GLOBE : LATITUDES AND LONGITUDES

CHAPTER 2

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- Globe
- Axis
- Equator
- Parallels of latitudes
- Heat Zones of the Earth
  - Torrid Zone
  - Temperate Zones
  - Frigid Zones
- Longitudes
- Longitude and Time
- Standard Time

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❑ Globe

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❑ Globe

- Globe is a true model (miniature form) of the earth.

- Globes may be of varying size and type – big ones, which cannot be carried easily, small pocket globes, and globe-like balloons, which can be inflated and are handy and carried with ease.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- The globe is not fixed. It can be rotated the same way as a top spin or a potter's wheel is rotated.

- On the globe, countries, continents and oceans are shown in their correct size.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- It is difficult to describe the location of a point on a sphere like the earth.
- Now the question arises as to how to locate a place on it?
- We need certain points of reference and lines to find out the location of places.

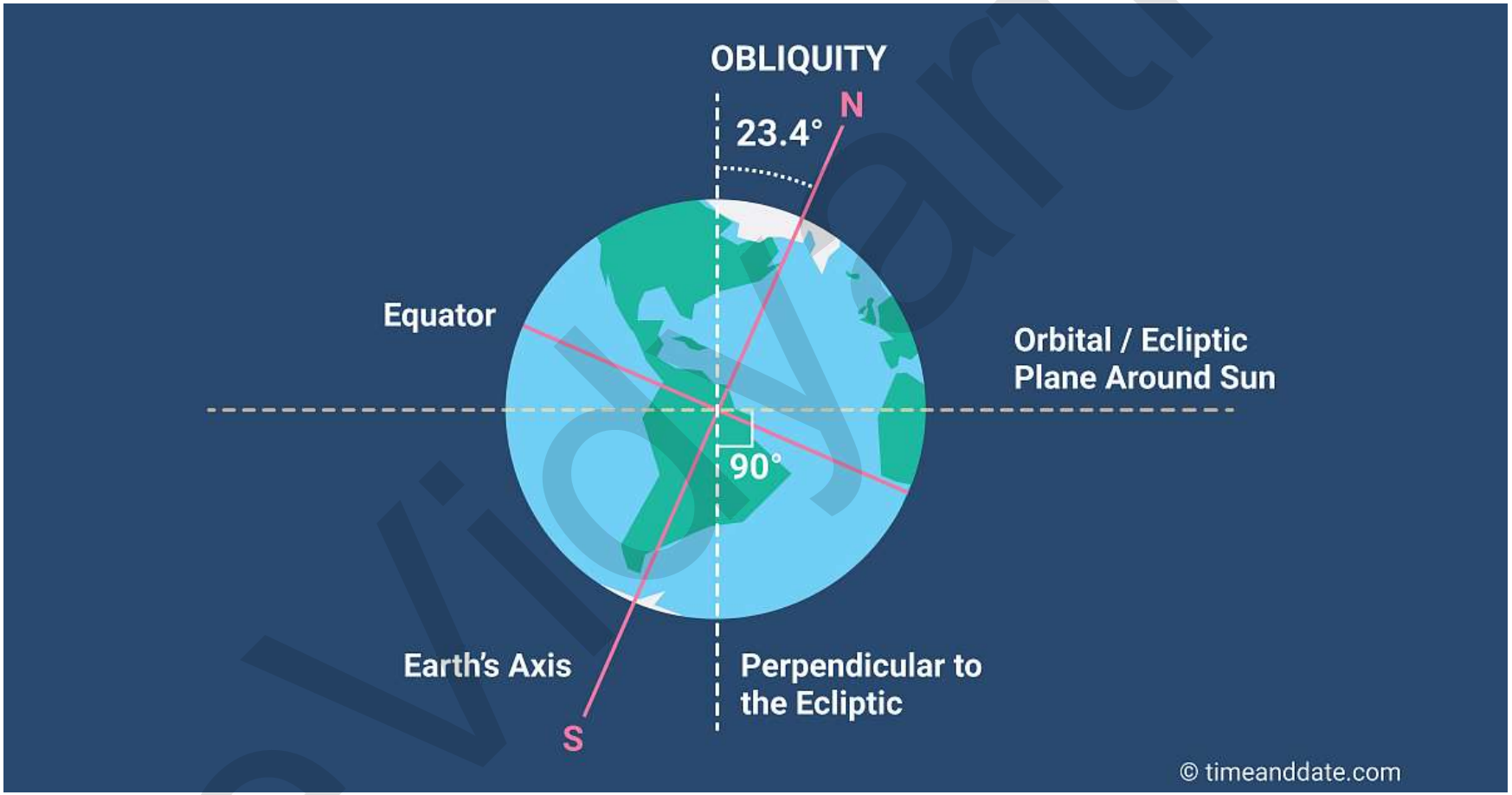
CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❑ Axis

❑ Axis

- A needle is fixed through the globe in a tilted manner, which is called its axis.
- Two points on the globe through which the needle passes are two poles – North Pole and South Pole.
- Earth rotates around it in 24 hours

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- The real earth has no such needle. It moves around its axis, which is an imaginary line.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

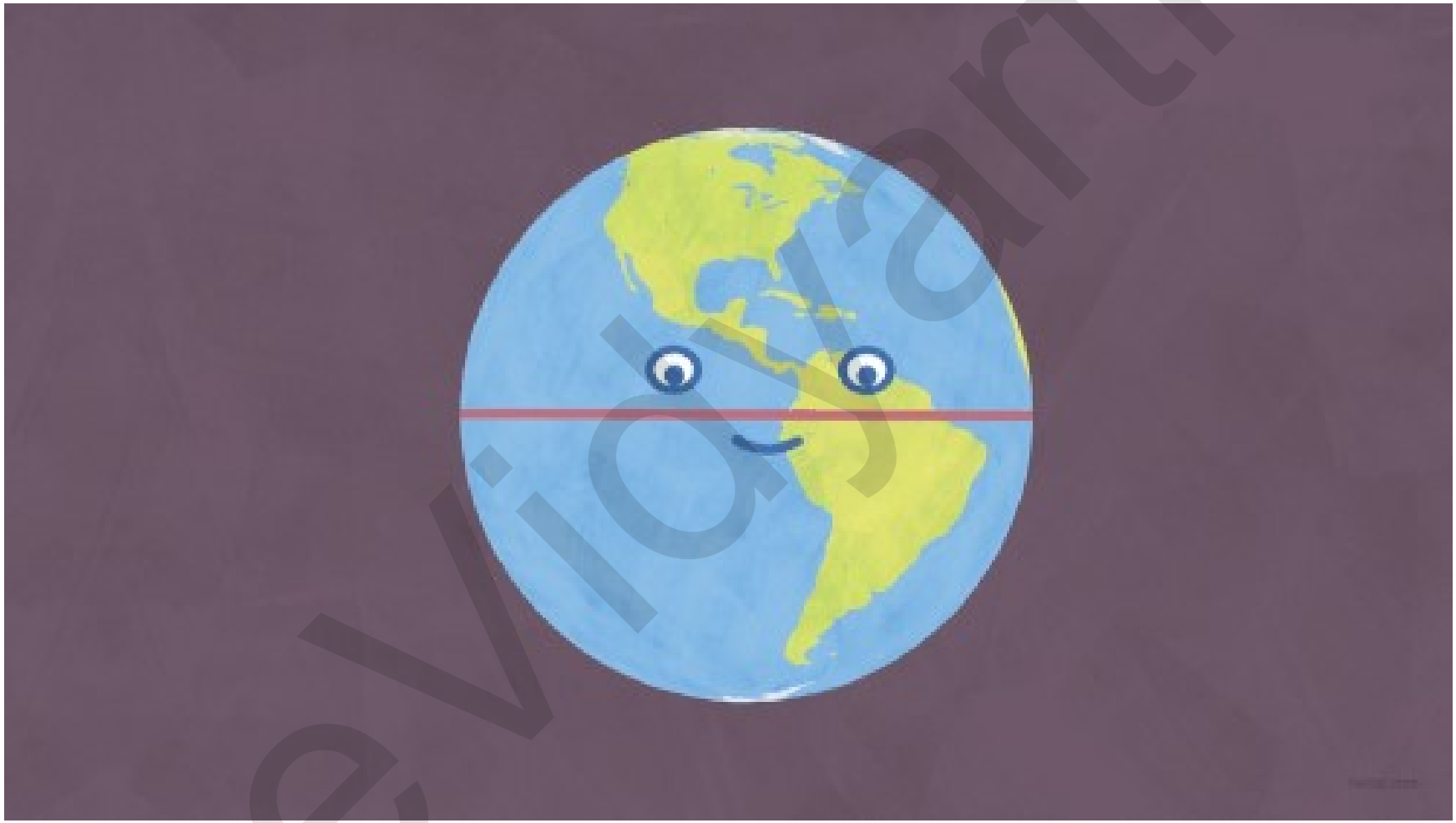
❑ Equator

❑ Equator

- An equator is an imaginary line around the middle of globe.
- It is halfway between the North Pole and the South Pole, at 0 degrees latitude.
- An equator divides the planet into a Northern Hemisphere and a Southern Hemisphere.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

www.evidyarthi.in



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- The northern half of the earth is known as the Northern Hemisphere.
- The southern half is known as the Southern Hemisphere.
- They are both equal halves.
- Therefore, the equator is an imaginary circular line and is a very important reference point to locate places on the earth.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

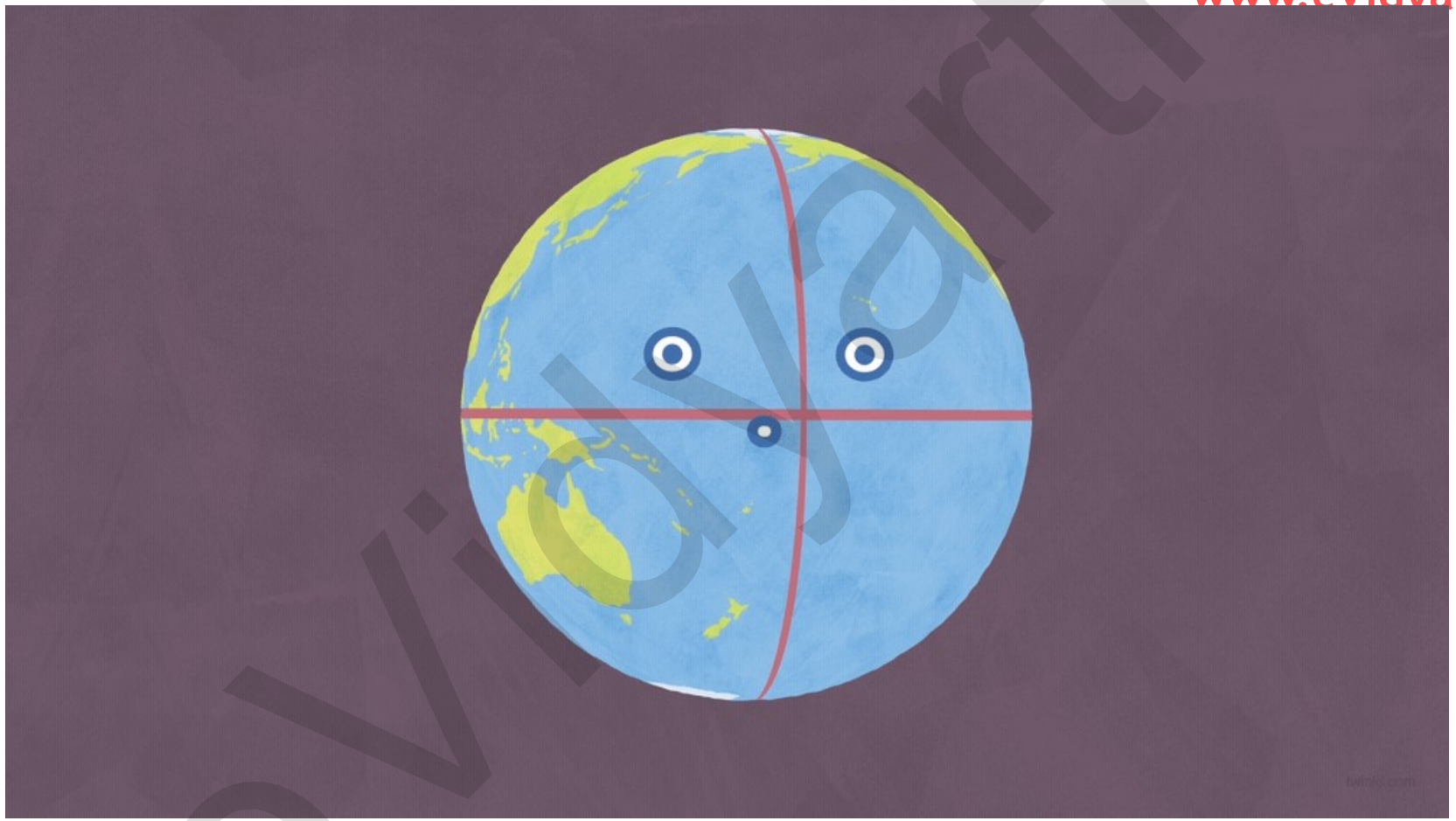
❑ Parallels of latitudes

❑ Parallels of latitudes

- All parallel circles from the equator up to the poles are called parallels of latitudes

- Latitudes are measured in degrees (°).

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- Since the distance from the equator to either of the poles is one-fourth of a circle round the earth, it will measure ¼th of 360 degrees, i.e. 90°.

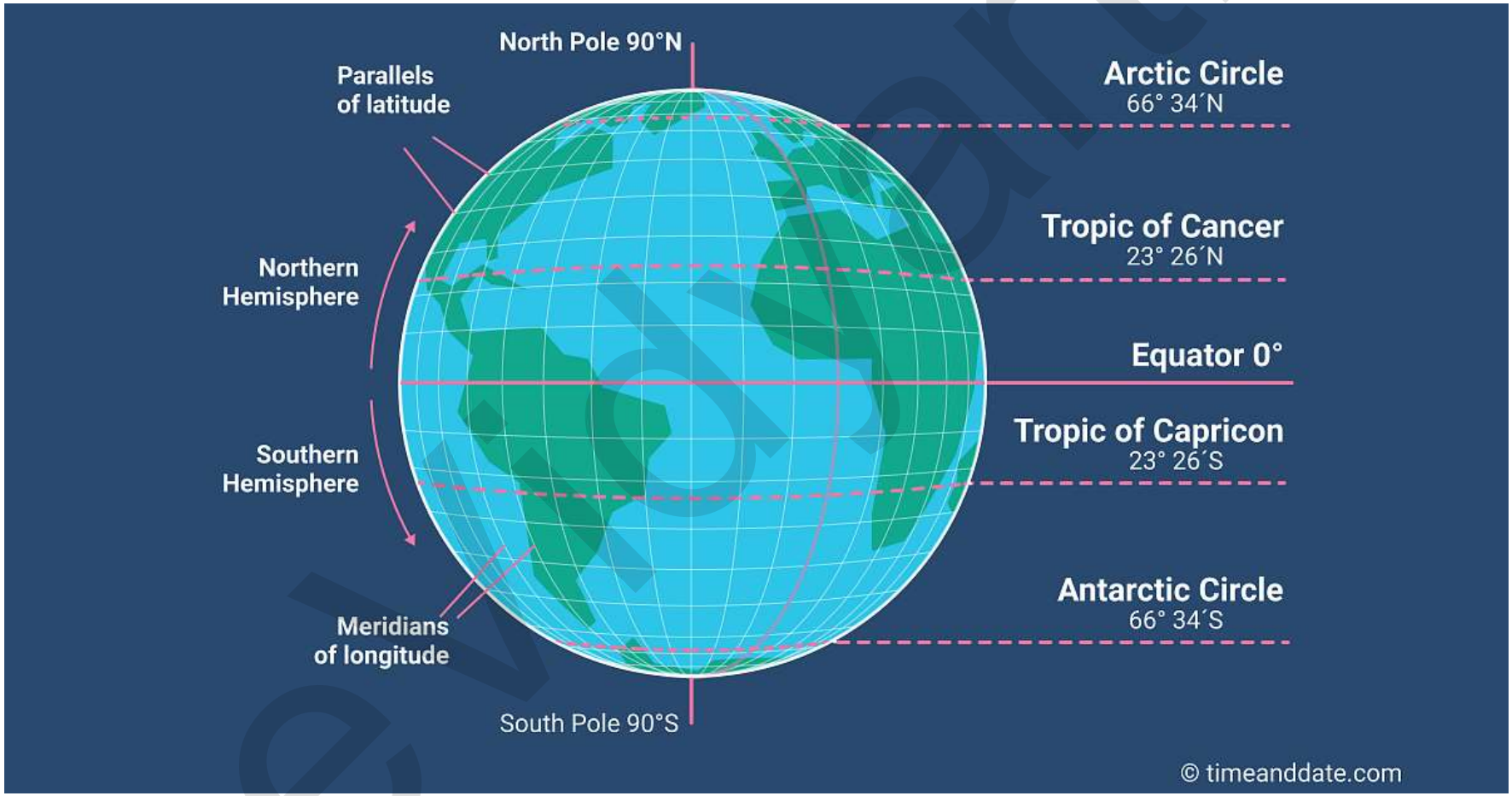
- Thus, 90 degrees north latitude marks the North Pole and 90°.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- All parallels north of the equator are called ‘north latitudes.’
- south of the equator are called ‘south latitudes.’
- The value of each latitude is, therefore, followed by either the word north (‘N’) or south (‘S’).

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

➢ Important parallels of latitudes



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

➢ Important parallels of latitudes

→ Tropic of Cancer (23½° N) in the Northern Hemisphere.

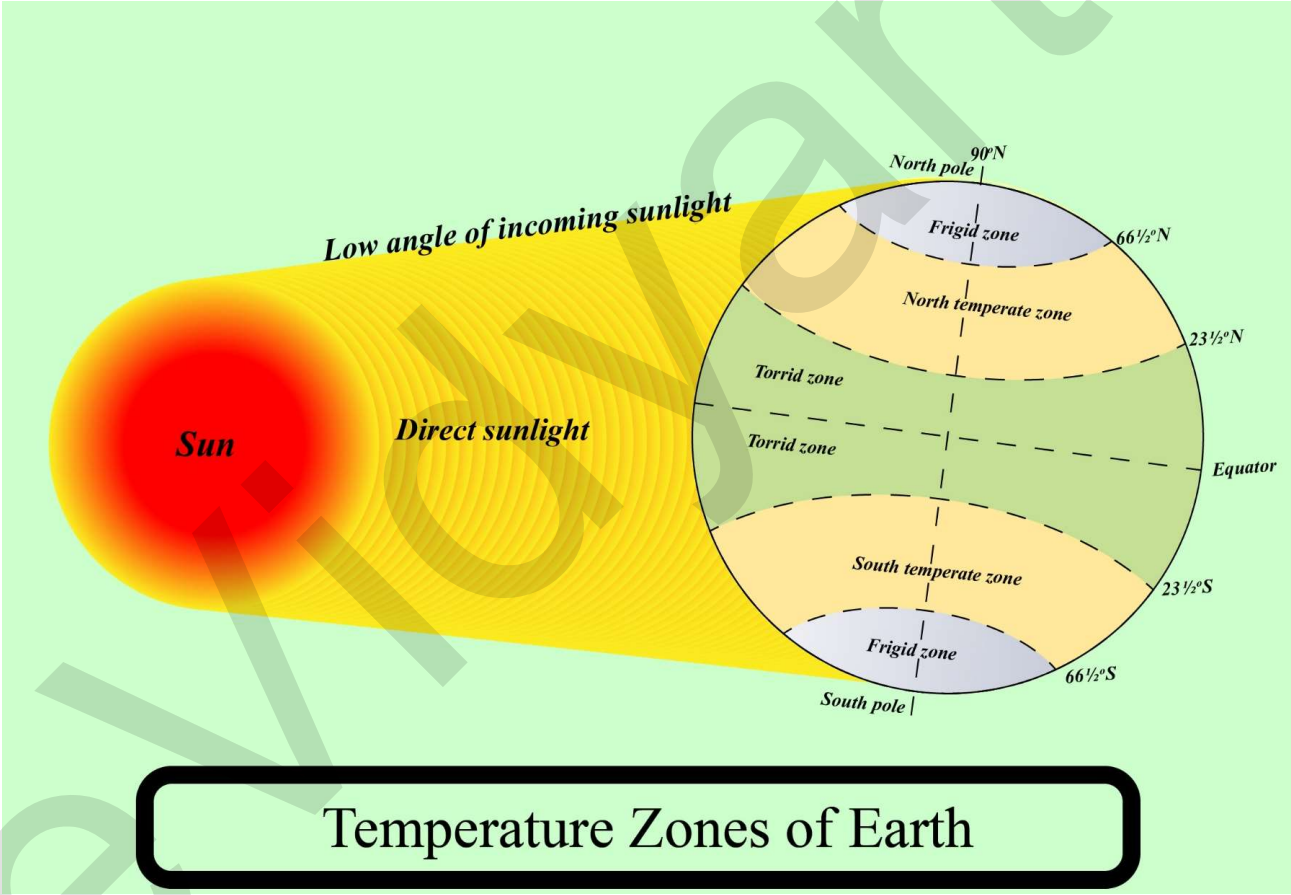
→ Tropic of Capricorn (23½° S) in the Southern Hemisphere.

→ Arctic Circle at 66½° north of the equator.

→ Antarctic Circle at 66½° south of the equator.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❖ Heat Zones of the Earth



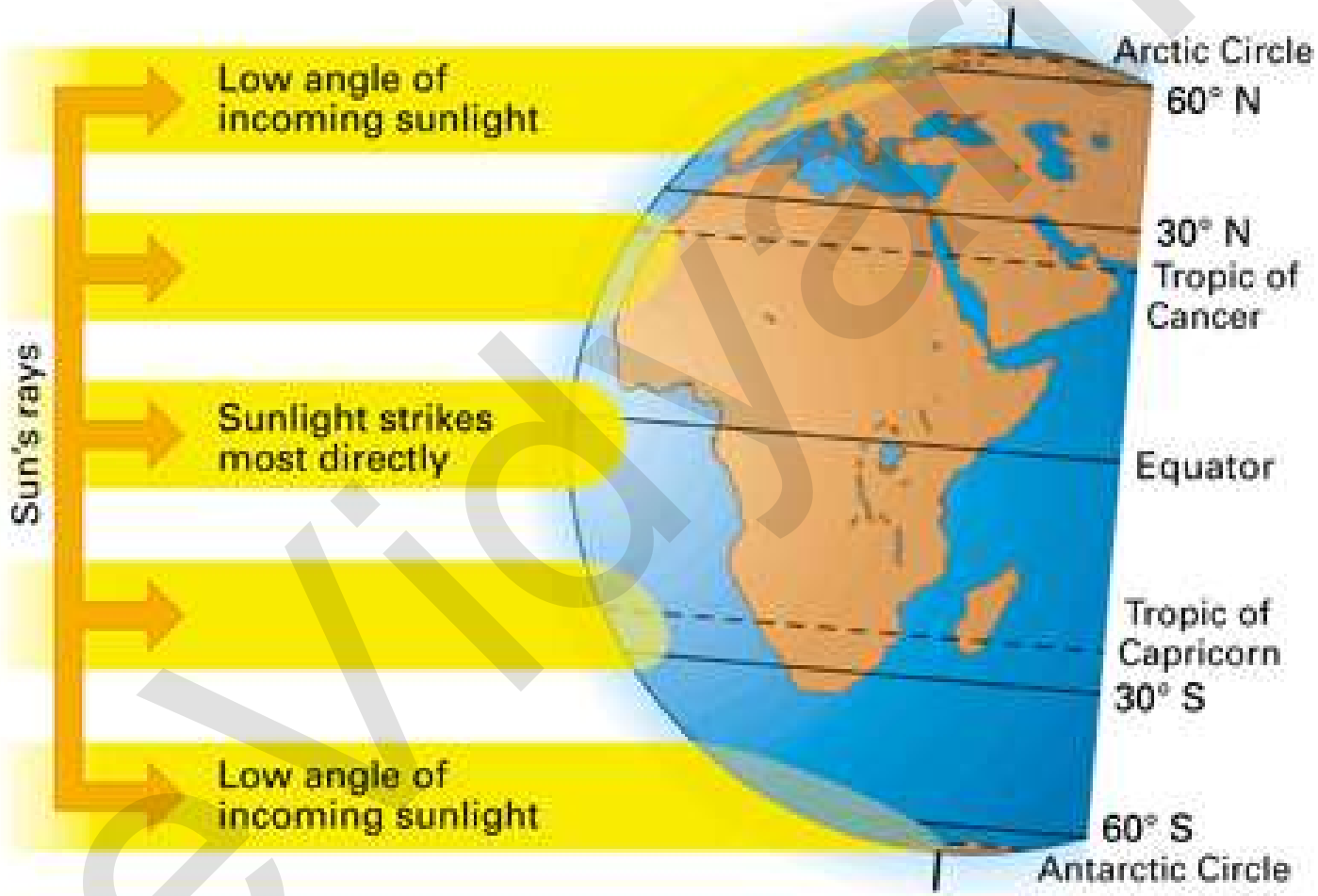
Temperature Zones of Earth

❖ Heat Zones of the Earth

The earth is divided in three heat zones:

- The **Torrid zone** receives the maximum heat.
- The **temperate zone** has a moderate temperature.
- The **frigid zone** has a cold climate as the sun rays are always slanting.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT



➢Torrid Zone

The mid-day sun is exactly overhead at least once a year on all latitudes in between the Tropic of Cancer and the Tropic of Capricorn. This area, therefore, receives the maximum heat and is called the Torrid Zone.

Temperate Zones

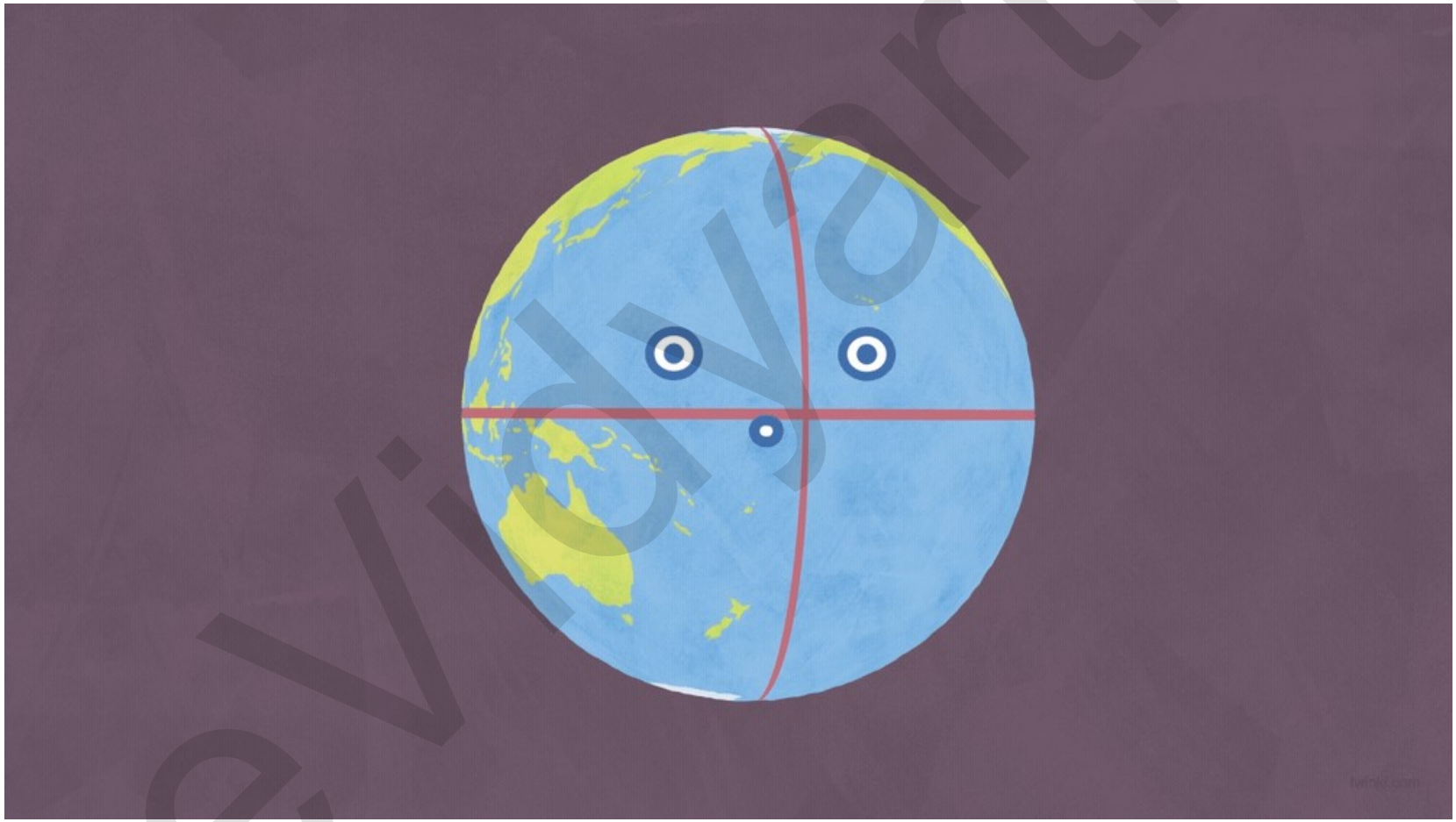
Beyond the tropics, the mid-day sun is never overhead. This happens because the sun rays come at a slant in these areas. So, this part of the earth receives mild temperature. These zones are called the Temperate Zones.

Frigid Zones

Areas between the Arctic Circle and the North Pole and those between the Antarctic Circle and the South Pole receive sun rays at a big slant. Due to this, the sun is never much above the horizon. So, this part of the earth receives the least amount of heat and remains very cold. These zones are called Frigid Zones.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❖ What are Longitudes ?



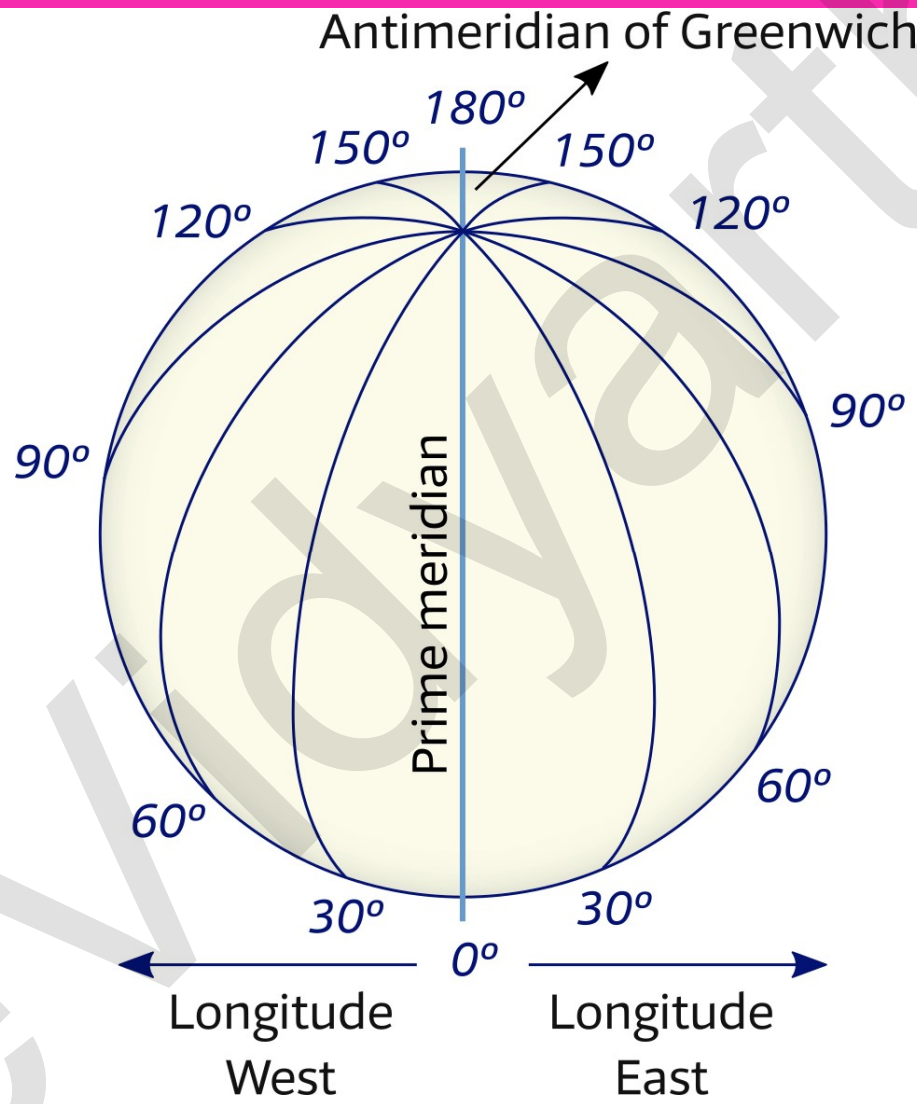
CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❖ What are Longitudes ?

The line of reference running from the North Pole to the South Pole is called Meridians of Longitude.

- The distance between them is measured in 'degrees of longitude'.
- All meridians are of equal length.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- The meridian which passes through Greenwich, where the British Royal Observatory is located, is called the **Prime Meridian**.

- The value of Prime Meridian is 0° longitude and from it, we count 180° Eastward as well as 180° Westward.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- Prime Meridian divides the earth into two equal halves, the Eastern Hemisphere and the Western Hemisphere.

- 180° East and 180° West meridians are on the same line.

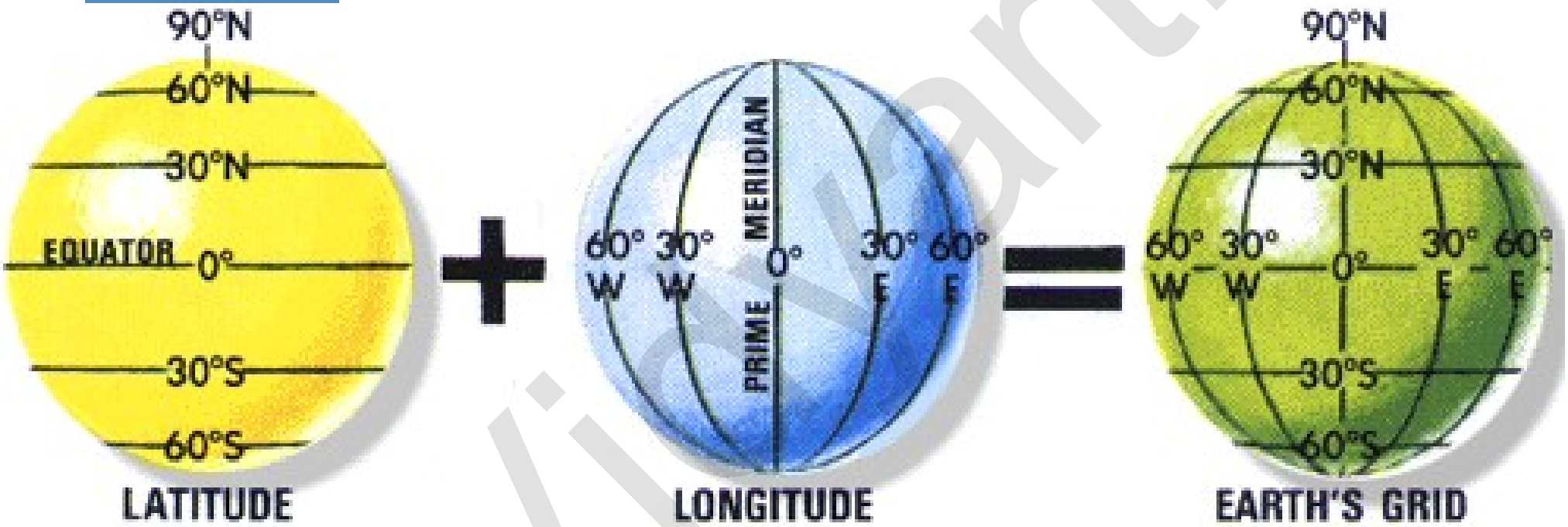
- We can locate any point on the globe if we know its latitude and longitude.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

→ Both 180° east and 180° west are on the same line.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

✓ Grid



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

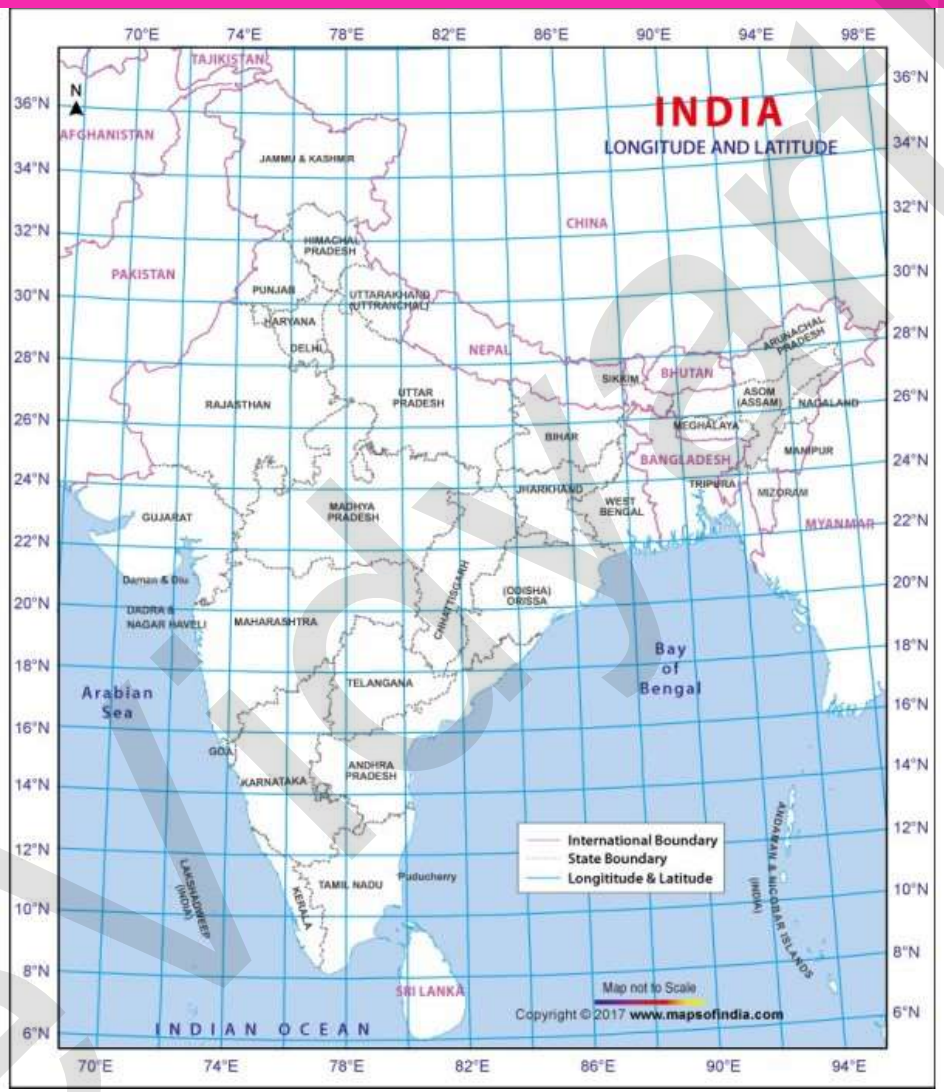
- Lets look at the grid of the parallels of latitude and meridians of longitude on the globe.

- We can locate any point on the globe very easily if we know its latitude and longitude.

For example, Dhubri in Assam is situated at 26° N latitude and 90° E longitude

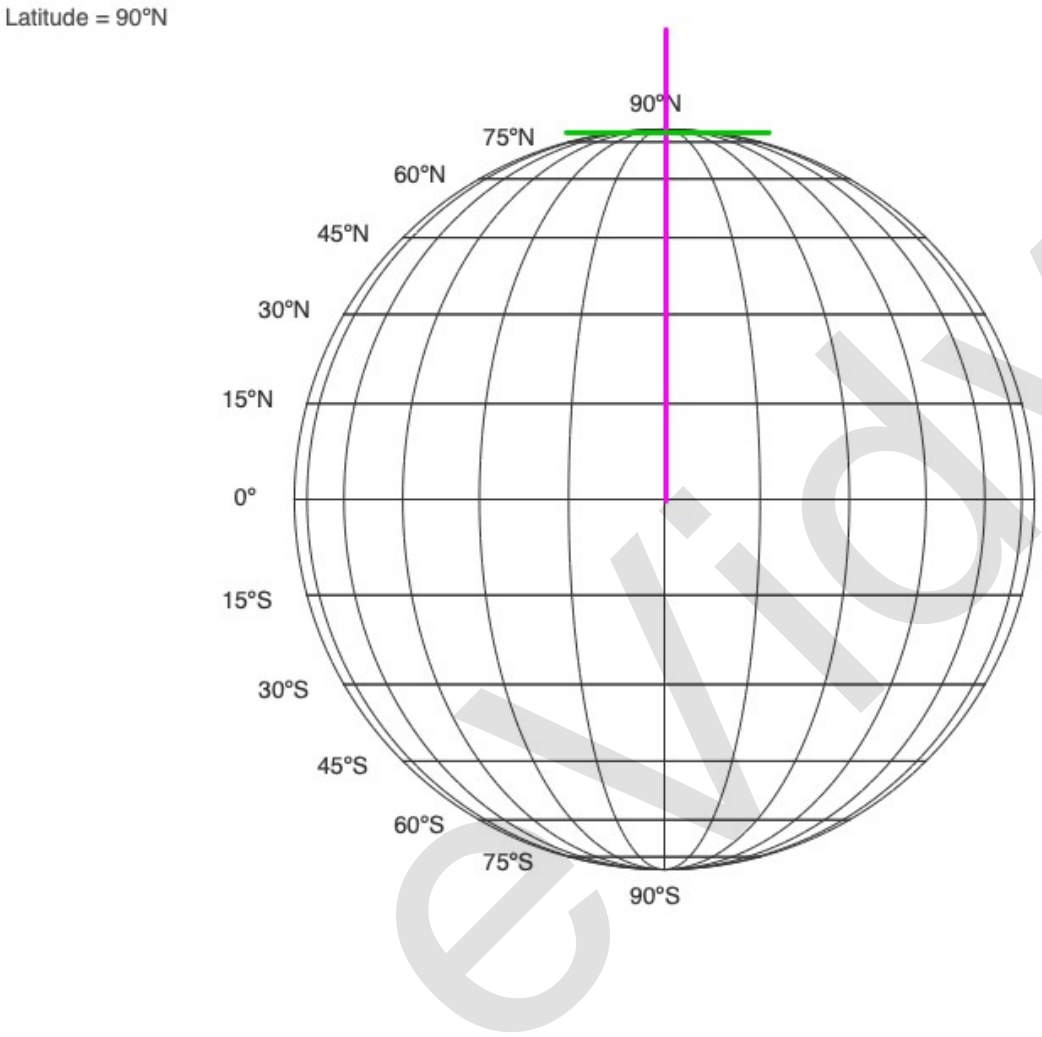
CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

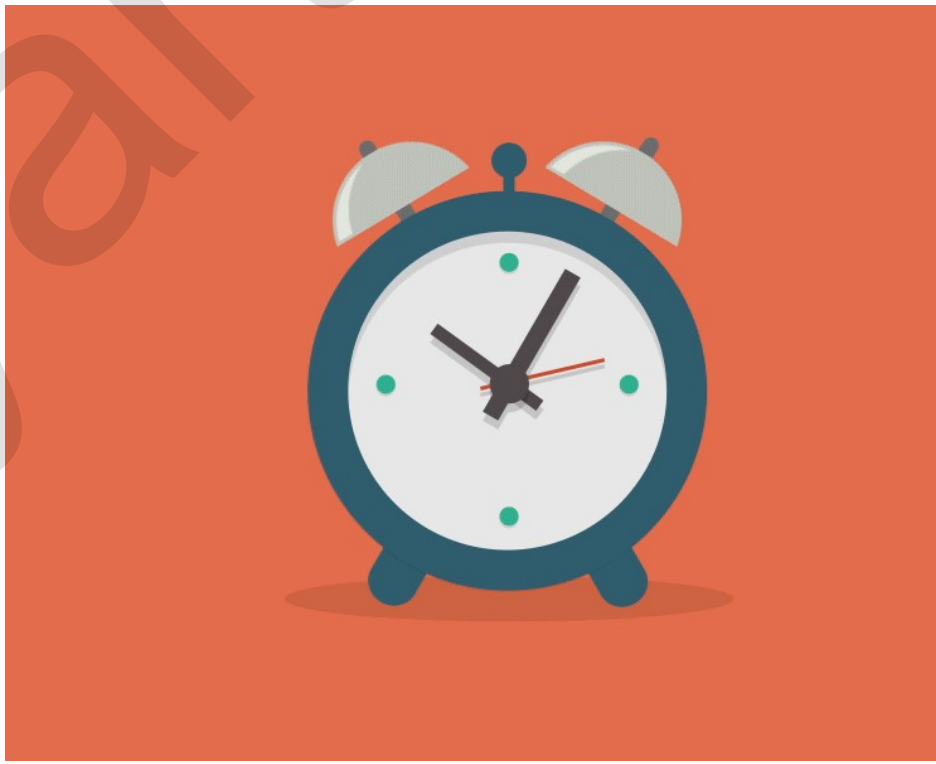
www.evidyarthi.in



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❖ Longitude and Time





CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❖ Longitude and Time

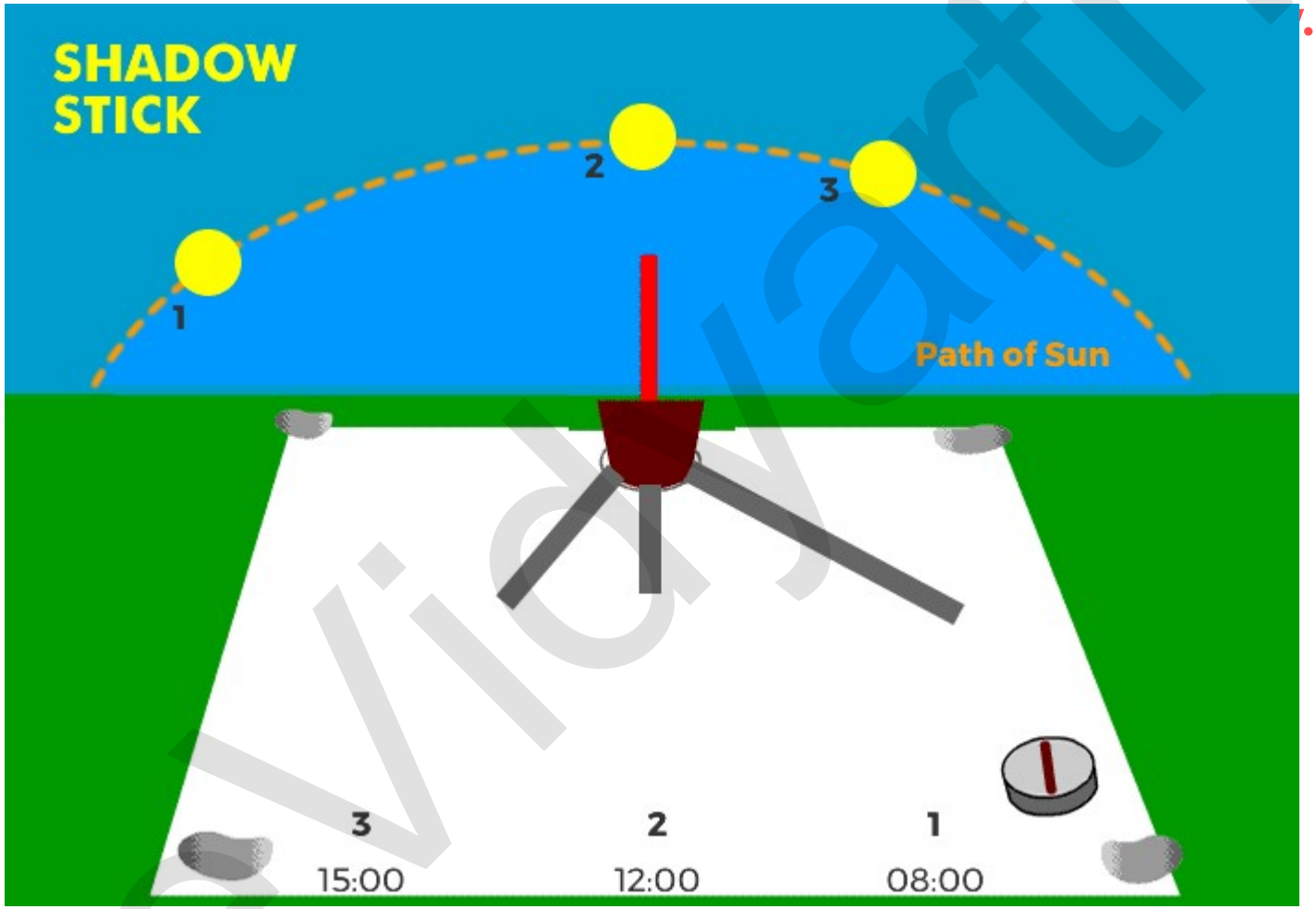
- The best means of measuring time is by the movement of the earth, the moon and the planets.
- The sun regularly rises and sets every day, and naturally, it is the best time-keeper throughout the world.
- Local time can be reckoned by the shadow cast by the sun, which is the shortest at noon and longest at sunrise and sunset.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- When the Prime Meridian of Greenwich has the sun at the highest point in the sky, all the places along this meridian will have mid-day or noon.

- As the earth rotates from West to East, those places East of Greenwich will be ahead of Greenwich time and those to the West will be behind it.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- The earth rotates 360° in about 24 hours.

- At any place, a watch can be adjusted to read at 12 o'clock when the Sun is at the highest point in the sky.

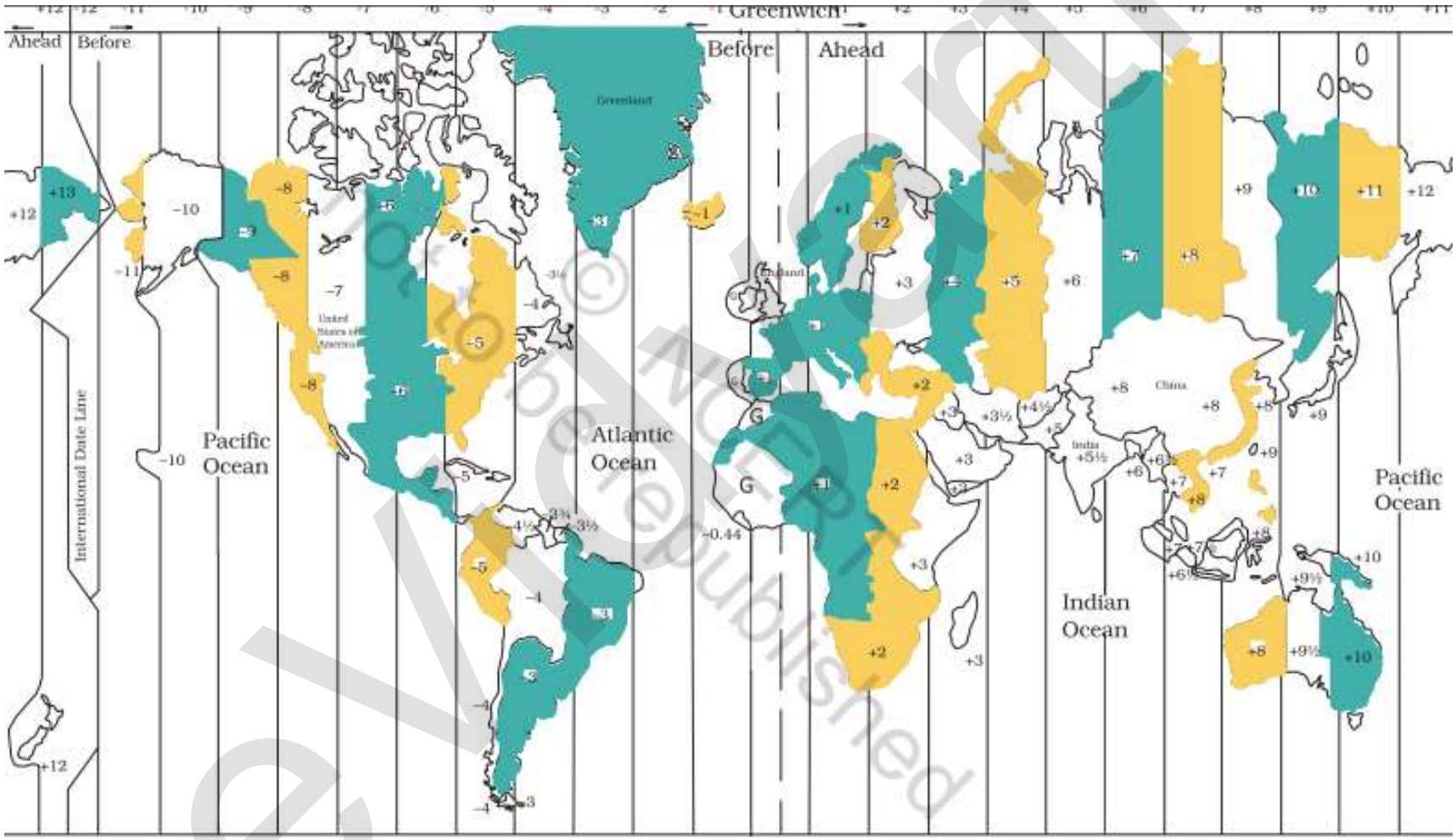
CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- The sun casts the smallest shadow when it is directly overhead.

→ But the relative position of the sun in sky keeps on changing as we move across the globe either from east to west or vice-versa.

- At 180 degrees of the Prime Meridian in the Pacific Ocean is the International Date Line. The line determines where the new day begins in the world.

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT



CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

❖ Why do we have Standard Time ?

❖ Why do we have Standard Time ?

- The local time various places are different, so it is necessary to adopt the local time of some central meridian of a country as the Standard Time.

- 82 ½ E is treated as the Standard Meridian of India. The local time at this meridian is known as the Indian Standard Time (IST).

CLASS VI CH 2 GLOBE : LATITUDES AND LONGITUDES NCERT

- India located East of Greenwich at 82° 30’E, is 5 hours and 30 minutes ahead of GMT.

- Some countries have a great longitudinal extent and so they have adopted more than one standard time.