

# Globe

**In this lesson, we will learn about :**

- ◆ Globe — types and uses
- ◆ Latitudes and longitudes
- ◆ Grid

Earth is a unique planet. It provides habitat to human beings, plants and animals.

## Shape of the Earth

In early times it was believed that the Earth is flat in shape. Due to this reason, sailors never ventured till the coast for fear of falling off the edge of the flat surface of the Earth. Now, explorers and astronauts have confirmed that the Earth is spherical in shape.

It is slightly flat at the poles and bulges at the equator.

### Do You Know?

The Earth is the only planet to have life on it. It is also called the 'Blue Planet'.

**A globe** : Look at the picture of the globe. It is a man-made model of the Earth. Globes are of various types and sizes — big ones which cannot be carried easily, small pocket globes and globes like balloons, which can be inflated and are very handy. We can see only half the globe at a time. To see the other half, we have to turn it around. This line is called an **axis**. This is an imaginary line.

We can see the correct shapes, position and location of all the continents and oceans on the globe. We can even look for countries on the globe.



Globe — a model of the Earth.

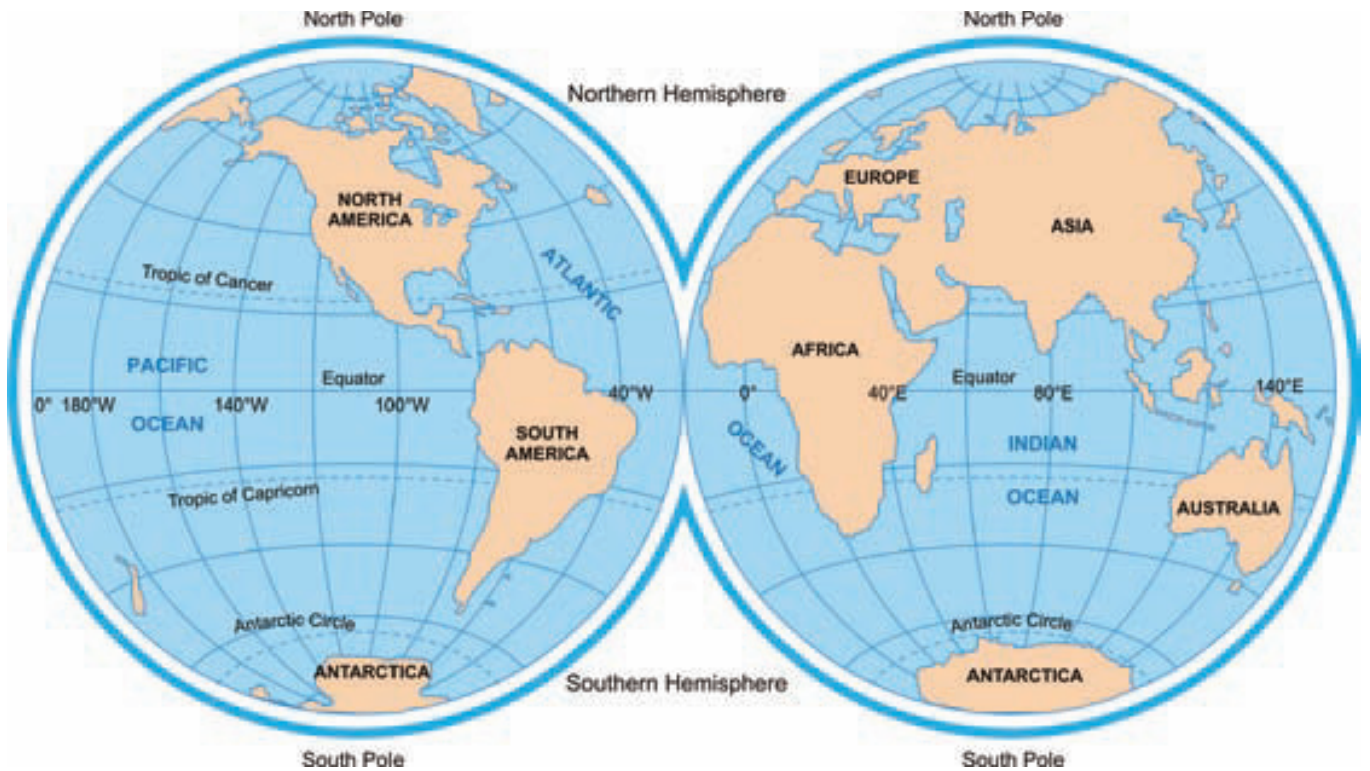


Pocket Globe



Inflatable Globe





Map of the World showing the Northern and the Southern Hemispheres

Look at the globe and see its two end points. The one at the top is called the North Pole, while the one at the bottom is called the South Pole. The line joining the two end points is called the axis of the Earth. (But remember, axis is an imaginary line.)

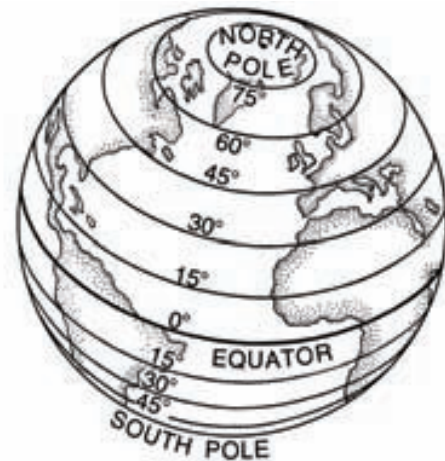
as we go away from the Equator towards the poles. The Equator which is the  $0^\circ$  latitude is the biggest latitude. Some other important latitudes on the globe have been given special names.

## A globe is a model of the Earth

On the globe, the Earth is divided into two equal halves called hemispheres by a line called the Equator. The upper hemisphere is called the **Northern Hemisphere** while the lower hemisphere is called the **Southern Hemisphere**. They are both equal halves.

## Lines of Latitudes

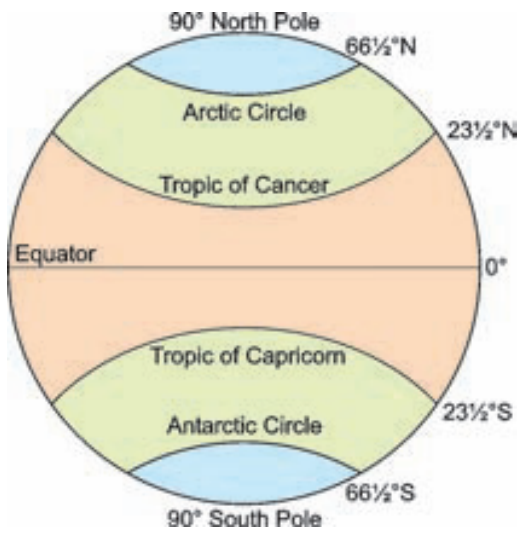
There are many other lines that are drawn parallel to the Equator. These are called **Lines of Latitudes** or **Parallels of Latitudes**. The size of these lines goes on decreasing



Parallels of Latitudes

- The Tropic of Cancer —  $23\frac{1}{2}^\circ$  N
- The Tropic of Capricorn —  $23\frac{1}{2}^\circ$  S

- The Arctic Circle —  $66\frac{1}{2}^{\circ}$  N
- The Antarctic Circle —  $66\frac{1}{2}^{\circ}$  S



Important Lines of Latitudes

## Lines of Longitudes

The lines that run from the North Pole to the South Pole are all of equal length. Their total number is 360 and are called **Meridians** or **Lines of Longitudes**.



Lines of Longitude

The line of longitude which passes through Greenwich near London in the U.K. is called the Prime Meridian. This base line has a  $0^{\circ}$  longitude and from it we count  $180^{\circ}$  eastward

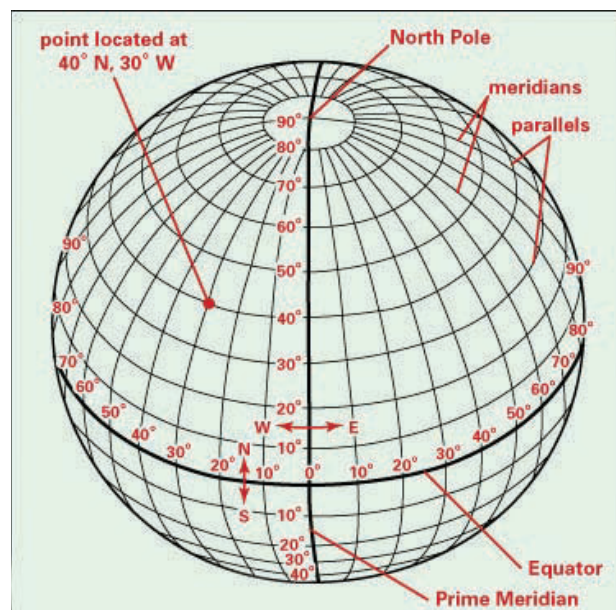
and  $180^{\circ}$  westward. Longitudes to the east of Greenwich are called East Longitudes (E) and those to the west are called West Longitudes (W).

The Prime Meridian divides Earth into two equal halves, the Eastern Hemisphere and the Western Hemisphere. Therefore, the longitude of a place is followed by the letter E for the east and W for the west. It is, however, interesting to note that  $180^{\circ}$  East and  $180^{\circ}$  West meridians are on the same line.

## Grid

The latitudes and longitudes which intersect each other at right angles form a network called grid. A grid helps in locating places.

Let us take Delhi for an example. The latitude of Delhi is  $28^{\circ}$ N and the longitude is about  $77^{\circ}$ E. Delhi will be at the point where the parallel of  $28^{\circ}$ N and meridian of  $77^{\circ}$ E intersect. This method is very useful and helps to locate any place in the world on the globe or on the map.



The Grid



## KEY WORDS

- Grid** — The network of latitudes and longitudes.  
**Axis** — Imaginary line on which the earth rotates.  
**Equator** — An imaginary line of latitude located at  $0^\circ$ .



## THINGS I HAVE LEARNT

1. The Earth is round in shape. It is slightly flat at the poles and bulges at the Equator.
2. A globe is a small man-made model of the Earth.
3. Axis is a line that joins the North Pole and the South Pole.
4. The Equator divides the Earth into two equal halves — Northern Hemisphere and Southern Hemisphere.
5. The lines parallel to the Equator are called Lines of Latitudes.
6. The lines that run from the North Pole to the South Pole are of equal length and are called Lines of Longitudes.
7. The Line of Longitude which passes through Greenwich near London in the U.K. is called the Prime Meridian.
8. The grid helps in locating places.



## THINK AND ANSWER

### A. Tick (✓) the correct answers.

1. The line of longitude which passes through Greenwich is called  
(a) Prime Meridian      (b) Tropic of Cancer      (c) Tropic of Capricorn
2. A globe is a \_\_\_\_\_ of the Earth.  
(a) Model      (b) Map      (c) Sketch
3. The total number of meridians is  
(a) 360      (b) 361      (c) 362
4. The equator is  
(a)  $0^\circ$  latitude      (b)  $0^\circ$  longitude      (c) None of these
5. The Tropic of Cancer is located at  
(a)  $23\frac{1}{2}^\circ$  N      (b)  $23\frac{1}{2}^\circ$  S      (c)  $66\frac{1}{2}^\circ$  N

**B. Fill in the blanks. Choose words from the box.**

Equator

axis

Greenwich

North Pole

East Longitudes

Prime Meridian

South Pole

West Longitudes

1. A globe can be easily rotated on a line called an \_\_\_\_\_.
2. The end point at the top of the globe is called the \_\_\_\_\_ and at the bottom of the globe is called the \_\_\_\_\_.
3. \_\_\_\_\_ is an imaginary line that divides the Earth in two halves.
4. The Line of Longitude which passes through \_\_\_\_\_ in U.K. is called the \_\_\_\_\_.
5. Longitudes to the east of Greenwich are called \_\_\_\_\_ and to the west are called \_\_\_\_\_.

**C. Write T for the true and F for the false statements.**

1. The Earth is flat at poles and round at the Equator.
2. Inflatable globes are very handy.
3. Axis is an imaginary line.
4. The Equator divides the Earth into two equal halves.
5. The Equator is the smallest longitude.
6. The Lines of Longitude are 360 in number.
7. The Prime Meridian also divides the Earth into two equal halves.
8. The latitudes and longitudes together form a network called grid.

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**D. Match the following.**

- |                        |                                     |
|------------------------|-------------------------------------|
| 1. Arctic Circle       | (a) $23\frac{1}{2}^{\circ}\text{S}$ |
| 2. Tropic of Cancer    | (b) $66\frac{1}{2}^{\circ}\text{S}$ |
| 3. Antarctic Circle    | (c) $66\frac{1}{2}^{\circ}\text{N}$ |
| 4. Tropic of Capricorn | (d) $23\frac{1}{2}^{\circ}\text{N}$ |

**E. Answer these questions.**

1. Who confirmed that the Earth is spherical in shape?
2. How many types of globes are there?
3. Why do we need a globe?
4. What is an axis?
5. Explain the meaning of 'Lines of Latitudes'?
6. Write the names of the four special latitudes that you have learnt.
7. What are the 'Lines of Longitudes'?

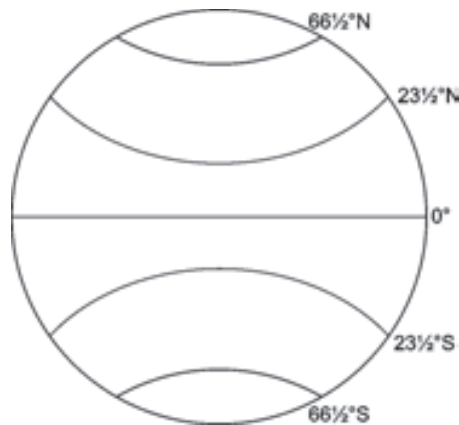
8. Which Meridian divides the Earth into two equal parts? How?
9. How does a grid help us?
10. How will you locate your city on the globe?

[VALUE BASED QUESTION]

[HOTS]



**F. Label the Lines of Latitudes given in the picture.**



**G. With the help of the Globe and maps, find out the latitude and longitude of the following cities :**

Delhi, New York, Moscow, Beijing, Kabul, Dacca, Tokyo, London

**H. Name the states of India through which the Tropic of Cancer passes.**



[http://www.infoplease.com/p/brainpop/latitude and longitude.html](http://www.infoplease.com/p/brainpop/latitude%20and%20longitude.html)



Procure a map of your town. Locate the places of your residence and those of your relatives and friends.