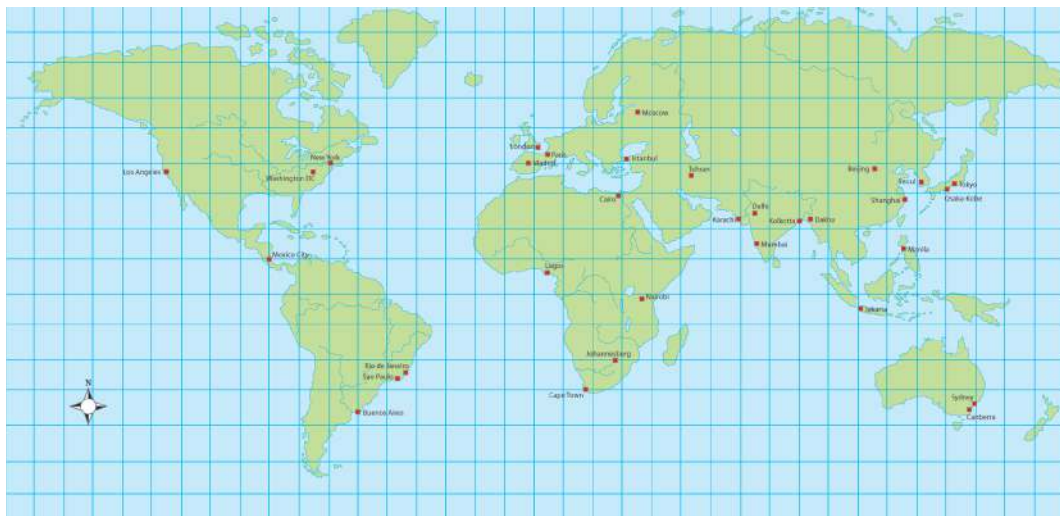


Map skills

In this module you will find answers to these key questions.

- What is latitude and longitude?
- How is the world divided into hemispheres?
- How do you use latitude and longitude to find places?
- How do you give the co-ordinates of places?
- What is scale?
- How do you use scale to measure distances?
- How do you use atlases and maps to find out information?
- Where are the world's major cities?
- How do atlases and maps help you understand what is happening in the world?



WHAT DO YOU KNOW ALREADY?

Do this activity with a partner.

- Look at the map.
 - Name the continents.
 - Name three countries in each continent.
 - Name a major city in each continent.
 - Describe where these countries are situated in the world:
 - South Africa
 - Australia
- Talk about your answers with the class.

Unit 1

Latitude and longitude

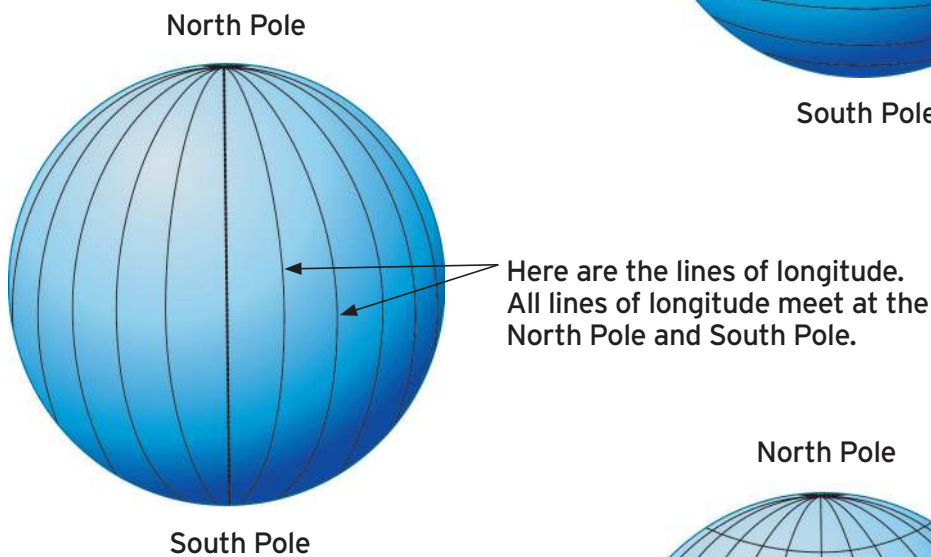
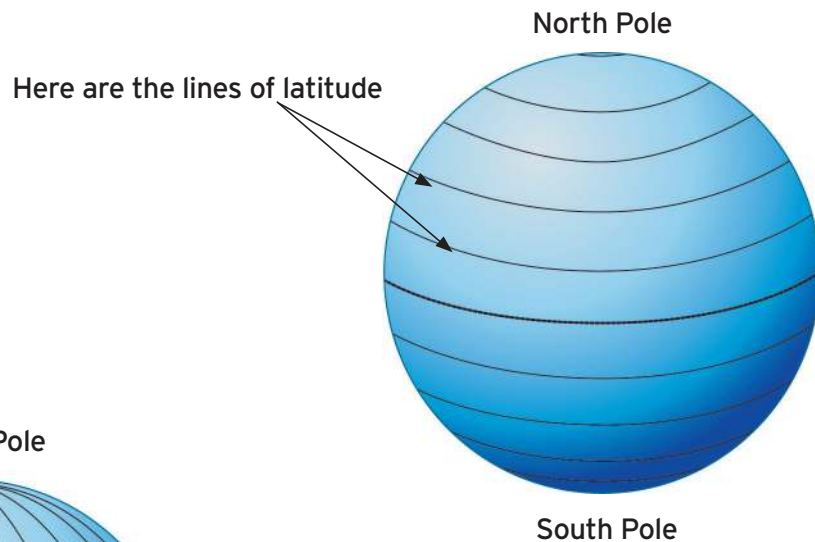


KEY QUESTION

What is latitude and longitude?

Words in **bold** are explained in the Word list at the back of the book.

The Earth is round. A model of the round Earth is called a globe. A globe has lines across it, which help you to find places. These are called **lines of latitude and longitude**. Each line is measured as a degree. The symbol for degree is $^{\circ}$.



The world is covered by a grid of lines of latitude and longitude.



FLASH FACTS >>

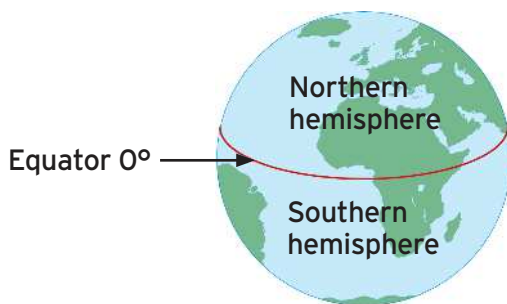
In Grade 5 you learned how to use grids on maps to find places.

Lines of **latitude** run from north to south; from pole to pole
 Lines of **longitude** run parallel to the equator above and below it

Hemispheres

The Earth's shape is called a sphere. A **hemisphere** is half a sphere. Two important lines of latitude and longitude divide the world into hemispheres: the equator and the Greenwich meridian.

Lines of latitude

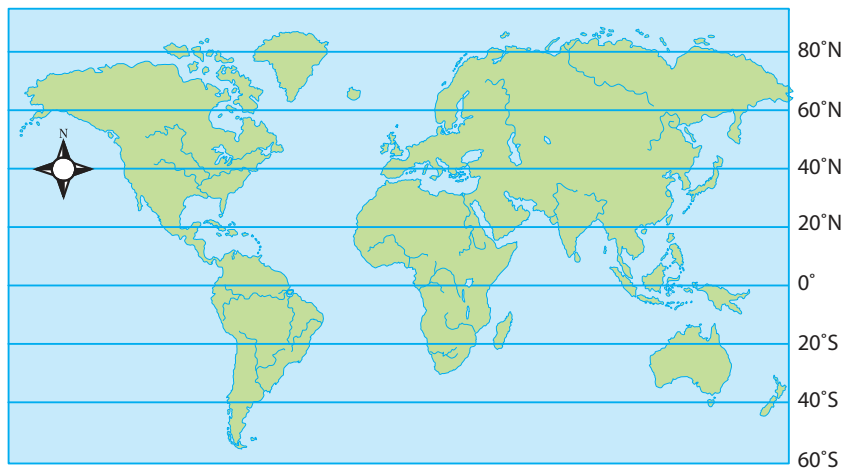
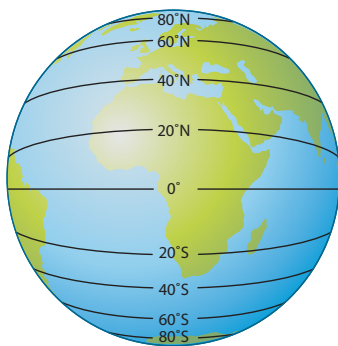


The equator is at 0° latitude.

The 0° line of latitude is called the **equator**. It divides the world into a northern hemisphere and a southern hemisphere.

Lines of **latitude** tell you how far a place is north or south of the equator. There are 181 lines of latitude in total. They are measured in degrees north or degrees south of the equator. So if a place is 25 degrees south of the equator, you write it as 25°S.

The lines of latitude go south from the equator to 90°S at the South Pole, and north from the equator to 90°N at the North Pole.



Lines of latitude on a globe and map.



Activity

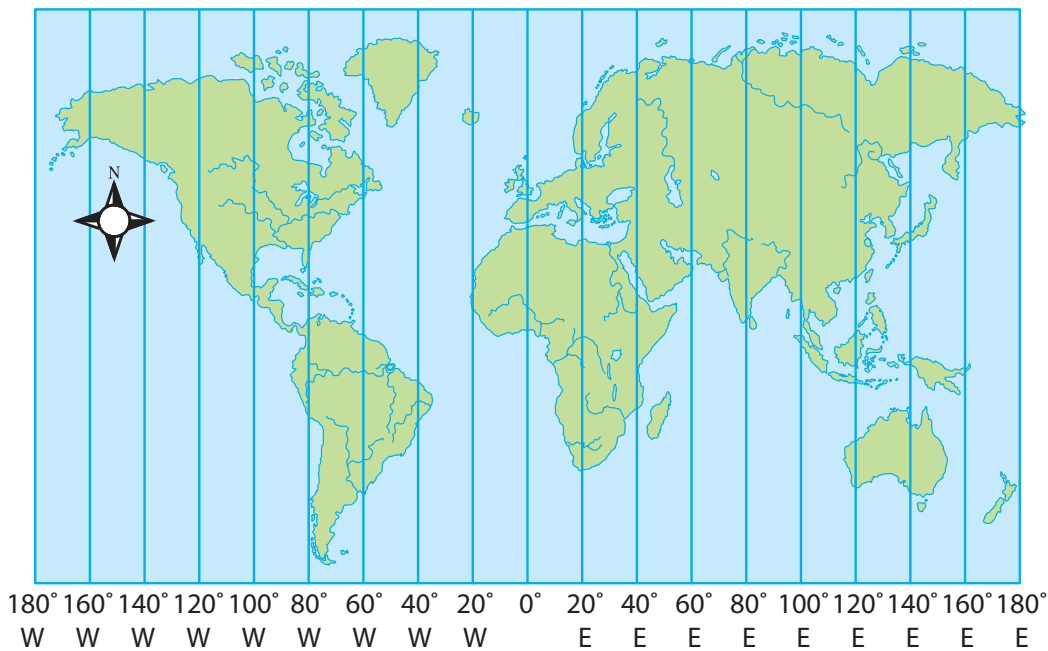
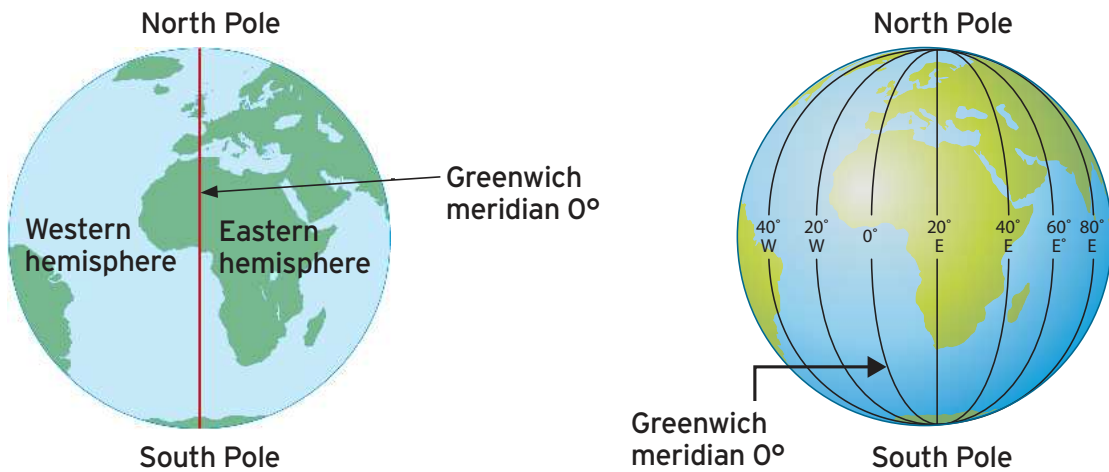
Use an atlas.

1. Find the latitude 30°S. List the countries situated on this latitude.
2. Find the latitude 30°N. List the countries situated on this latitude.

3. Find the latitude 80°N . List the countries situated on this latitude.
4. Find the latitude 23.5°N . What is this latitude called?
5. Find the latitude 23.5°S . What is this latitude called?

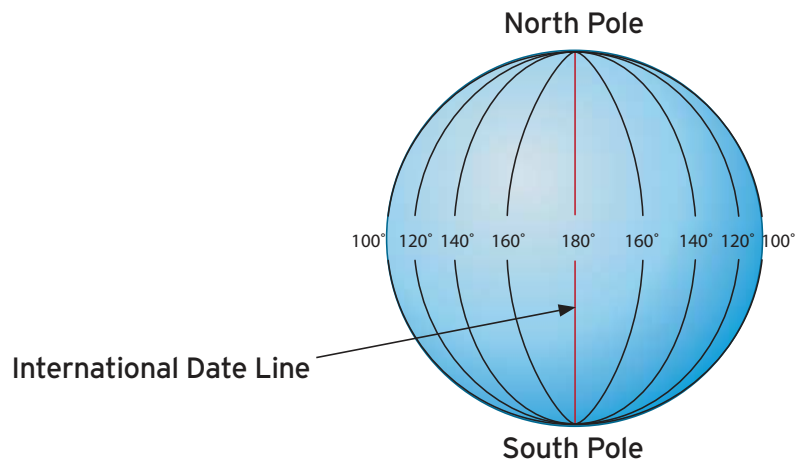
Lines of longitude

The 0° line of longitude is called the **Greenwich meridian**. It divides the world into an eastern hemisphere and a western hemisphere. There are 360 lines of longitude in total. All these lines of longitude are measured in degrees east or west of the Greenwich meridian. So if a place is 35 degrees west of the Greenwich meridian, you write it as 35°W .



The longitude line of 20°E passes through the most southern tip of Africa.

The most western longitude is 180°W . The most eastern longitude is exactly the same line, at 180°E . The line is also called the International Date Line.

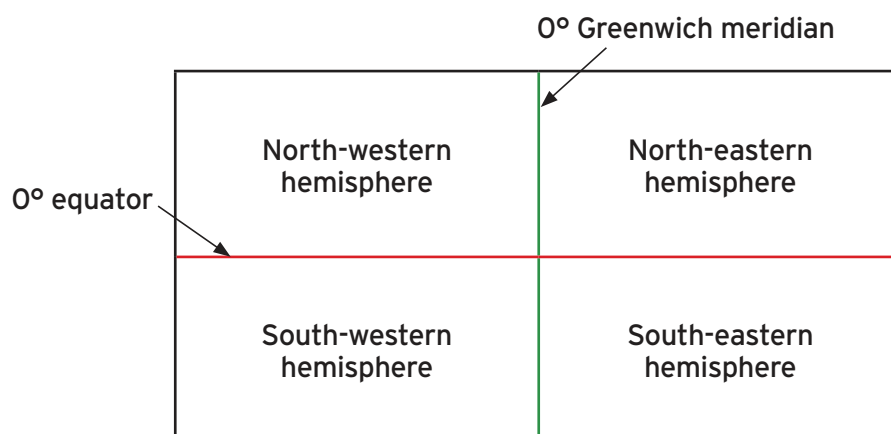


P Activity

Use an atlas.

- List all the countries situated on each of these lines of longitude. Go from north to south.
 - longitude 30°E
 - longitude 30°W
 - longitude 80°E
- Find where you live on a map of South Africa in your atlas or on your classroom wall map. Name the nearest lines of latitude and longitude.

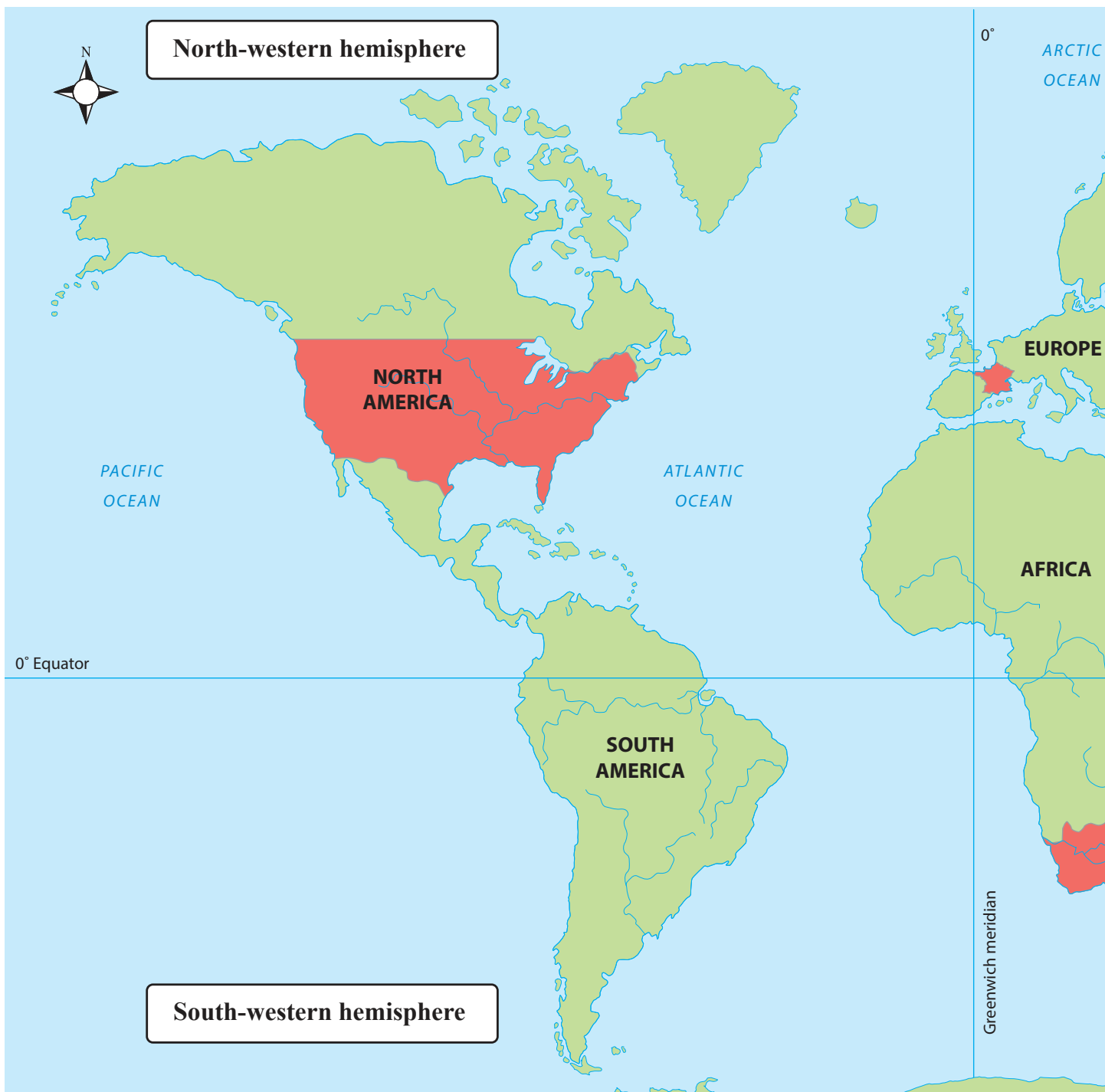
You can describe places in the world according to which hemisphere they are in.



P Activity

Use the map and an atlas for this activity.

1. Name the continents mainly in
 - a) the north-western hemisphere
 - b) the south-western hemisphere
 - c) the north-eastern hemisphere.
2. Which hemisphere (northern or southern) has the most continents?



3. In which hemispheres is Africa?
4. Complete these sentences.
 - a) South Africa is in the _____ hemisphere.
 - b) France is in the _____ hemisphere.
 - c) The USA is in the _____ hemisphere.
5. The Arctic and Antarctic are often not easy to see on world maps. In which hemisphere is the Antarctic?
6. Name three African countries in the northern hemisphere.
7. Name three African countries in the southern hemisphere.



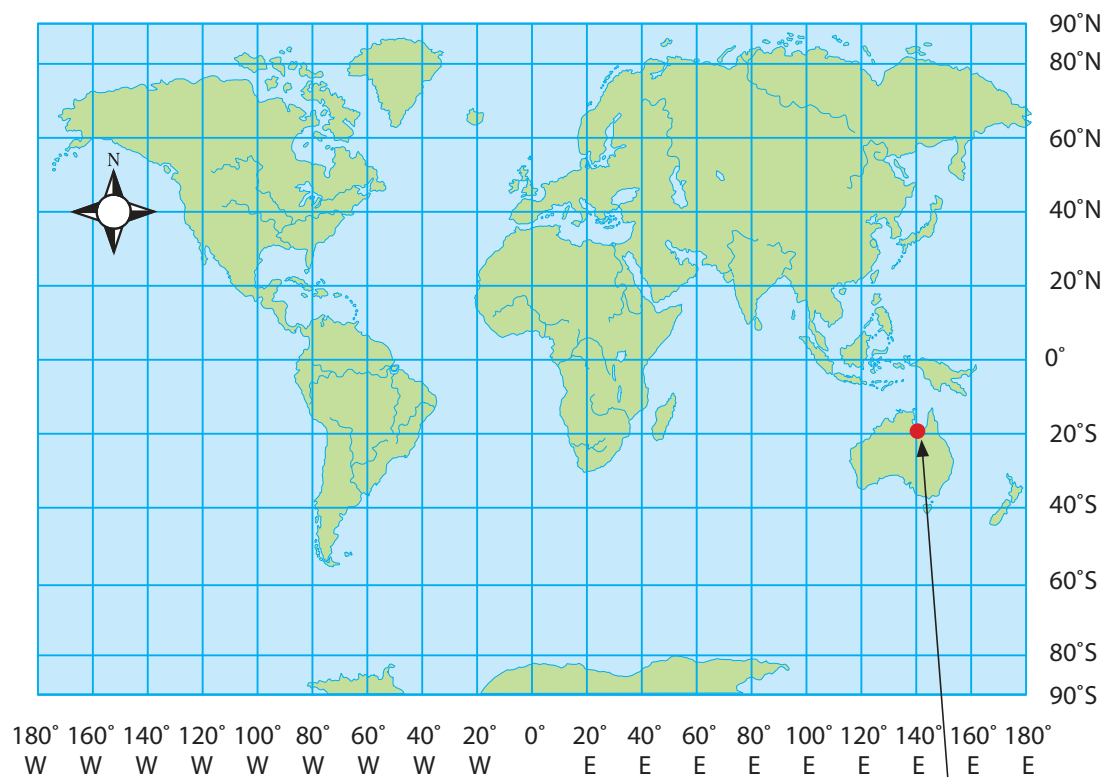
Locating places using lines of latitude and longitude

When lines of longitude and latitude are drawn together on a map, they form a grid. You use this grid to find places on a map. It would get complicated if a map showed all the lines of longitude and latitude, so most maps only show every 20 degrees.

The position of every place on Earth can be described by its latitude and longitude. Sometimes this is called the **co-ordinates** of a place.

A co-ordinate is written like this: 20°S; 140°E

- Latitude is written first, as either south or north.
- Longitude is written next, as either east or west.
- 20°S means the place is south of the equator on the 20 degrees line of latitude.
- 140°E means the place is east of the Greenwich meridian on the 140 degrees line of longitude.
- The place is at the point where the lines of 20°S and 140°E meet.



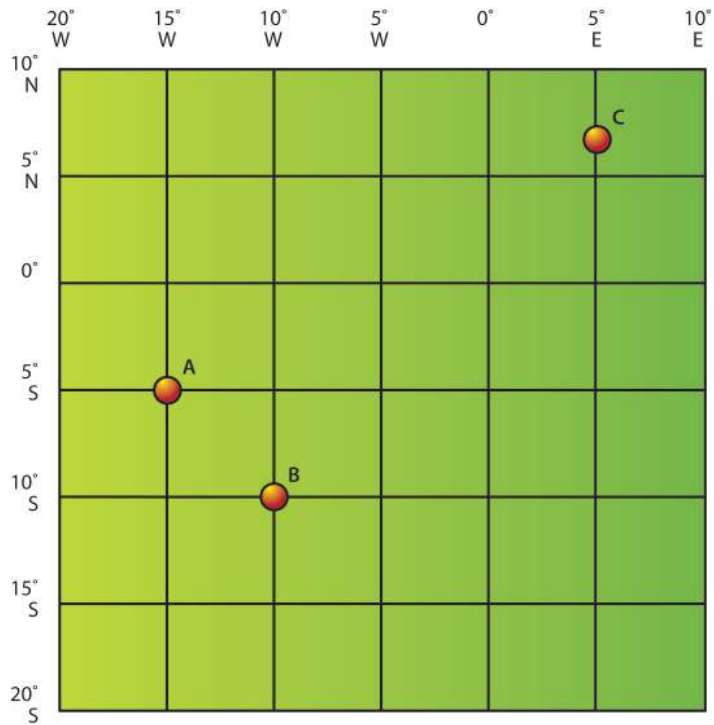
World map showing lines of longitude and latitude.

20°S; 140°E

Activity



- The grid shows the co-ordinates of three towns. Copy the grid and then answer the questions.



- Match the co-ordinates for each town.

Town	Grid reference
Town A	7°N; 5°E
Town B	5°S; 15°W
Town C	10°S; 10°W

- Label where these towns would be located on your grid:

- Town D: 5°S; 10°E
- Town E: 8°N; 15°W

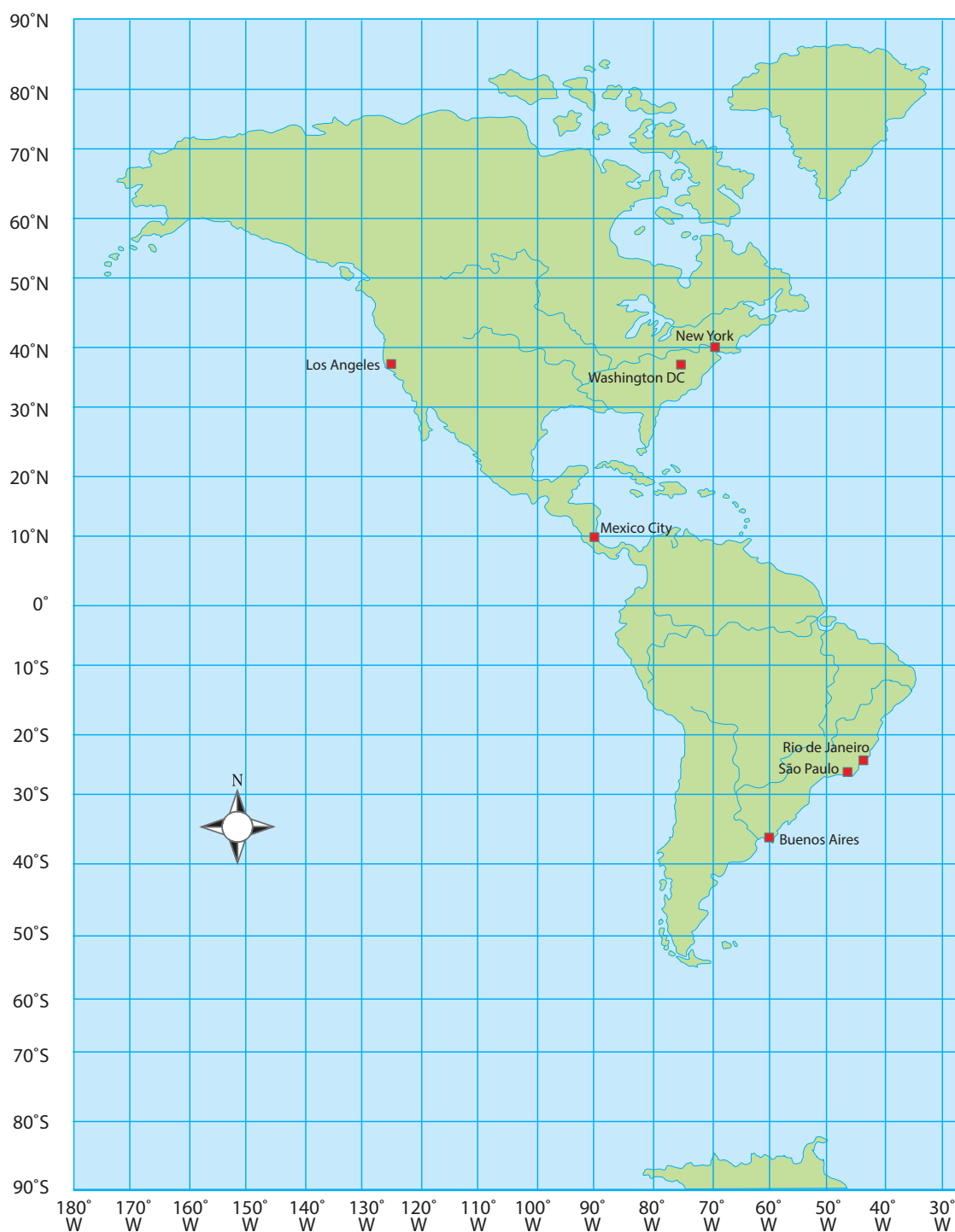
- Which towns are on the same line of latitude?
- Which two towns are on the same line of longitude?



- Write down three co-ordinates. Ask your partner to find their location on the grid.

Activity

- P** 1. Use the map. Give the co-ordinates of the following cities:
- | | |
|-------------------|------------------|
| a) London | e) Washington DC |
| b) Tokyo | f) Cairo |
| c) Rio de Janeiro | g) Moscow. |
| d) Beijing | |



This map shows the position of the world's biggest cities.
 You'll find Cape Town at 30°S; 18°E.