

Geography – Std 9

Fifth Assignment

Chapter 3 : **Motions of the Earth**

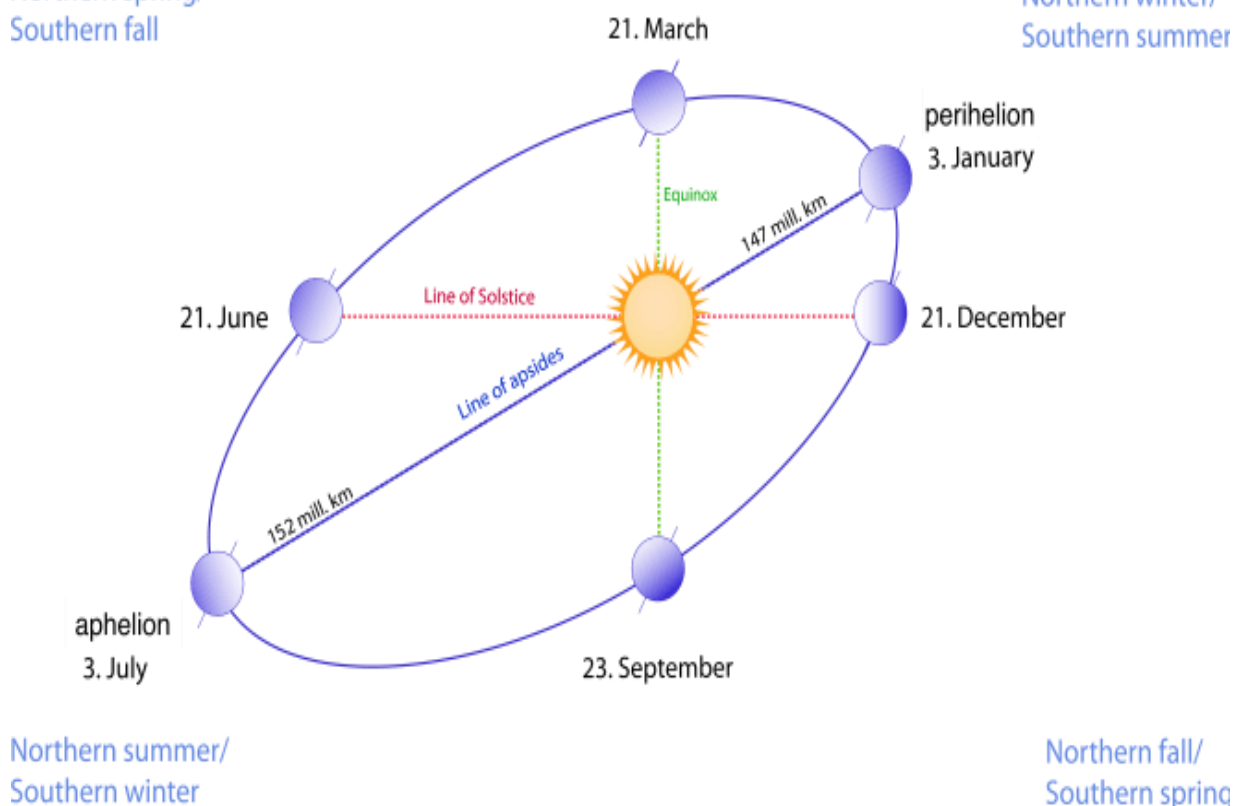
Rotation and Revolution

(The following questions are for you to guide you to understand the Chapter)

1. What is an Orbit? Features. (pg 25)

Northern spring/
Southern fall

Northern winter/
Southern summer



2. What is a Leap Year? Learn in detail. (pg 25)

3. Perihelion and Aphelion – definition, diagram, differences (pg 25)

4. Combined Effects of the Earth's Axis and Revolution (pg 26)

5. Apparent Migration of the Sun – Northward & Southward (pg 26)

HOMEWORK :

Write down in your Geography Homework Copy both the questions and the answers of the following questions :-

- 1. What do you know about the Earth's orbit?**
- 2. Distinguish between Aphelion and Perihelion.**
- 3. How is Uttarayan different from Dakshinayan?**

NOTE :- *These questions are **only** for **HOMEWORK**. You are expected to answer any question asked from this chapter. So, learn **thoroughly**.*

(Please see the next pages to go through the text of the video)

What is an Orbit?

It is the path along which the Earth moves round the Sun. This orbit of the Earth is elliptical or oval in shape. The speed of the Earth along its orbit is around 30 km per second which is tremendous.

What is a Leap Year?

A leap year is a year in which an extra day is added to the Gregorian calendar. While an ordinary year has 365 days, a leap year has 366 days. The extra day is added to the month of February making February 29. In an ordinary year, February has 28 days, but in a leap year, it has 29 days.

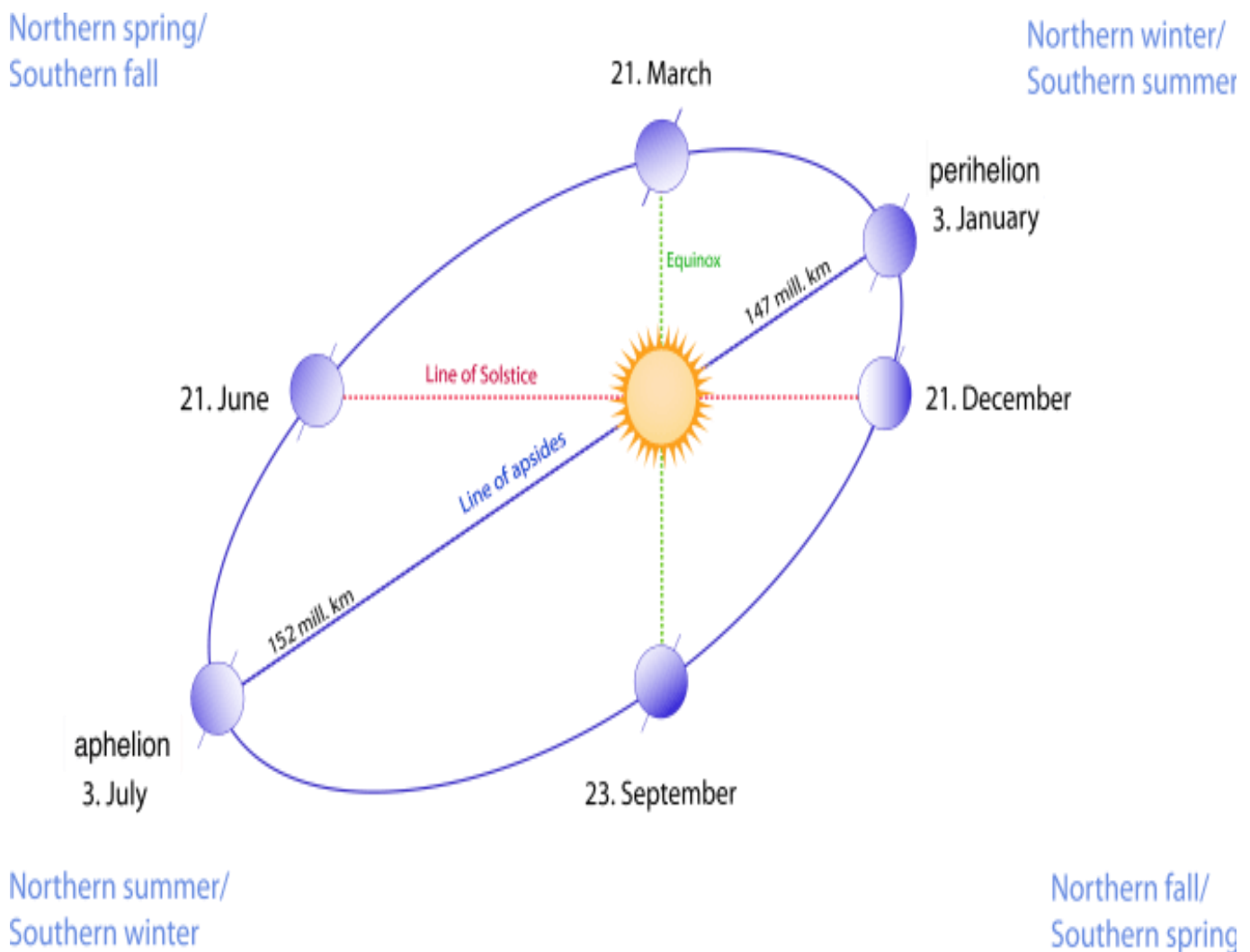
What are Aphelion and Perihelion

Remember that the Earth orbits the Sun in an elliptical path which is oval, not circular.

Aphelion is the point of the Earth's orbit that is *farthest* away from the Sun.

Perihelion is the point of the Earth's orbit that is *nearest* to the Sun.

The words come from Ancient Greek, in which “*helios*” means “Sun” and “*apo*” means “far” and “*peri*” means “close”.



Combined Effects of the Inclination of the Earth's Axis and Revolution

- ❖ Since the Axis of the earth is inclined, each of the Poles receives the Sun's rays alternately. When the North pole is tilted towards the Sun, it is Summer in the Northern hemisphere, and, when the North Pole is turned away from the Sun, it is Winter there. Same apply for the South Pole too.
- ❖ Due to the inclination of the Earth's Axis, the duration of Day and Night varies from place to place. Places having Summer will have longer days while places having Winter will have shorter days.
- ❖ The altitude of the mid-day Sun also varies accordingly.
- ❖ It brings changes in the Seasons.

Apparent Migration of the Earth *Northward & Southward Movement*

1. **Northward Apparent Migration or *UTTARAYAN***
The Sun appears to be moving northward after December 22nd till 21st June. This northward movement for six months is known as **Northward Apparent Migration or *UTTARAYAN***.
2. **Southward Apparent Migration or *DAKSHINAYAN***
For the next six months, the Sun appears to be moving southward after 21st June till 22nd December. This southward movement of the Sun is also known as ***DAKSHINAYAN***.

'Uttar' means North and **'Ayan'** means movement. Essentially 'Uttarayan' means the northward

movement of the Sun. ‘Uttarayan’ is generally considered to be auspicious.

Similarly, ‘*Dakshin*’ means south and ‘Ayan’ means movement. Essentially, ‘Dakshinayan’ is the Southward movement of the sun. ‘Dakshinayan’ is generally considered to be inauspicious.