**THE GLOBE**


**A globe is a three-dimensional (3D) model of the Earth.**

**It shows the planet in a round shape, just like it actually is.**

**What a Globe Shows:**

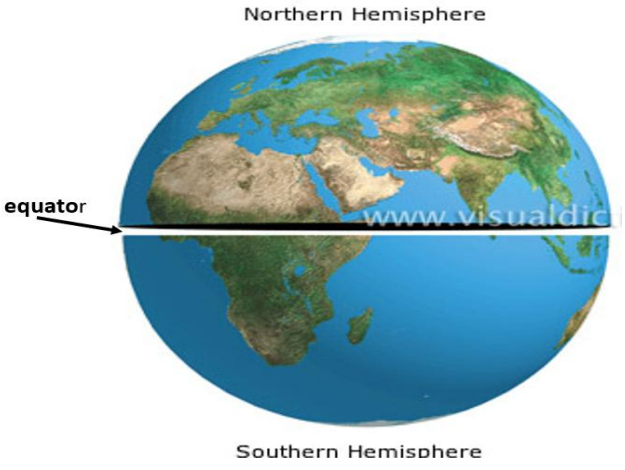
- Continents and oceans
- Countries and borders
- Lines of latitude and longitude
- The equator and poles
- Physical features (mountains, deserts, etc., depending on the type of globe

**The equator** divides the earth into **the northern and southern hemispheres**.

**The Northern Hemisphere is the top half of the Earth, above the Equator.**

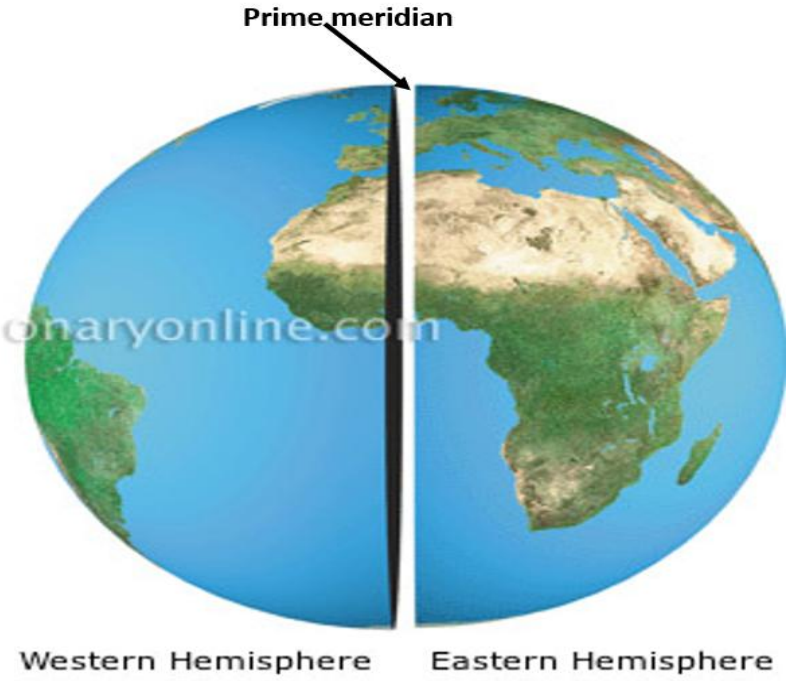
**The Southern Hemisphere is the bottom half of the Earth, below the Equator.**

**They have opposite seasons because of Earth's tilt.**



**The Eastern Hemisphere is the half of the Earth east of the Prime Meridian (0°) up to 180°.**

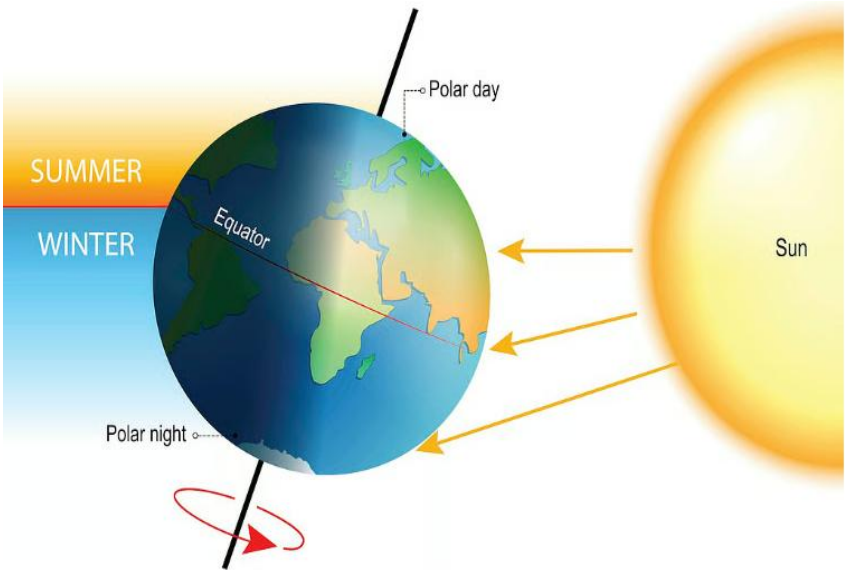
**The Western Hemisphere is the half of the Earth west of the Prime Meridian up to 180°.**




**The hemispheres have opposite seasons.**

**When one hemisphere is tilted towards the Sun, it receives more direct sunlight → Summer**

**When one hemisphere is tilted away from the Sun; it receives weak sunlight → Winter**



**The Earth's rotation**

**Rotation is the movement of the Earth spinning around its own axis.**

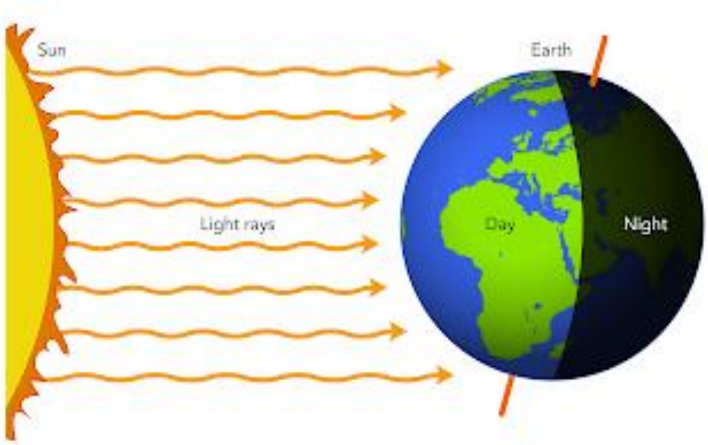
The Earth spins from west to east around an imaginary line called the axis.

One complete spin takes 24 hours, which gives us one day. This spinning movement is called rotation. Because the Earth rotates, different parts of the earth face the Sun at different times.

**Effects of Earth's Rotation**

**Rotation causes three major effects:**

**1.Day and Night**




When your part of the Earth faces the Sun → it is daytime.

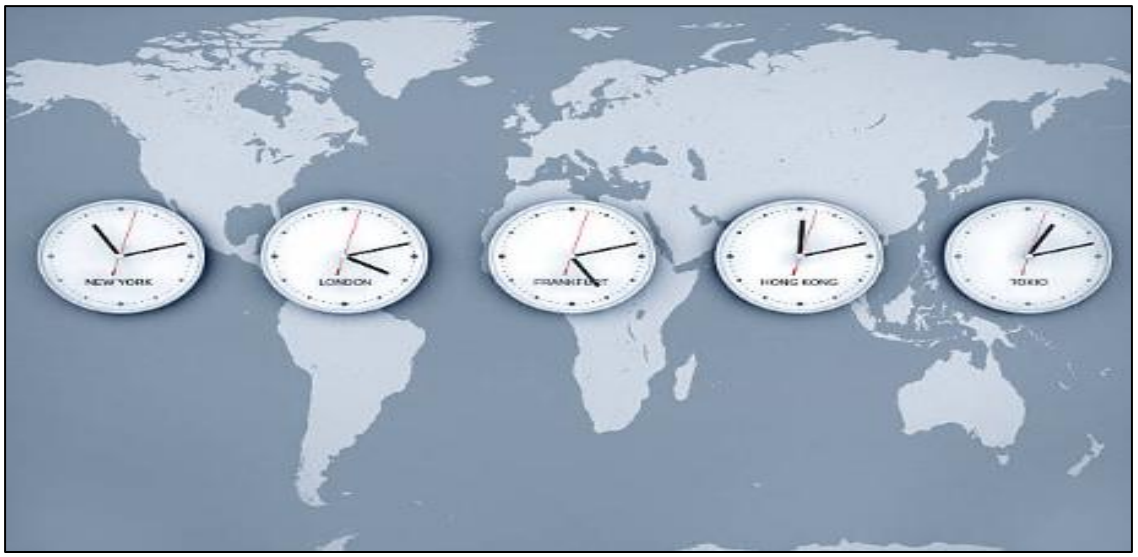
When your part of the Earth faces away from the Sun → it is night.

This is the most important effect of rotation.

**2. The Apparent Movement of the Sun**


The Sun looks like it rises in the east and sets in the west but actually, it is the Earth rotating west to east. **This is why shadows change during the day.**

## 3.Time Zones

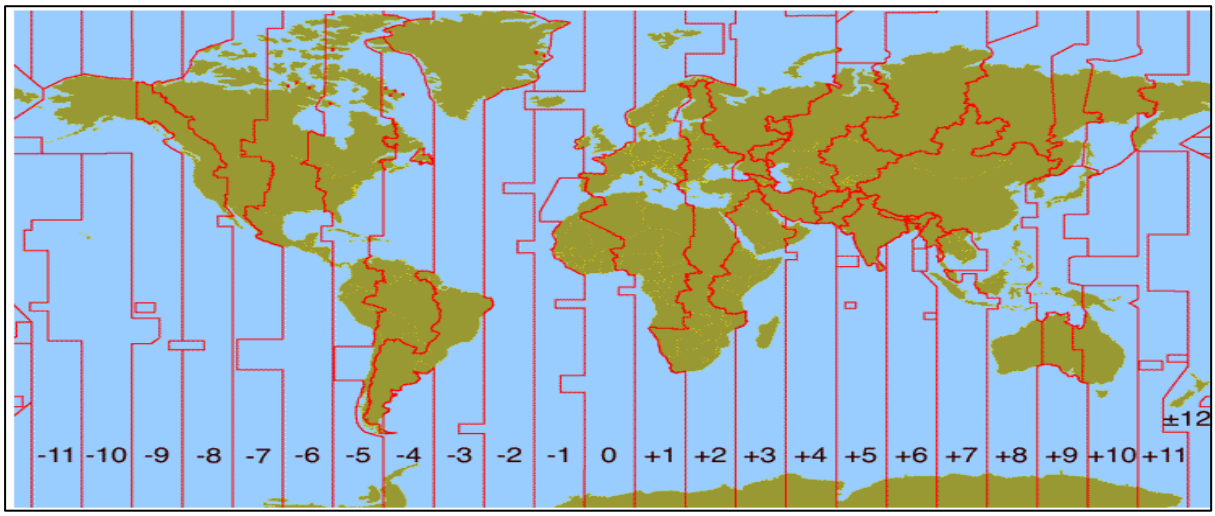



Because the Earth rotates, different places experience day and night at different times.

The world is divided into 24 time zones, one for each hour.

When it is daytime in South Africa, it may be nighttime in other parts of the world

**The Earth is divided into 24 main time zones, each generally 1 hour apart, based on Earth's rotation of 360° in 24 hours.**




**The rotation of the earth from west to east means that places across the world have different times according to the sun.**

**The earth takes 24 hours to complete one rotation on its axis.**

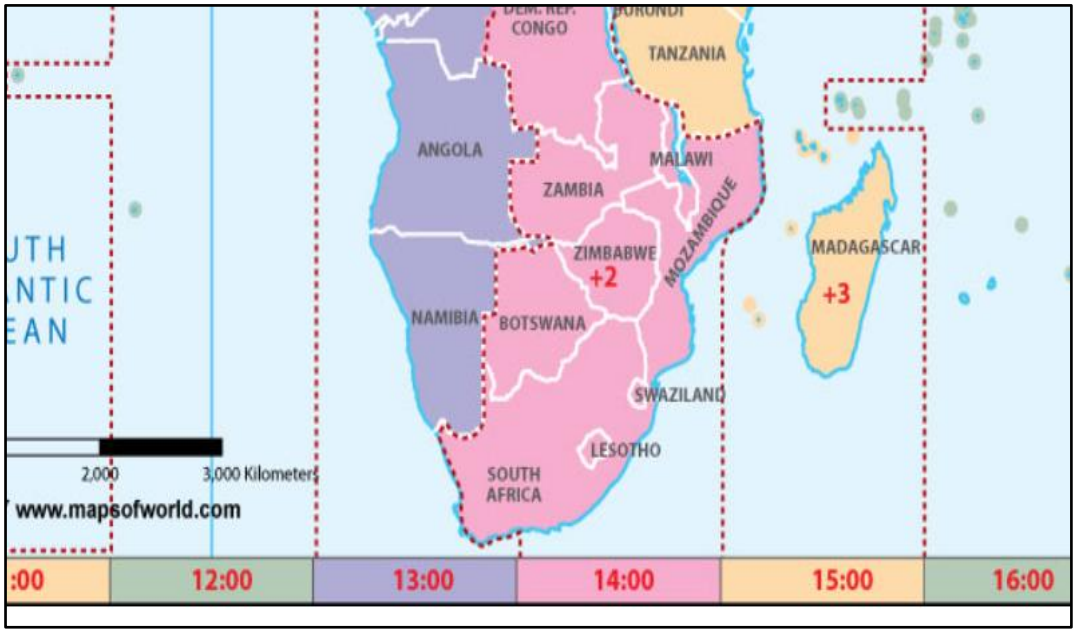
**360 degrees are covered in one rotation.**

**360° divided by 24 = 15°**

**Why Time Zones Matter**

- **International meetings**
- **Travel coordination**
- **Online events & virtual learning**
- **Broadcasting & trade**

**South African Standard Time**

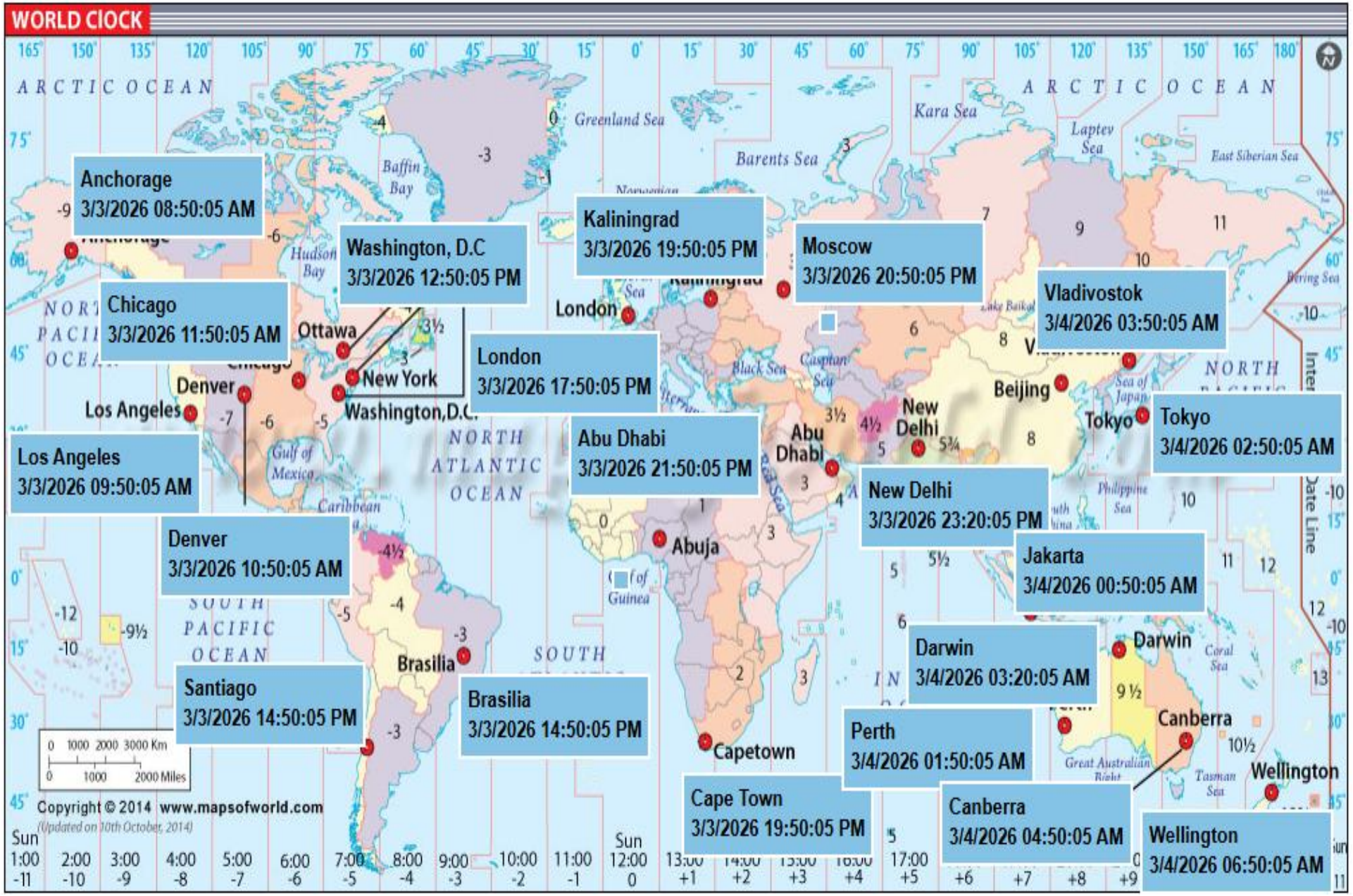



**South African Standard Time (SAST) is the official time used in South Africa.**

**The time zone in South Africa is called South African Standard Time (SAST).**

**South Africa should have two time zones as the 15° and 30° lines of longitude both pass through the country.**

**The South African government decided to adjust the time zones to fit the country's borders and use one time zone based on the 30° line of longitude.**


WORLD CLOCK
Anchorage
3/3/2026 08:50:05 AM
Chicago
3/3/2026 11:50:05 AM
Washington, D.C
3/3/2026 12:50:05 PM
Kaliningrad
3/3/2026 19:50:05 PM
Moscow
3/3/2026 20:50:05 PM
Vladivostok
3/4/2026 03:50:05 AM
London
3/3/2026 17:50:05 PM
Abu Dhabi
3/3/2026 21:50:05 PM
Tokyo
3/4/2026 02:50:05 AM
Los Angeles
3/3/2026 09:50:05 AM
Denver
3/3/2026 10:50:05 AM
New Delhi
3/3/2026 23:20:05 PM
Jakarta
3/4/2026 00:50:05 AM
Darwin
3/4/2026 03:20:05 AM
Santiago
3/3/2026 14:50:05 PM
Brasilia
3/3/2026 14:50:05 PM
Perth
3/4/2026 01:50:05 AM
Cape Town
3/3/2026 19:50:05 PM
Canberra
3/4/2026 04:50:05 AM
Wellington
3/4/2026 06:50:05 AM
ARCTIC OCEAN
NORTH ATLANTIC OCEAN
SOUTH PACIFIC OCEAN
Greenland Sea
Barents Sea
Kara Sea
Laptev Sea
East Siberian Sea
Baffin Bay
Hudson Bay
Gulf of Mexico
Caribbean
Black Sea
Caspian Sea
Sea of Japan
Philippine Sea
Coral Sea
Tasman Sea
Great Australian Bight
Bering Sea
Ottawa
New York
Washington,D.C.
Los Angeles
Denver
London
Abuja
Abu Dhabi
New Delhi
Beijing
Tokyo
Darwin
Brasilia
Capetown
Canberra
Wellington
0 1000 2000 3000 Km
0 1000 2000 Miles
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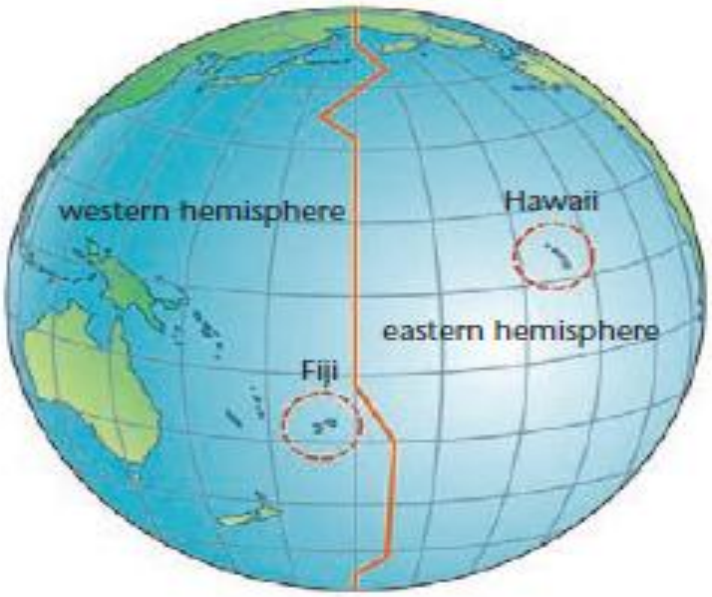
(Updated on 10th October, 2014)
Sun 1:00 -11
2:00 -10
3:00 -9
4:00 -8
5:00 -7
6:00 -6
7:00 -5
8:00 -4
9:00 -3
10:00 -2
11:00 -1
Sun 12:00 0
13:00 +1
14:00 +2
15:00 +3
16:00 +4
17:00 +5
+6
+7
+8
+9

**The International Date Line**




**The International Date Line follows the 180° line of longitude.**

This line divides the world into the eastern and western hemispheres on the Pacific Ocean part of the world.

The International Date Line is adjusted to fit in with the location and shape of countries and islands.

**Places in the eastern hemisphere are a day earlier than places in the western hemisphere**.

## ACTIVITY

## Topic: The Globe

## Multiple Choice (10 marks)

Choose the correct answer and write ONLY the letter (A–D).

1. Lines running **north–south** on the globe are called:
   A. Parallels
   B. Meridians
   C. Latitudes
   D. Poles
2. The **Equator** is a line of:
   A. Longitude
   B. Latitude
   C. Thickness
   D. Time
3. The **Prime Meridian** is also known as:
   A. 0° Latitude
   B. 180° Longitude
   C. 0° Longitude
   D. 90° South
4. Which hemisphere is **South Africa** located in?
   A. Northern
   B. Western
   C. Southern
   D. Eastern
5. Lines of latitude measure distances:
   A. East and West
   B. North and South
   C. Around the Earth
   D. Only in the Poles

1. What is the difference between latitude and longitude?

2. Why do geographers use the grid system on the globe?

## . Look at the coordinates below and answer the questions:

- Point X: **30°S, 25°E**
- Point Y: **10°N, 60°W**

a) In which hemisphere is Point X located?
b) In which hemisphere is Point Y located?
c) Which point is closer to the Equator?
d) Which point is in the Western Hemisphere?

## Activity – Interpreting a Simple Grid

**Study the map grid and answer:**

| | Longitude | | |
|---|---|---|---|
| | 10°E | 20°E | 30°E |
| Lat 10°N | A | B | C |
| 0° | D | E | F |
| 20°S | G | H | I |

1. **Give the coordinates of:**
   **a) A:**
   **b) E:**
   **c) H:**
2. **Which point lies on the Equator?**
3. **Which point lies furthest south?**