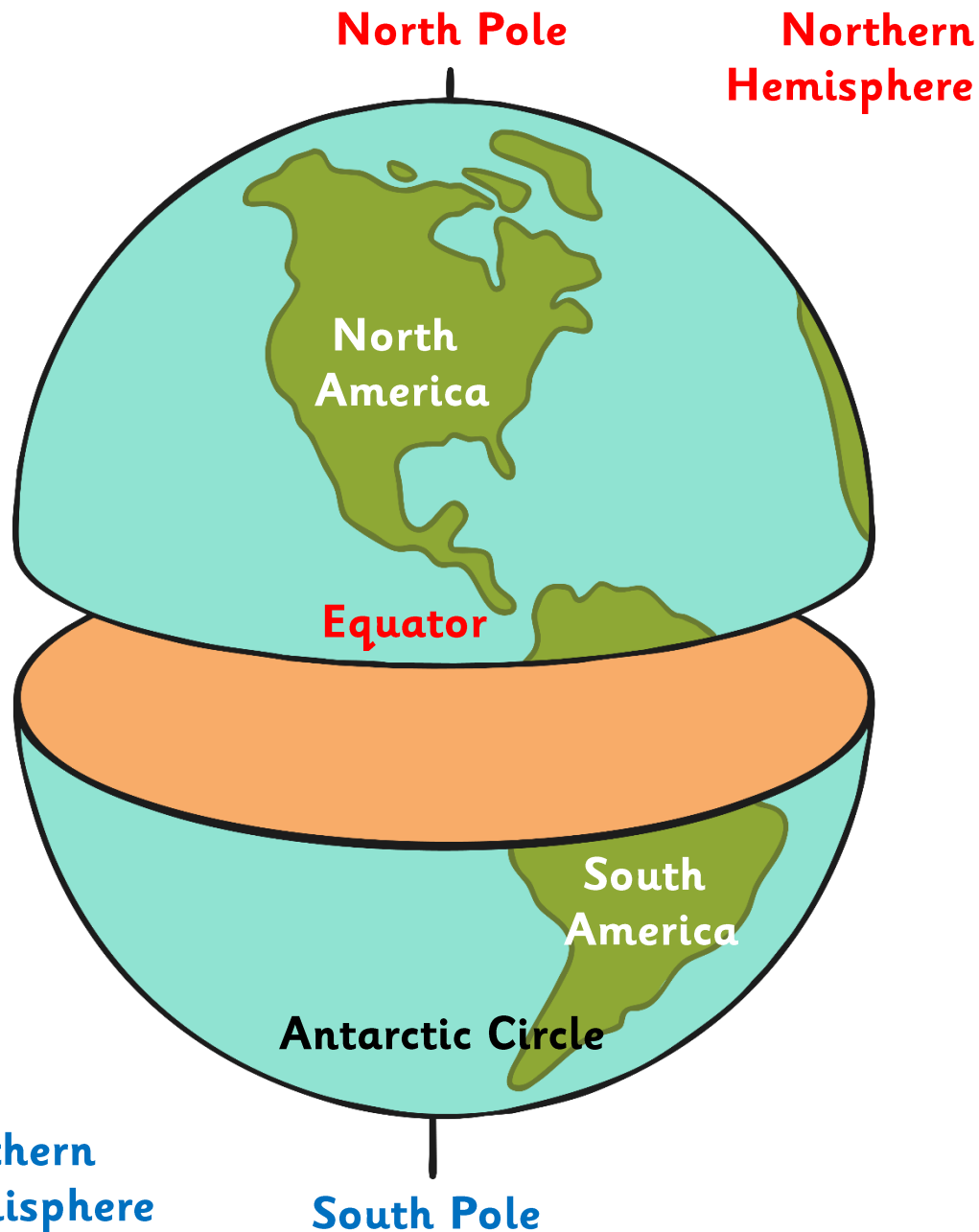
**Tropic of Cancer and Tropic of Capricorn**



**The Arctic and Antarctic Circle**



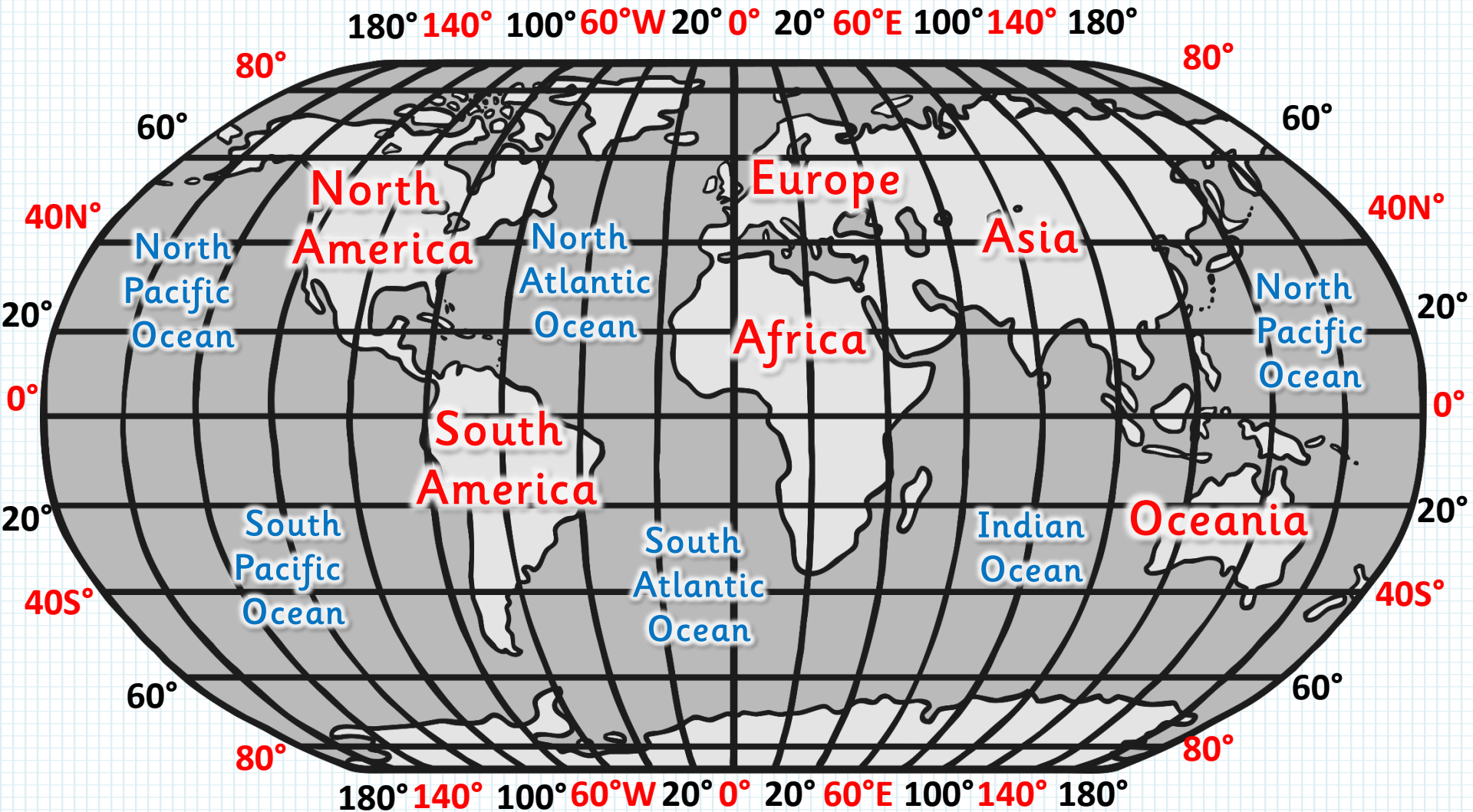
**The Prime Meridian and The  
International Date Line**



Imagine the  
Earth cut  
in half...

The **Northern Hemisphere** is  
anywhere north of the  
Equator whilst the  
**Southern Hemisphere**  
is anywhere south of  
the Equator.

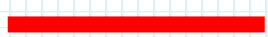
- What countries do you know in the Northern Hemisphere?



- What countries do you know in the Southern Hemisphere?

# An Orange World

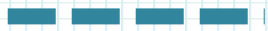
## Key



The Equator



Tropic of Cancer and Tropic of Capricorn



The Arctic and Antarctic Circle



The Prime Meridian and The  
International Date Line

NH – Northern Hemisphere

SH – Southern Hemisphere

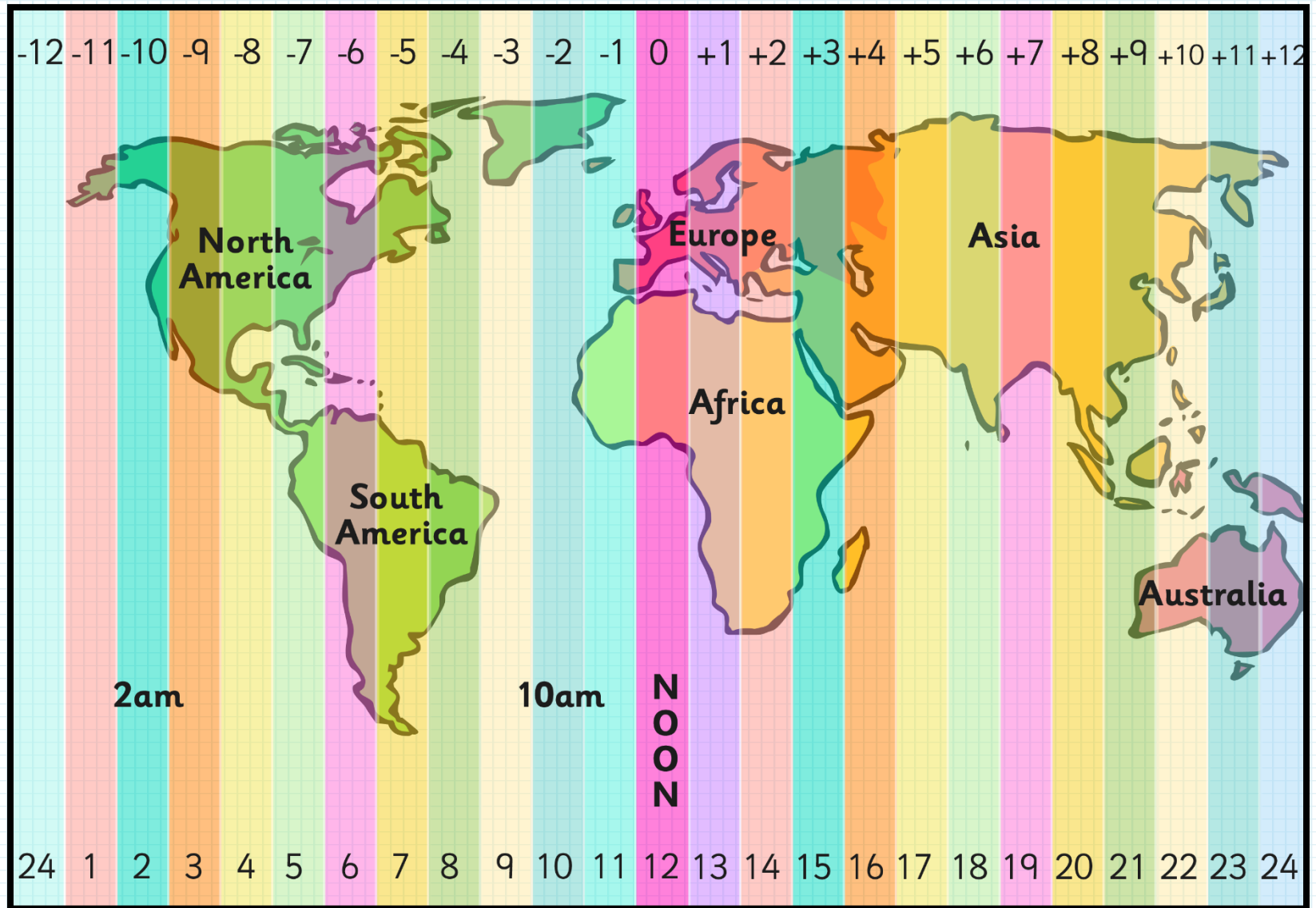
WH – Western Hemisphere

EH- Eastern Hemisphere

NP – North Pole

SP – South Pole

# World Time Zones: How it Works



# Plenary

Which are lines of latitude and which are longitude?

Prime Meridian

Tropic of Cancer

Tropic of Capricorn

Equator

Greenwich Meridian

Lines of Latitude

Lines of Longitude

