CLASS-5

SOCIAL STUDIES

CHAPTER-3

THE MOVEMENTS OF THE EARTH

A. Write T for true and F for false.

1. The Earth is the centre of the universe. **F**

2. The Earth is tilted on its axis at an angle of 66 ½ ^{0}.**T**

3. The summer solstice occurs on 21 July. **T**

4. The Spring Equinox occurs on 21 March. **T**

B. Match the following.

Column (A)	**Column (B)**
1. The tilt of the Earth is in the direction of the	c) Pole Star
2. Autumn equinox occurs on	d) 23 September
3. The longest day of the year is	a) 21 June
4. During the Winter Solstice, the South Pole gets	b) 24 hours of daylight

C. Fill in the blanks.

1. **21st June** is the longest day of the year.

2. When the days and nights, are of equal length, it is called an **Equinox**.

3. During the months of July, August and September, the **North Pole** gets 24 hours of sunlight.

4. The Southern Hemisphere experiences summer in the months of **January**, **February** and **March**.

5. A leap year comes after every **4** years and an extra day is added to the month of **February** in this year.

D. Answer the following questions in short.

1. Define orbit.

Ans: The solar system and all the planets including Earth revolve around the Sun in a definite path which is called the orbit.

2. In which direction is the Earth tilted?

Ans: The Earth is tilted in the direction of Pole Star.

3. What is the direction of the Earth's rotation on its axis?

Ans: The direction of the Earth's rotation on its axis is West to East.

4. What is the shape of the Earth's orbit?

Ans: The shape of the Earth's orbit is an oval.

5. List the two factors that affect seasons.

Ans: The two factors that affect seasons are the angle of the Sun's rays and the length of the days

E. Answer the following questions in detail.

1. Explain the reason for the occurrence of seasons at different times of the year in the two hemispheres.

Ans: In the month of June, the North Pole is tilted towards the Sun while the South Pole is tilted away from the Sun. Thus places in the Northern Hemisphere experience summer, while the places in the Southern Hemisphere experiences winter.

In December the South Pole is tilted towards the Sun so Southern Hemisphere experiences summer while places in the Northern Hemisphere experiences winter.

2. What is rotation? Draw a diagram of Earth's rotation.

Ans: The movement of the Earth on its axis is called rotation. The Earth rotates from west to east. The Earth takes about 24 hours or one day to complete one rotation.

Note: Students will have to draw a diagram of rotation of the Earth from page no. 23 (Day and night)

3. What is the significance of the Earth's revolution?

Ans: The significance of the Earth's revolution are:-

i. It causes changes in seasons
ii. It is responsible for leap year every after four years.

4. Write a short note on Winter Solstice.

Ans: During the month of January, February and March, the Southern Hemisphere faces the Sun directly and the Northern Hemisphere gets indirect rays of the Sun due to the tilt of the Earth's axis. This makes the nights larger and days shorter in the Northern Hemisphere. The shortest night occurs on 21st December. It is called the Winter Solstice. It marks the beginning of winter in the Northern Hemisphere.

5. Define equinox and state its importance.

Ans: The term equinox means 'equal day and night'. In March and September, the Sun's rays fall vertically on the equator. Both the North Pole and the South Pole are at an equal distance from the Sun. Thus days and nights are of equal length everywhere on the Earth. 21st March is the Spring Equinox while 23 September is the Autumnal Equinox.

F. Think and answer.

1. Although the Earth is rotating at such a fast pace, we don't feel giddy. Why?

Ans: We don't feel any of this motion because these speeds are constant. The spinning and orbital speeds of Earth stay the same so we don't feel any accelerating or giddy. We can only feel motion if your speed change.

2. Would there have been any benefits if the Earth had more moons like Mars, Jupiter and Saturn?

Ans: No, there would be no benefits if the Earth had more moons. If there would be many moons around the Earth, there would be more than two high tides per day and more solar eclipses.

3. Why does the Pole Star remain constant?

Ans: The Pole Star in in the rotation axis of the sky, which is why it's the only star that never moves from its spot. Earth's axis points almost directly to Polaris, so this star is observed to show the least movement.

EXPERIENTIAL LEARNING

Activity

Quiz Time

1. When was the last leap year? When will be the next leap year?

Ans: Wednesday, 1 January 2020 was the last leap year. The next leap year will be in the year 2024.

2. If the Earth was not tilted on its axis, what would have been its effect?

Ans: If the Earth was not tilted on its axis we wouldn't have seasons.

3. How much time does the Moon takes to complete one revolution around the Earth?

Ans: The moon takes once every 28 days to complete one revolution around the Earth. It means that the Moon orbits the Earth around 13 times in a year.