LOCATING PLACES ON EARTH.

The lines drawn on maps and globes are real lines,since the surface of the earth does not have them, we say that they are imaginary lines on the earth. These lines are called latitudes and longitudes.

LATITUDES-The equator is drawn on globes and maps around the centre of the earth- it is called latitude. It is a circle that divides the earth into North Pole two equal halves- the northern and southern hemispheres (hemi=half). In each hemisphere, lines parallel to the equator are drawn from the equator to the poles. These are also latitudes and are also circles, like the equator. As the latitudes move closer to the poles, the circles get smaller. Eventually, at each pole, the latitude is just a dot!Each latitude is given a number. The equator is numbered as 0 degree, which is written as 0°. The numbers of the other latitudes go from 1 ° to 90° in each hemisphere. Latitudes numbered 1, 2 or 3 are close to the equator. Latitudes numbered 60, 70 or 80 are far away from the equator. The latitude at each pole is numbered 90°. The equator is numbered as just 0° but the numbers of the other latitudes are followed by N or S. This tells us whether the latitude is in the northern hemisphere (N), or in the southern hemisphere (S).

Latitudes that are close to the equator are larger circles while those that are far away from the equator are smaller circles. The number of the latitude shows how close or far it is from the equator.

There are two sets of special latitudes

The first set of special latitudes is near the equator. These are called the tropics. They are:

1) The Tropic of Cancer in the northern hemisphere. Its number is 23½0 N.
2) The Tropic of Capricorn in the southern hemisphere. Its number is 23½0 S.

The second set of special latitudes is near the Equator. These are:

1) The Arctic Circle in the northern hemisphere. Its number is 66½0 N.
2) The Antarctic Circle in the southern hemisphere. Its number is 66½0 S.

LONGITUDES-Longitudes are lines that are drawn from one pole to the other. Each longitude starts at the North Pole and ends at the South Pole, so each longitude is a semi-circle. The longitudes are also numbered. The longitude numbered as 0° is known as the prime meridian (meridian= line of longitude). The diagram shows you that longitudes are drawn east or west of the prime meridian. They are also numbered. Starting with the 0° of the prime meridian, the number of the longitude is followed by E (for East) or W (for West). A longitude that is 10°E will be east of the prime meridian and 10°W will be west of the prime meridian. The longitudes continue east and west, round the globe, up to 180°. This is exactly opposite the prime meridian and it is where the longitudes from the east and west meet. So, this longitude is called the 180th meridian. It does not have either E or W written after it. The two semi-circles, the prime meridian and the 180th meridian, form a circle that divides the earth into two halves-the eastern hemisphere and the western hemisphere. The eastern hemisphere lies to the east of the prime meridian and the western hemisphere lies to its west.

I) DIFFERENCES BETWEEN LATITUDES AND LONGITUDES.

LATITUDES.

1) Latitudes are circles of different sizes. The equator is the biggest circle and latitudes near the poles are the smallest circles. The latitude at each pole is a dot.
2) Latitudes are parallel to each other, so they never meet.
3) Latitudes run in an east-west direction.
4) The equator is numbered as 0°. The other latitudes are numbered from 1° to 90° N or S, depending on which hemisphere they are in.

LONGITUDES.

1) Longitudes are semi-circles of the same size. They go from one pole to the other
2) Longitudes meet at the poles. They are widest apart at the equator
3) Longitudes run in a north-south direction.
4) The prime meridian is numbered as 0°. The other longitudes are numbered from 1° onwards with E or W added to the number, depending on whether they are east or west of the prime meridian. The meridian on the opposite side of the prime meridian, where longitudes from east and west meet, is numbered as 180° and is called the 180th meridian.

FINDING PLACES WITH THE HELP OF LATITUDES AND LONGITUDES.

1) a grid of numbered lines in each map.
2) an index where the names of places are given in alphabetical order. The index tells you the number of the square or rectangle in which a place is.

In an atlas for younger students, the lines in a map are numbered A, B, C ... and 1, 2, 3 ... However, in most maps, the lines of latitude and longitude form the grid. Therefore, in the index, the grid numbers for a place will be the numbers (in degrees) of the latitude and the longitude. These are called the coordinates for the place. With this numbering too, you can find a place in a map in the same way.

The lines of latitude and longitude help us to understand several things about the earth.

SUMMARY.

1) The lines of latitude and longitude are drawn on maps and globes but are imaginary lines on the surface of the earth.
2) Latitudes are drawn parallel to the equator.
3) The two tropics and the Arctic and Antarctic Circles are special latitudes.
4) Longitudes are semi-circles drawn from pole to pole.
5) All the latitudes and longitudes are numbered.
6) Latitudes and longitudes form a grid on maps that helps to locate places.
7) The lines of latitude are also known as 'parallels'.
8) As the earth rotates on its axis, all the places which are along the same longitude will have the same time of day. Use a globe and a torch to see how this happens.