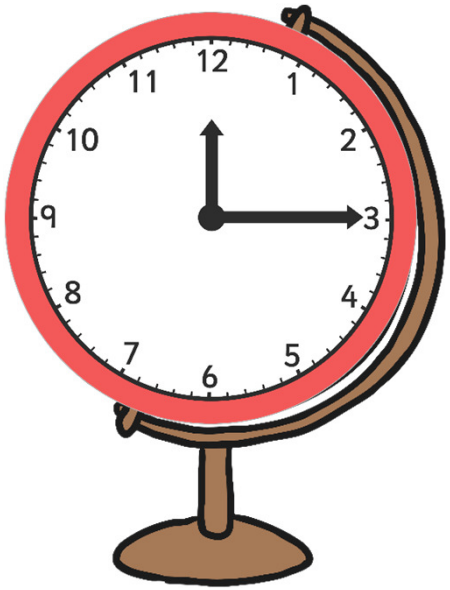

TIME ZONES OF THE WORLD
Time Zones
Coordinated Universal Time (UTC)
formerly Greenwich Mean Time (GMT)
(number indicates standard time
CANADA
UNITED STATES
MEXICO
Greenland
(DENMARK)
ICELAND
RUSSIA
CHINA
INDIA
KAZAKHSTAN
MONGOLIA
IRAN
SAUDI ARABIA
ALGERIA
LIBYA
EGYPT
SUDAN
NIGERIA
ETHIOPIA
SOUTH AFRICA
BRAZIL
ARGENTINA
COLOMBIA
PERU
CHILE
VENEZUELA
BOLIVIA
PARAGUAY
URUGUAY
AUSTRALIA
INDONESIA
JAPAN
PHILIPPINES
MALAYSIA
PAPUA NEW GUINEA
NORTH ATLANTIC OCEAN
NORTH PACIFIC OCEAN
SOUTH PACIFIC OCEAN
SOUTH ATLANTIC OCEAN
INDIAN OCEAN
ARCTIC OCEAN
Caribbean Sea
Gulf of Mexico
Mediterranean Sea
Arabian Sea
Greenland Sea
Norwegian Sea
Barents Sea
Kara Sea
Laptev Sea
East Siberian Sea
Baffin Bay
Hudson Bay
Labrador Sea
Beaufort Sea
Davis Strait
Denmark Strait
Gulf of Guinea
Philippine Sea
South China Sea
Bay of Bengal
Sea of Japan
Sea of Okhotsk
Tasman Sea
Coral Sea
Great Australian Bight
Saint Helena, Ascension, and Tristan da Cunha (U.K.)
French Southern and Antarctic Lands (FRANCE)
Falkland Islands (Islas Malvinas) (administered by U.K. claimed by ARGENTINA)
occupied by the SOVIET UNION in 1945, administered by RUSSIA, claimed by JAPAN

Time Zones



Time is different depending on where you are in the world. If it is daytime in the UK, it will be night-time in Australia.

How do time zones work?

- Midday (12 noon) is the time when the sun is highest in the sky. The sun is highest in the sky at different times in different places in the world.



How do time zones work?

- The Earth is a sphere and rotates one full turn (360 degrees) in 24 hours. 360 divided by 24 is 15 degrees so the Earth turns 15 degrees each hour.



How do time zones work?

- The Earth is a sphere and rotates one full turn (360 degrees) in 24 hours. 360 divided by 24 is 15 degrees so the Earth turns 15 degrees each hour.

- The Earth has 24 different time zones and local time depends on which time zone you are in.



How do time zones work?

- Time zones don’t quite follow the lines of longitude



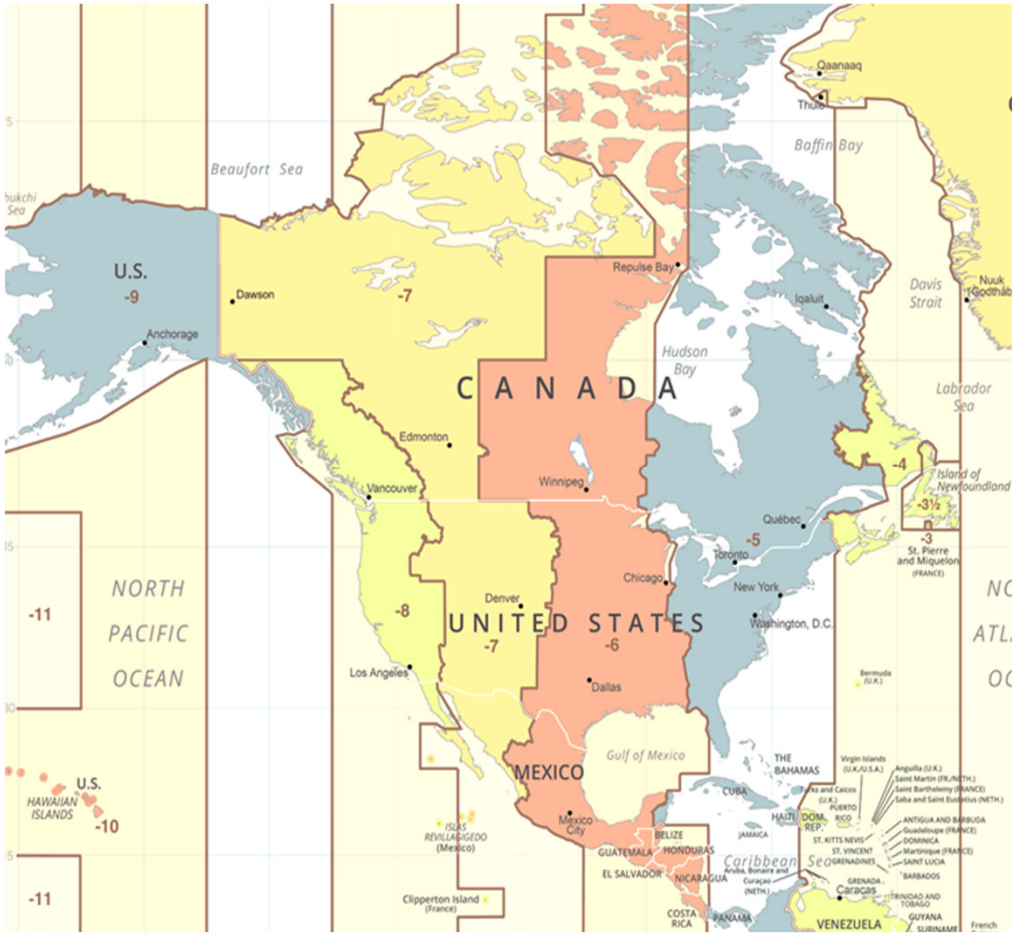
How do time zones work?

- Time zones don’t quite follow the lines of longitude
- They are a bit wonky in places to avoid time zones dividing small countries into more than one time zone.
- You can see this on the map to the right.



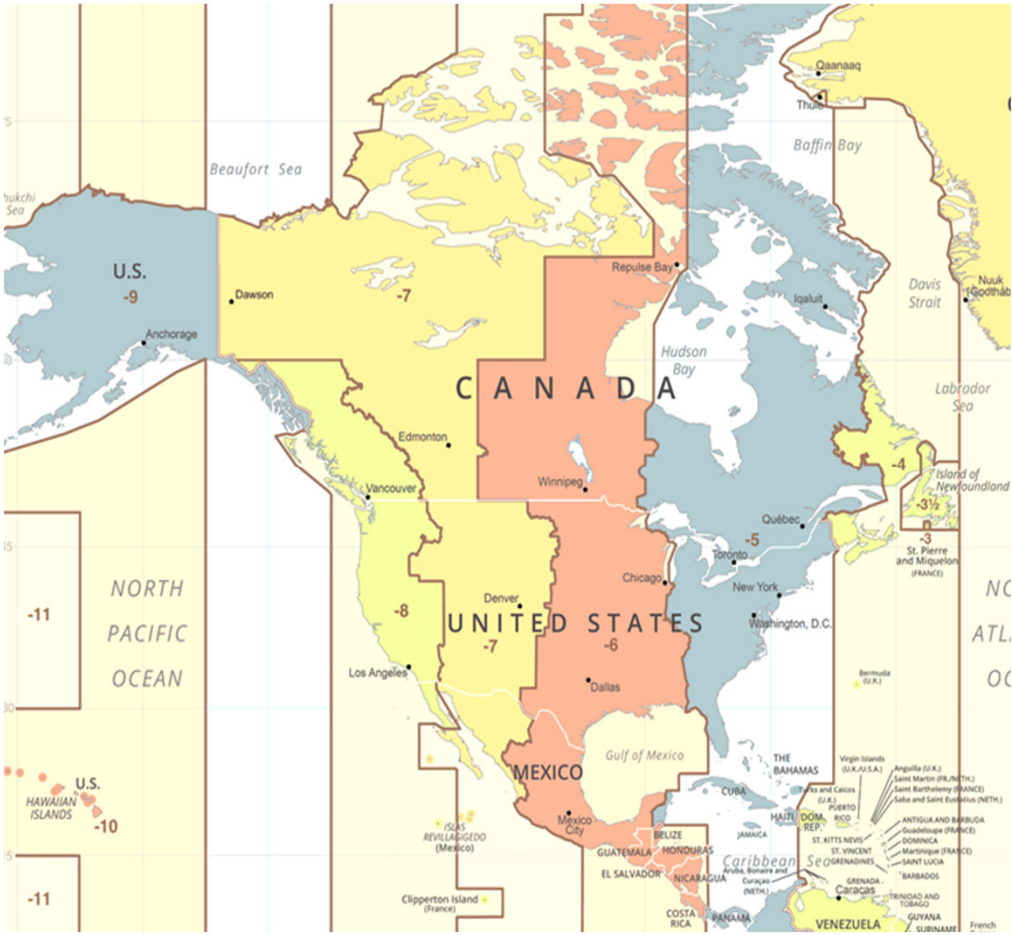
How do time zones work?

- Some large countries have several time zones.



How do time zones work?

- Some large countries have several time zones.
- USA has five time zones.
- This means it is 7am on the west coast when it is noon on the east coast.



Time Zones

All time zones are measured from a starting point at England's Greenwich Observatory in London.

This point is known as the Greenwich Meridian or the Prime Meridian (GMT).



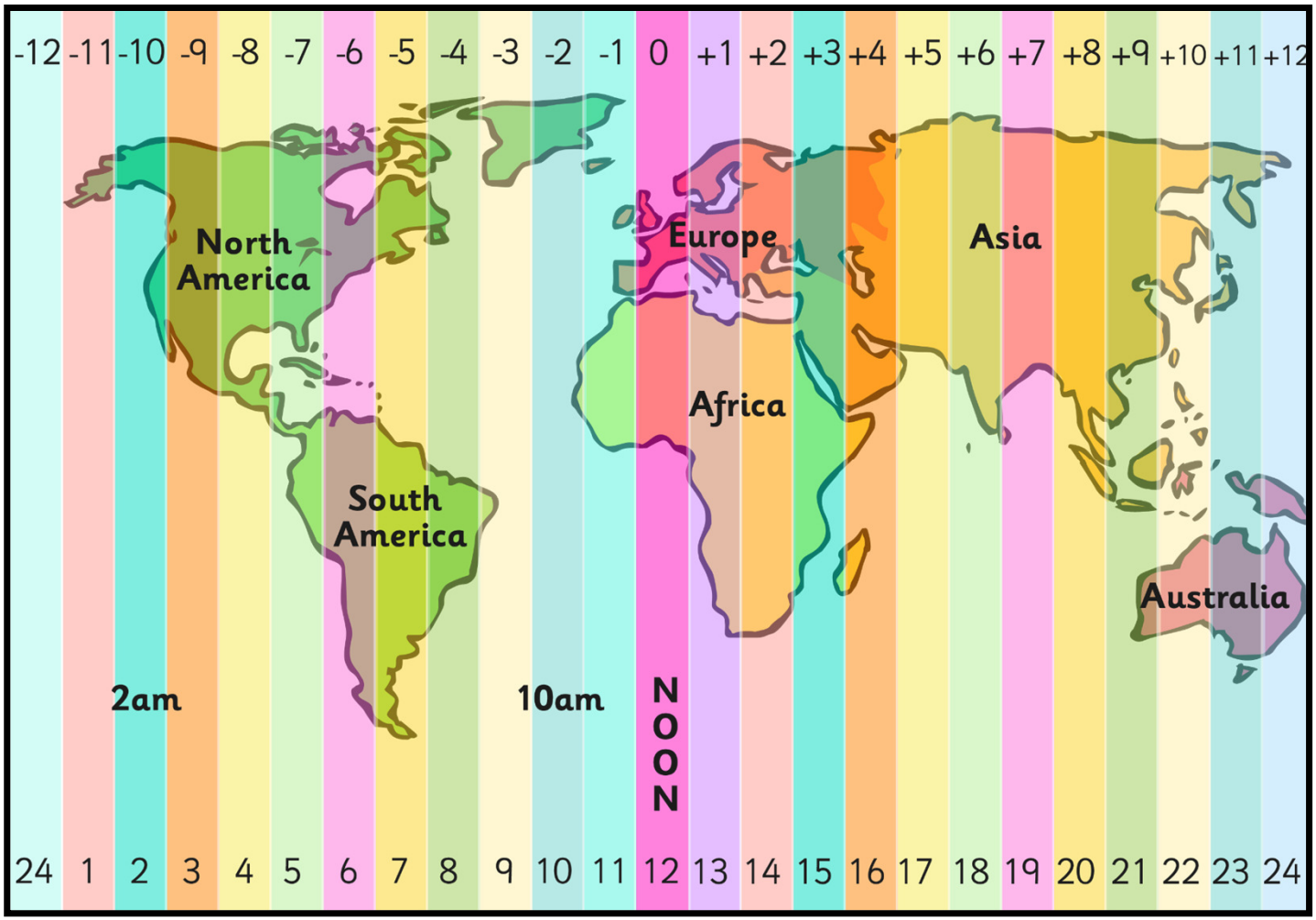
Time Zones

The Eastern time zone in the United States is known as GMT minus five hours (see map on the next slide). This means that when it is noon in the Eastern USA, it is 5pm in Greenwich.



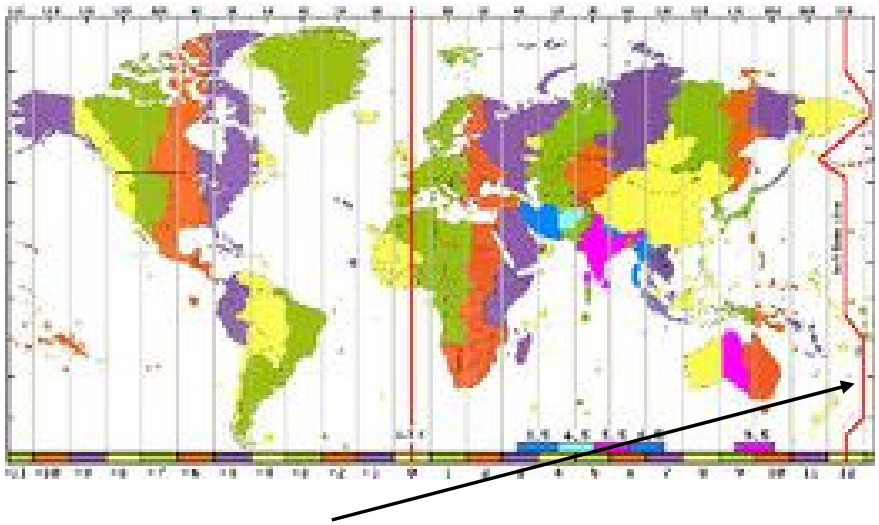
Time Zones: How does it work?

This map shows time zones with the wonky lines smoothed out to make them easier to see.



24hr time

The International Date Line (IDL)



The IDL is the jagged red line.

The IDL is an imaginary line on the surface of the Earth, going from north to south in the Pacific Ocean.

The date becomes one day later as one travels across it in a western direction, and one day earlier as one travels across it in an eastern direction.

Task 1: Can you work out the time?

1. If it is 4am in Bangkok, what time is it in Paris?
2. If it is 7am in Russia, what time is it in Portugal?
3. What is the time in Los Angeles if it is 3pm in England?
4. I live in Sydney and I want to call my son who lives in London, but I do not want to wake him before 9am his time. What is the earliest time I should call him in Sydney?
5. I live in Auckland, my daughter lives in Toronto, how long after midnight in Auckland do I have to wait until I can say ‘Happy New Year’ to her?