

CLASS 7

SCIENCE

REVISION NOTES

Revision Notes for Class 7 Science Chapter 12: Earth, Moon and the Sun

Quick revision notes summarizing all key concepts from Class 7 Science Chapter 12 "Earth, Moon and the Sun".

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Rotation: the Earth spins on its own axis from west to east, completing one turn in about 24 hours; this causes the cycle of **day and night** and makes the Sun and stars appear to move from east to west across the sky.

Revolution: the Earth moves around the Sun in a nearly circular orbit, taking about 365 days (one year) to complete one revolution.

The **Pole Star** lies almost directly above Earth’s rotational axis and so appears almost fixed in the sky, while other stars appear to circle around it through the night.

Stars appear to rise about **4 minutes earlier** each successive night, because of the Earth’s combined rotation and revolution; over a year this adds up to a full 24-hour (one-day) shift, so the same star pattern returns to the same position after about 365 days.

Different constellations are visible at different times of year because Earth’s revolution changes which direction in space faces us at night.

Seasons are caused by the tilt of Earth’s axis (about 23.5° to its orbital plane) combined with its revolution around the Sun — not by the Earth’s changing distance from the Sun.

When a hemisphere is tilted towards the Sun, it has longer days, more direct sunlight, and summer; when tilted away, it has shorter days, slanting sunlight, and winter — the two hemispheres always have opposite seasons at the same time.

At the **equinoxes** (around 21 March and 22/23 September), neither hemisphere is tilted towards the Sun, and day and night are close to equal (about 12 hours each) everywhere on Earth.

Near the poles, extreme tilt effects can cause continuous daylight (“midnight Sun”) or continuous darkness for weeks at a time around the solstices.

Solar eclipse: occurs on a new Moon day, when the **Moon comes between the Sun and the Earth**; the Moon’s small shadow (umbra) falls on a narrow strip of Earth, so totality is visible only briefly and from a small area; never look directly at a solar eclipse without proper eye protection.

Lunar eclipse: occurs on a full Moon night, when the **Earth comes between the Sun and the Moon**; the Earth’s large shadow falls on the Moon, so it is visible from a much wider area of Earth and is safe to view with the naked eye. The Moon often looks reddish (“blood moon”) during totality due to sunlight bending through Earth’s atmosphere.

The Moon can appear to exactly cover the much larger Sun during a total solar eclipse because **apparent size depends on both actual size and distance** — the Sun is about 400 times wider than the Moon but also about 400 times farther away, making their apparent sizes in the sky nearly equal.

Because the Earth rotates west to east, places to the **east** experience sunrise, noon and sunset earlier than places to the west at a similar latitude.

See also: [NCERT Solutions for Class 7 Science Chapter 12](#)

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