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NCERT Solutions for 6th Class Geography: Chapter 3-Motions Of The Earth



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NCERT Solutions for 6th Class Geography: Chapter 3-Motions Of The Earth

Class 6: Geography Chapter 3 solutions. Complete Class 6 Geography Chapter 3 Notes.

NCERT Solutions for 6th Class Geography: Chapter 3-Motions Of The Earth

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Question A.1:

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What do you mean by the inclination of the earth's axis?

ANSWER:

The tilted position of the Earth's axis is known as inclination of the Earth's axis. The Earth's rotation axis makes an angle of about 66.5° with the plane of its orbit around the Sun or about 23.5° from the perpendicular to the elliptical plane. This inclination is the reason we experience different seasons on the Earth.

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Question A.2:

What are the effects of the earth's rotation?

ANSWER:

The Earth rotates about its axis and it takes about 24 hours to complete one rotation. Some of the effects of the Earth's rotation are as follows:

1. Rotation creates a diurnal cycle of light and darkness, i.e. day and night.
2. Rotation causes tides, i.e. rise and fall of the sea level twice a day.
3. Rotation causes sunrise in the east and sunset in the west.

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Question A.3:

Why does February have 29 days after every 4 years?

ANSWER:

The Earth revolves around the Sun in anticlockwise direction and it takes about 365 days and 6 hours to complete one revolution. However, for our convenience, these extra 6 hours are added every year for the next four years to create a total of 24 hours or one more day in February. This extra day in February comes after every four years and the year in which it occurs is known as the leap year; it has 366 days in total.

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Question A.4:

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What are the effects of revolution?

ANSWER:

The Earth takes around 365 days and 6 hours to complete one revolution around the Sun. The effects of the Earth's revolution are as follows:

1. Variation in the lengths of days and nights
2. Slanting or vertical sunrays
3. Occurrence of various seasons (spring, summer, autumn and winter)
4. Movement of the Sun between the Tropic of Cancer and the Tropic of Capricorn

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Question A.5:

Name the two factors responsible for the occurrence of seasons.

ANSWER:

The two factors responsible for the occurrence of seasons are as follows:

1. The Earth rotates on its own axis and it is tilted at an angle of 23.5° with respect to its orbital plane; this causes the occurrence of seasons.
2. The revolution of the Earth around the Sun, which requires 365 days and 6 hours, in an elliptical orbit also causes the change in seasons.

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Question B.1:

Rotation and revolution

ANSWER:

Rotation	Revolution
1. The Earth takes 24 hours to complete one	The Earth takes around 365 days and 6 hours to complete one revolution around the

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rotation.

Sun.

2. The Earth rotates on its axis.

The Earth revolves around the Sun in an elliptical orbit.

3. The rotation of the Earth causes day and night.

The revolution of the Earth causes the occurrence of seasons.

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Question B.2:

Vertical rays of the sun and slanting rays of the sun

ANSWER:

Vertical Rays

Slanting Rays

1. These are concentrated rays and carry more heat.

These are not concentrated and carry less heat.

2. These rays spread over a very small area on the Earth

These rays spread over a large area on the Earth.

3. The part of the Earth tilted towards the Sun receives vertical rays.

The part of the Earth tilted away from the Sun receives slanting rays.

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Question C.1:

We have alternate days and nights.

ANSWER:

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This is because the Earth rotates on its axis and completes one rotation in 24 hours. During this rotation, sunrays fall on half of the spinning Earth and this half of the Earth experiences day. The other darker side of the Earth experiences night during this time. With each spin, the Earth moves from darkness to light and vice versa.

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Question C.2:

Days and nights are not equal in length.

ANSWER:

The variation in the lengths of days and nights occurs because the Earth revolves around the Sun, with its axis always inclined at an angle of 66.5° . This causes longer days and shorter nights in summer in the southern hemisphere. This variation between the lengths of days and nights increases with increasing distance from the Equator to the poles.

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Question C.3:

21st June is the longest day in the Northern Hemisphere.

ANSWER:

On 21 June, the Northern Hemisphere is inclined towards the Sun. The rays of the Sun fall directly on the Tropic of Cancer, causing summer in the Northern Hemisphere and winter in the Southern Hemisphere. Because of this, we experience the longest day and the shortest night of the year on 21 June.

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Question C.4:

On 21st March and 23rd September days and nights are equal all over the world.

ANSWER:

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On 21 March and 23 September, the Sun shines vertically on the Equator; therefore, all places on the Earth experience equal days and equal nights. On 21 March, the Northern Hemisphere has spring, while the Southern Hemisphere has autumn. On 23 September, the Northern Hemisphere has autumn, while the Southern Hemisphere has spring.

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Question D.1:

The angle which the earth's axis makes with the plane of the earth's orbit is

- a. $23\frac{1}{2}^{\circ}$
- b. 60°
- c. $66\frac{1}{2}^{\circ}$
- d. 90°

ANSWER:

The correct answer is option (a).

Explanation: The Earth's axis is an imaginary line joining the North Pole and the South Pole. This axis is tilted at an angle of $23\frac{1}{2}^{\circ}$ with respect to the plane of the Earth's orbit. This tilt is also known as the inclination of the Earth's axis.

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Question D.2:

The time of the day just before sunrise is known as

- a. dusk
- b. dawn

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- c. twilight
- d. morning

ANSWER:

The correct answer is option (b).

Explanation: Dawn is the time just before sunrise. During this time, the sky starts getting filled with the Sun's glow and the rays of the Sun start piercing the darkness.

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Question D.3:

During summer the poles have continuous daylight for

- a. 6 months
- b. 3 months
- c. 1 months
- d. 2 months

ANSWER:

The correct answer is option (a).

Explanation: During summer, both the poles, i.e. the North and South Poles, experience continuous daylight for a period of six months; during winter, both the poles experience continuous darkness for a period of six months.

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Question D.4:

22nd December is the shortest day in the

- a. Southern Hemisphere
- b. regions near the poles
- c. regions near the Equator
- d. Northern Hemisphere

ANSWER:

The correct answer is option (d).

Explanation: On 22 December, the Northern Hemisphere turns away from the Sun and experiences the shortest day. On the contrary, at this time, the Southern Hemisphere inclines towards the Sun and therefore experiences the longest day.

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Question E:

A	B
Magellan	Causes deflection of winds
Summer	in Northern Hemisphere is on 21
Solstice	March
Spring Equinox	causes seasons
Rotation	proved that the earth is round
Revolution	is the longest day

ANSWER:

A	B
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Magellan	proved that the Earth is round
Summer solstice	is the longest day
Spring equinox	in the Northern hemisphere is on 21 March
Rotation	causes deflection of winds
Revolution	causes seasons

Explanation:

1. In olden days, people used to think that the Earth is like a flat disc. But Magellan proved that the Earth is round.
2. During the summer solstice, the Northern Hemisphere witnesses its longest day of the year.
3. On 21 March every year in the Northern Hemisphere, the spring equinox happens when the length of the day and that of the night are equal.
4. The rotation of the Earth is responsible for the deflection of winds.
5. The revolution of the Earth around the Sun causes the change in seasons (summer, winter, spring etc.) on the Earth.

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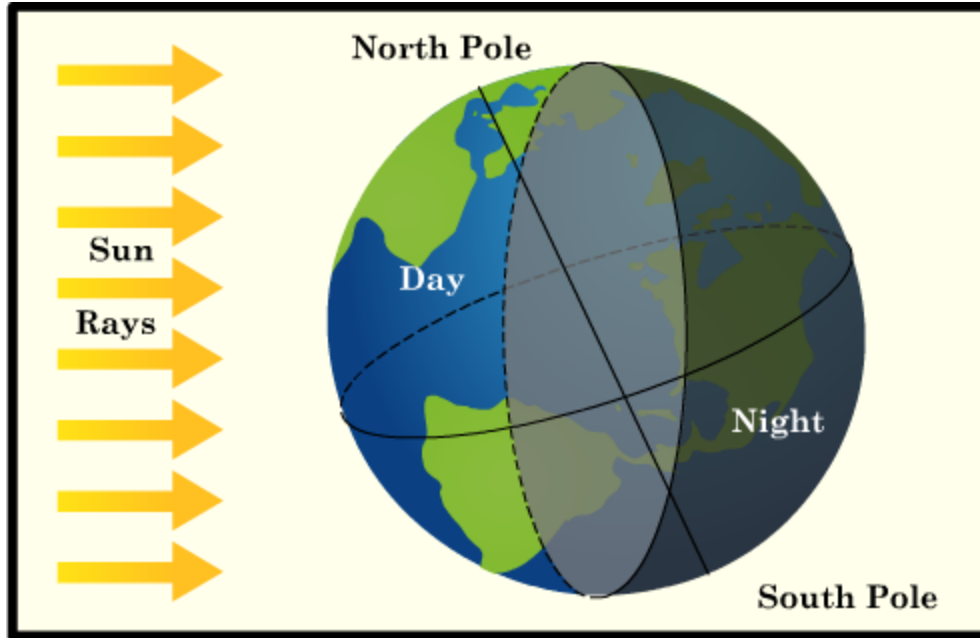
Question F:

Draw neat and labelled diagrams to show the occurrence of day and night and the occurrence of seasons

ANSWER:

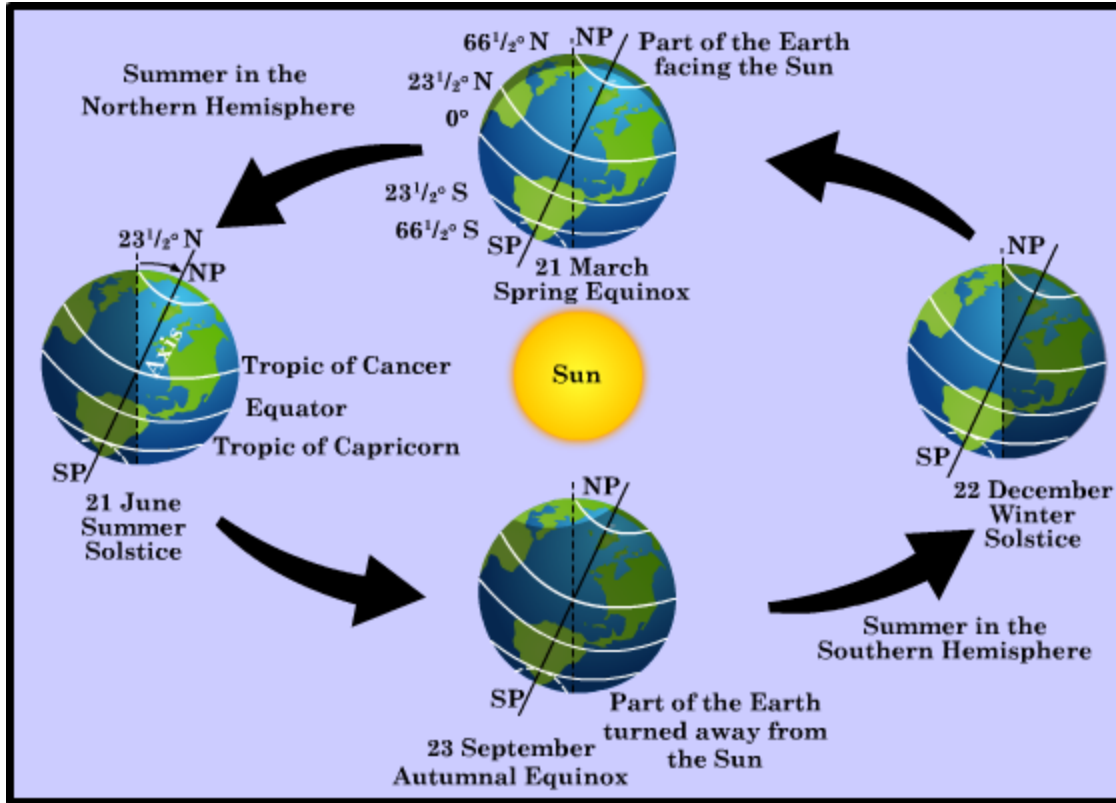
Occurrence of Day and Night

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Occurrence of Seasons

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- Chapter 2 Globe: Latitudes and Longitudes
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The National Council of Educational Research and Training is an autonomous organization of the Government of India which was established in 1961 as a literary, scientific, and charitable Society under the Societies Registration Act. The major objectives of NCERT and its constituent units are to: undertake, promote and coordinate research in areas related to school education; prepare and publish model textbooks, supplementary material, newsletters, journals and develop educational kits, multimedia digital materials, etc. Organise pre-service and in-service training of teachers; develop and disseminate innovative educational techniques and practices; collaborate and network with state educational departments, universities, NGOs and other educational institutions; act as a clearing house for ideas and information in matters related to school education; and act as a nodal agency for achieving the goals of Universalisation of Elementary Education. In addition to research, development, training, extension, publication and dissemination activities, NCERT is an implementation agency for bilateral cultural exchange programmes with other countries in the field of school education. Its headquarters are located at Sri Aurobindo Marg in New Delhi. [Visit the Official NCERT website](https://www.ncert.nic.in/) to learn more.

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