

CLASS 8

SCIENCE

REVISION NOTES

Revision Notes for Class 8 Science Chapter 11: Keeping Time with the Skies

Condensed revision notes for Class 8 Science Chapter 11: Keeping Time with the Skies - Curiosity textbook.

Condensed revision notes for Class 8 Science Chapter 11: Keeping Time with the Skies – Curiosity textbook.

Day is based on Earth's **rotation** on its own axis (≈ 24 hours).

Month is based on the **Moon's revolution** around Earth — its phase cycle (synodic month) is about **29.5 days**; its orbit relative to the stars (sidereal month) is about **27.3 days**.

Year is based on **Earth's revolution** around the Sun (≈ 365.25 days, hence leap years).

Moon phases are caused by how much of the Moon's sunlit half faces Earth as it orbits — not by Earth's shadow (that's a separate, rarer event: a lunar eclipse).

New Moon: Moon's dark side faces Earth, invisible/nearly invisible.

First Quarter: half-lit, waxing, overhead around sunset.

Full Moon: fully lit, visible all night from sunset to sunrise.

Last Quarter: half-lit, waning, overhead around sunrise.

Waxing = growing fuller (New $\rightarrow$ Full); **Waning** = shrinking (Full $\rightarrow$ New).

Tidal locking: the Moon's rotation and orbital periods are equal, so the same face always points towards Earth.

Luni-solar calendars periodically add an intercalary (extra) month to stay aligned with the solar year, since 12 lunar months (≈ 354 days) fall about 11 days short of a solar year.

Leap year: an extra day added roughly every 4 years to correct for the solar year being slightly more than 365 days.

Artificial satellites are used for communication, navigation, weather monitoring, scientific research, disaster management, and Earth observation.

Geostationary satellite: orbits once every 24 hours, matching Earth's rotation, so it stays fixed above the same point on the ground.

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