

Assignment: **Subject: - Social Science** **Class: - VI** **Teacher: - Mrs. Shilpa Grover**

Name: _____ **Class & Sec:** _____ **Roll No.** _____ **Date:** _____

Chapter- 3 Motion of the Earth

- a. The angle of inclination of the earth's axis with its orbital plane is $66\frac{1}{2}^{\circ}$.
- b. The movement of the earth on its axis is called rotation. The movement of the earth around the sun in a fixed path or an orbit is called Revolution.
- c. Every fourth year, February has 29 days instead of 28 days. Such a year with 366 days is called a leap year.
- d. **Summer Solstice**– When the Southern hemisphere experiences the winter season and it is summer in the northern hemisphere. At that point in time, the position of the earth on 21st June is called the Summer Solstice. **Winter Solstice**– When the Southern hemisphere experiences the summer season and the reverse occurs at the Northern hemisphere. At that point in time, the position of the earth on 22nd December is called the Winter Solstice.
- e. On 21st March and September 23rd, direct rays of the sun fall on the equator. At this position, neither of the poles is tilted towards the sun. Therefore, the whole earth experiences equal days and equal nights. This is called an equinox.
- f. The Earth is always revolving and it is divided into two hemispheres. The part of the earth which faces the sun experiences summer and the part away from the sun experiences winter. Therefore, Southern Hemisphere experience Winter and Summer Solstice at different times than that of the Northern Hemisphere.
- g. The Poles experience 6 months of day and six months of nights due to the inclination of the earth on its own axis. This inclination keeps one pole towards the sun and another pole away from the sun for 6 months each. This is the reason behind this condition.

1. What would happen if the earth did not rotate?

In such a condition the portion of the earth facing the sun would always experience day, and thus there would be continuous warmth in the region. At the same time the other half would always remain dark and be freezing cold all the time. These are extreme conditions which are not suitable for life. Thus, we can say that if the earth did not rotate life would not have been possible.

2. How does leap year occur?

The earth takes 365 days i.e. one year to complete one revolution around the sun. We consider a year as consisting of 365 days only and ignore six hours for our convenience. Six hours saved every year are added to make one day i.e. 24 hours over a span of four years. This surplus day is added to the month of February. Thus every fourth year, February has 29 days instead of 28 days. Such a year with 366 days is called a leap year.

3. Why the southern hemisphere celebrates Christmas in summers?

On 22nd December, the Tropic of Capricorn receives direct sun rays due to the tilt of South Pole towards it. As the sun rays are vertical on it, hence it has summers. Therefore, Christmas which falls on 25th December is celebrated in summers in the Southern hemisphere

4. Distinguish between summer solstice and winter solstice?

Summer solstice	Winter solstice
Sun shines vertically on the Tropic of cancer.	Sun shines vertically on the Tropic of Capricorn.
North pole is inclined towards the sun and the south pole is away from it.	South pole is inclined towards the sun and the north pole is away from it.
This position is on 21st June.	This position is on 22nd December.
When the Sun is directly over the Tropic of Cancer in the Northern Hemisphere, it is also known as the northern solstice.	When the Sun is directly over the Tropic of Capricorn in the Southern Hemisphere, it is also known as the southern solstice.

5. Draw the diagram of the revolution of the earth and seasons.

Refer figure 3.3 page no- 19 from your book