





Cosmic Science & Environmental Studies

Revision Notes & Key Concepts



1. What is Cosmic Science?

The study of the universe: Sun, Moon, stars, planets, galaxies, and celestial bodies.

Day-night cycle



Seasons



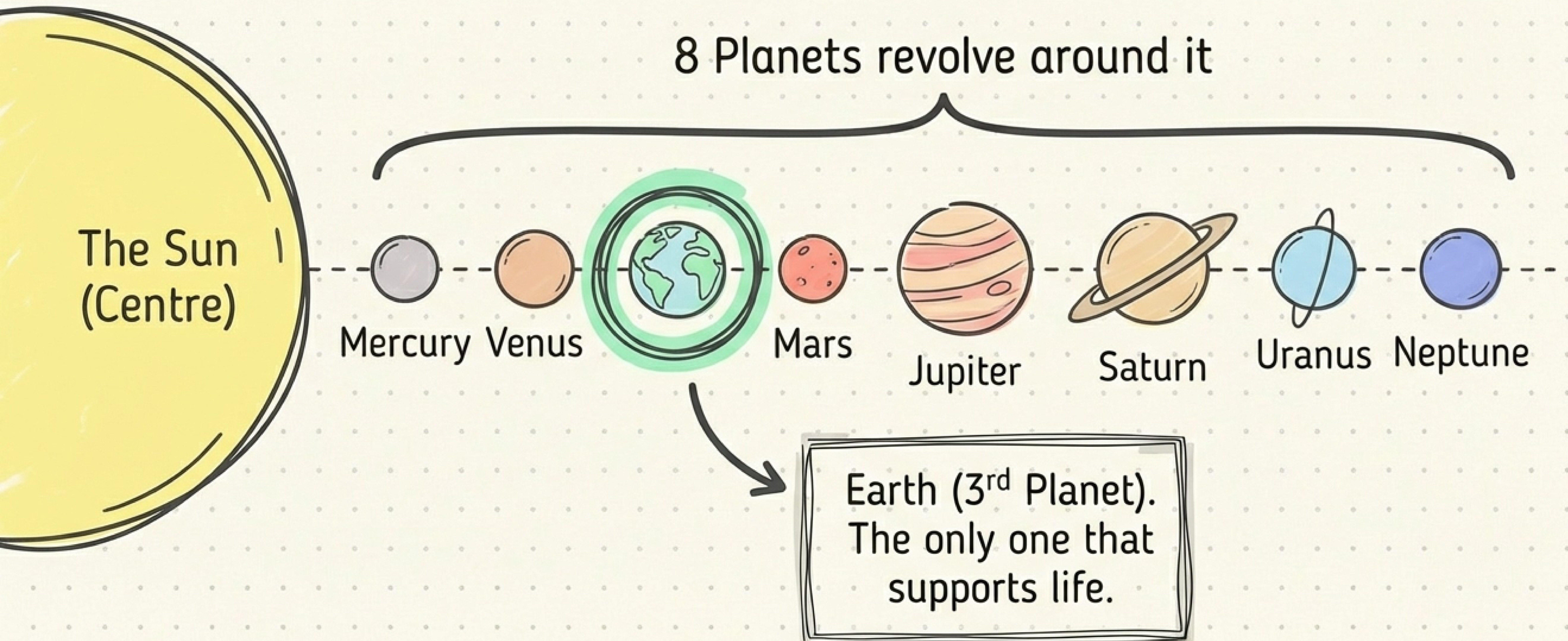
Eclipses



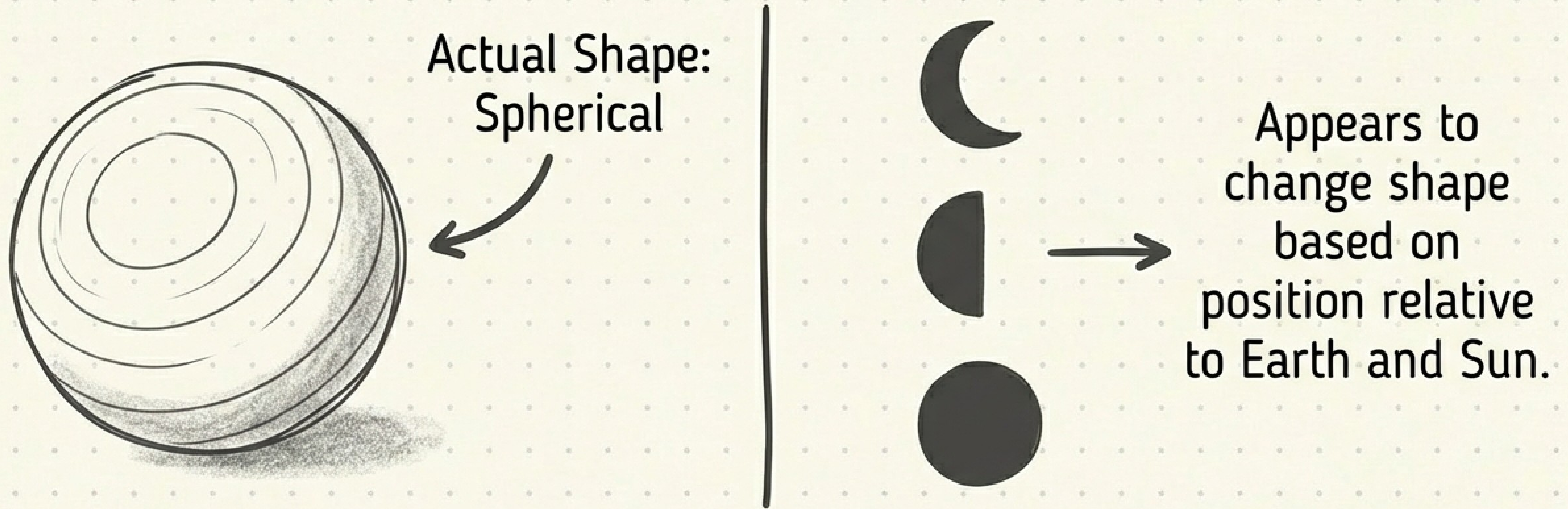
Phases of the Moon



2. The Solar System

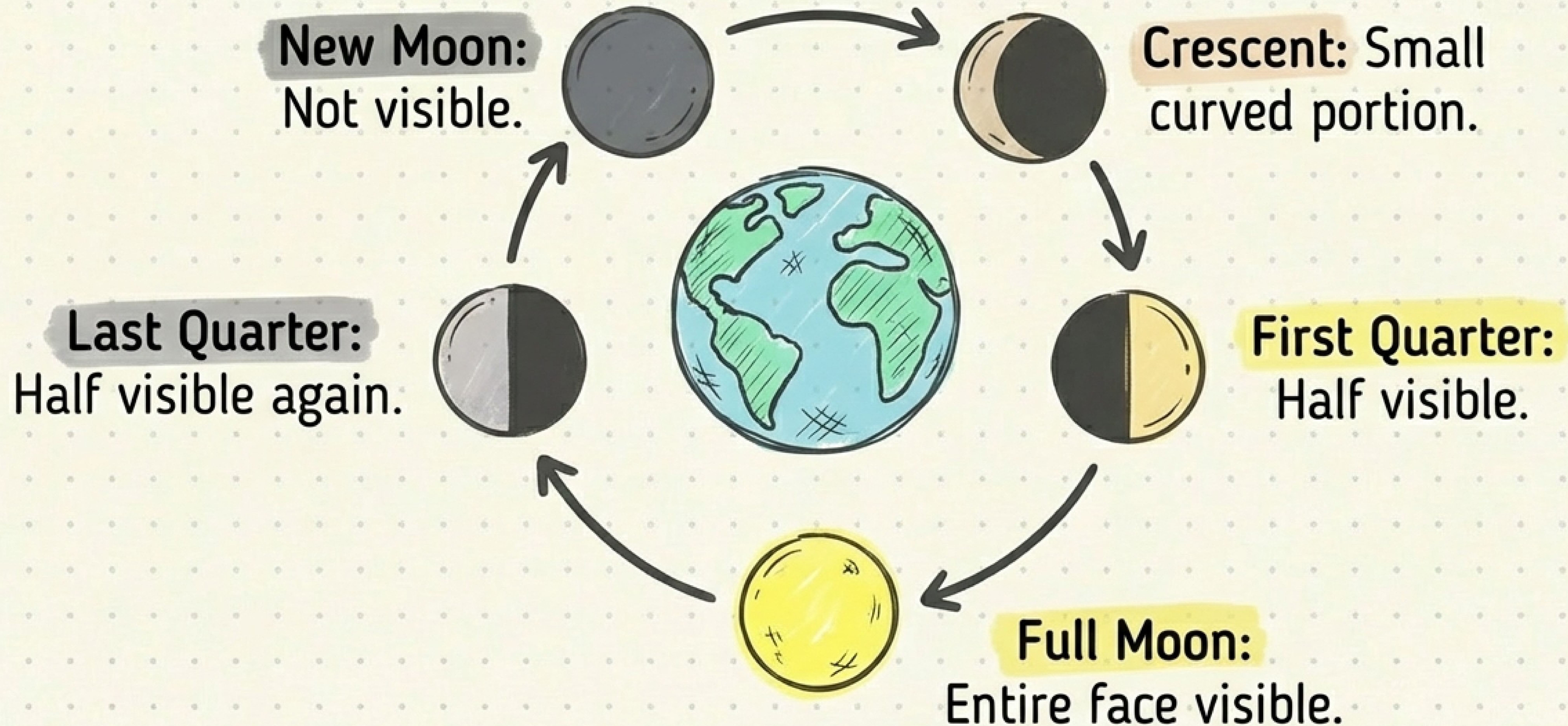


3. The Moon: Shape vs. Appearance



These visible changes are called the Phases of the Moon.

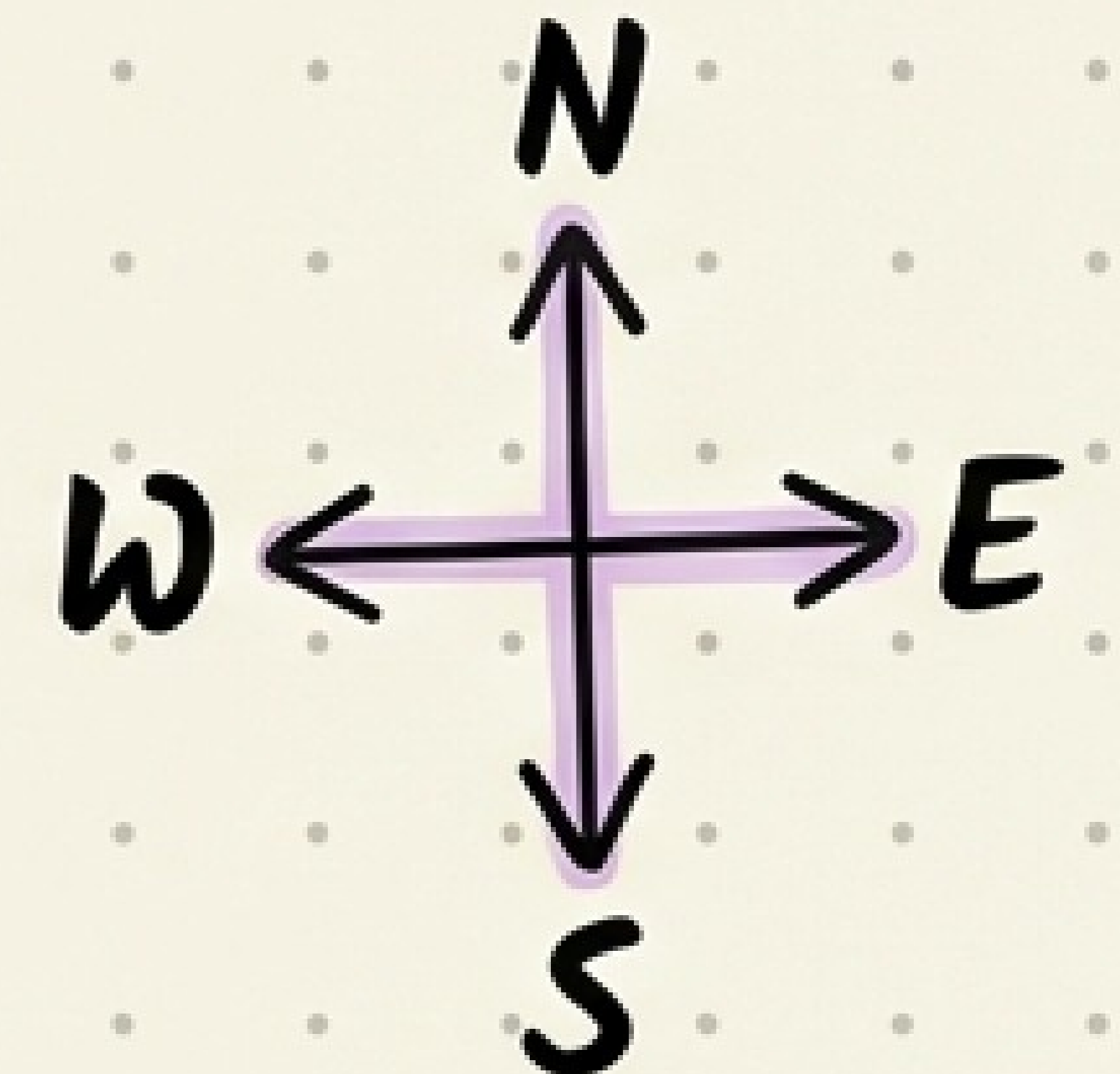
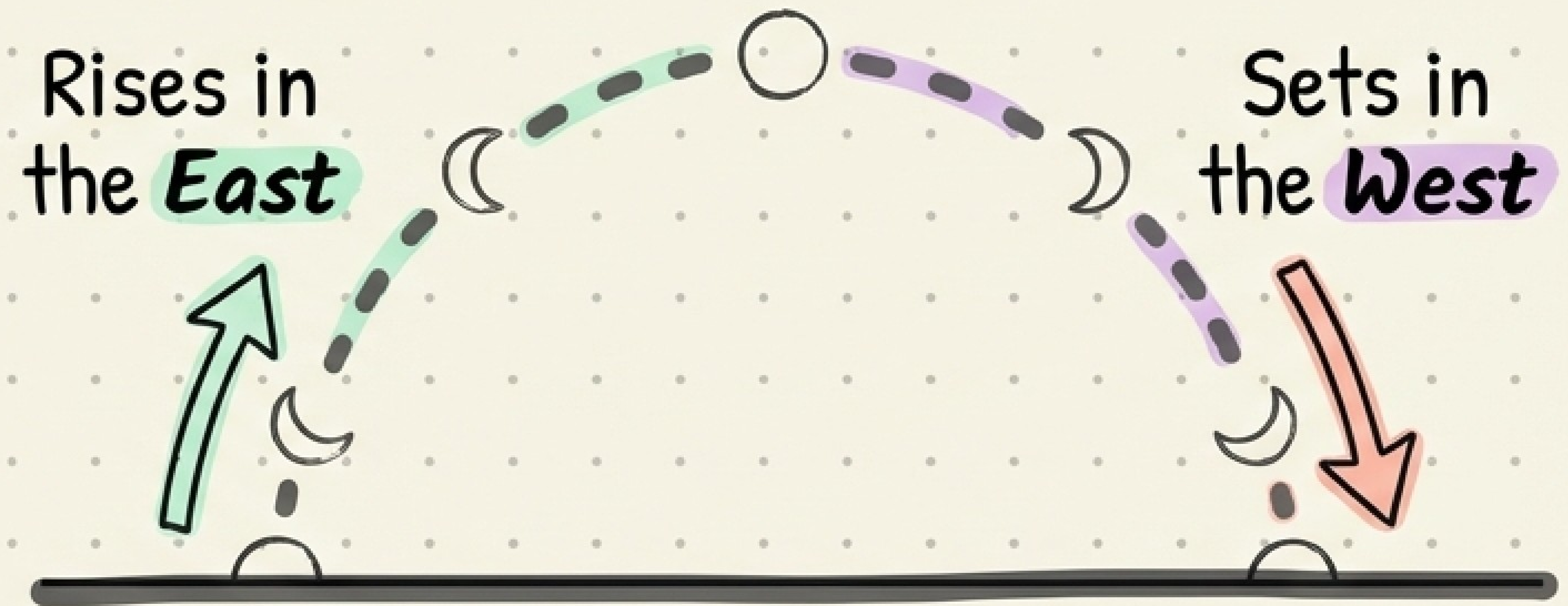
The Lunar Phases



4. Moon Mechanics: Movement



Time to revolve
around Earth.



The 50-Minute Shift

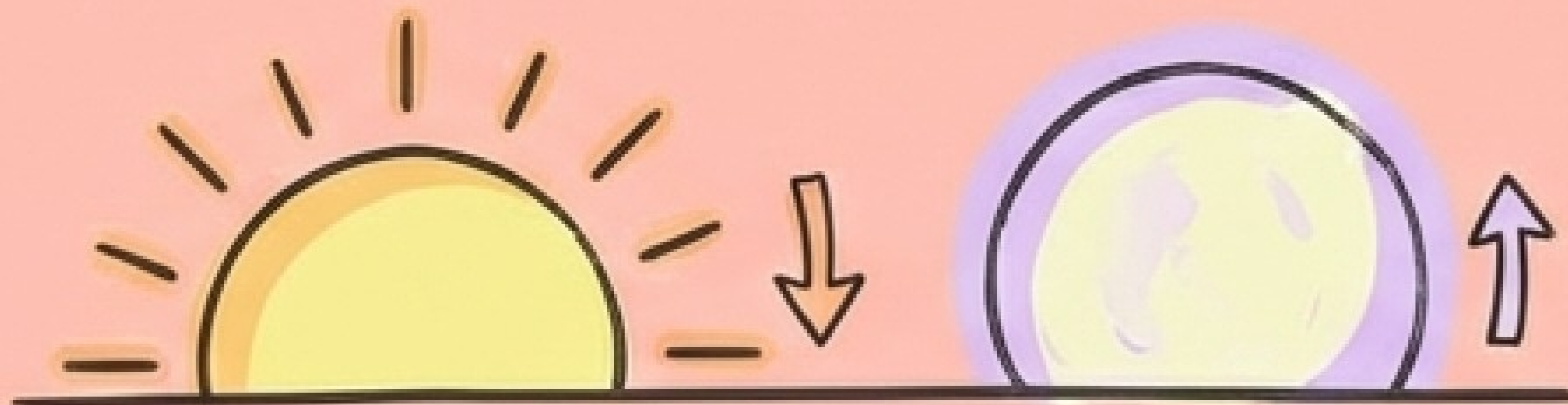
The Moon's rising time shifts approximately **50 minutes later** each day.

Why? Because the Moon is moving in its orbit around Earth while Earth rotates.



Phase Timing Cheat Sheet

Full Moon



Full Moon rises at **Sunset.**

New Moon



New Moon rises at **Sunrise.**

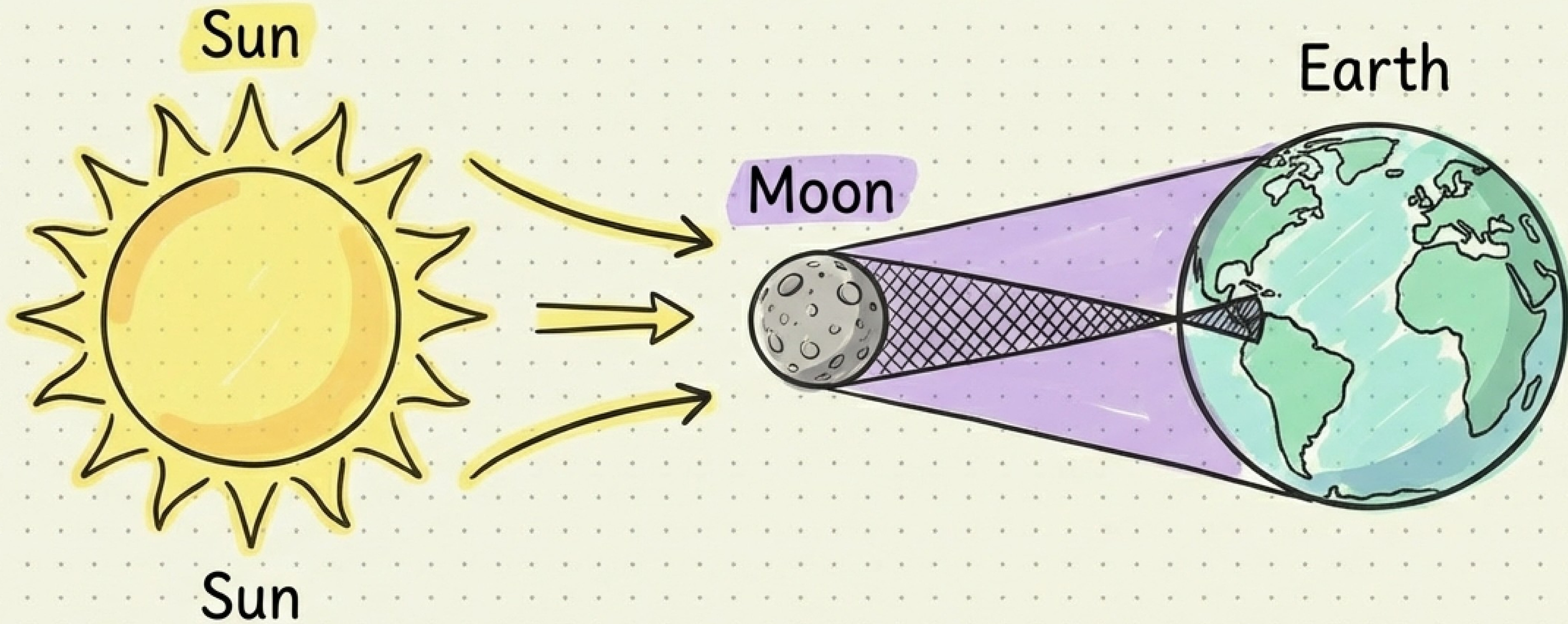
This forms a repeating monthly cycle.

5. Day and Night



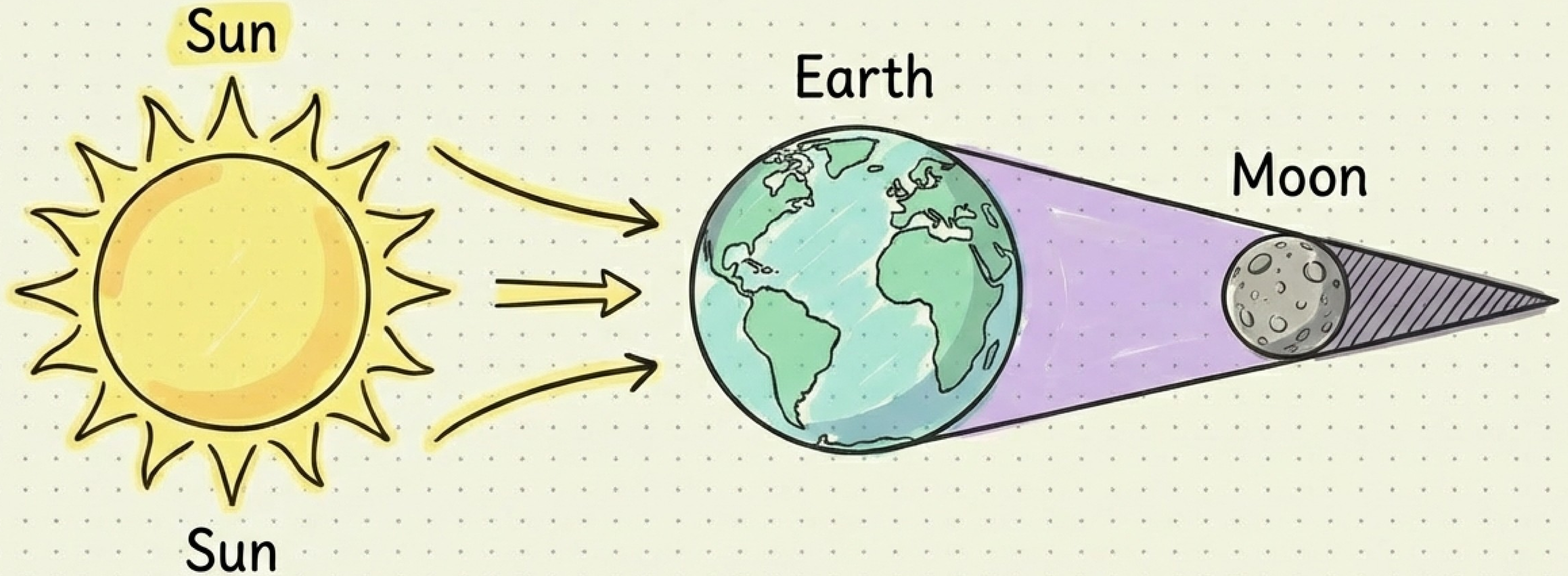
Day and Night occur due to **Rotation** (spinning), **NOT** Revolution (orbiting).

6. Solar Eclipse



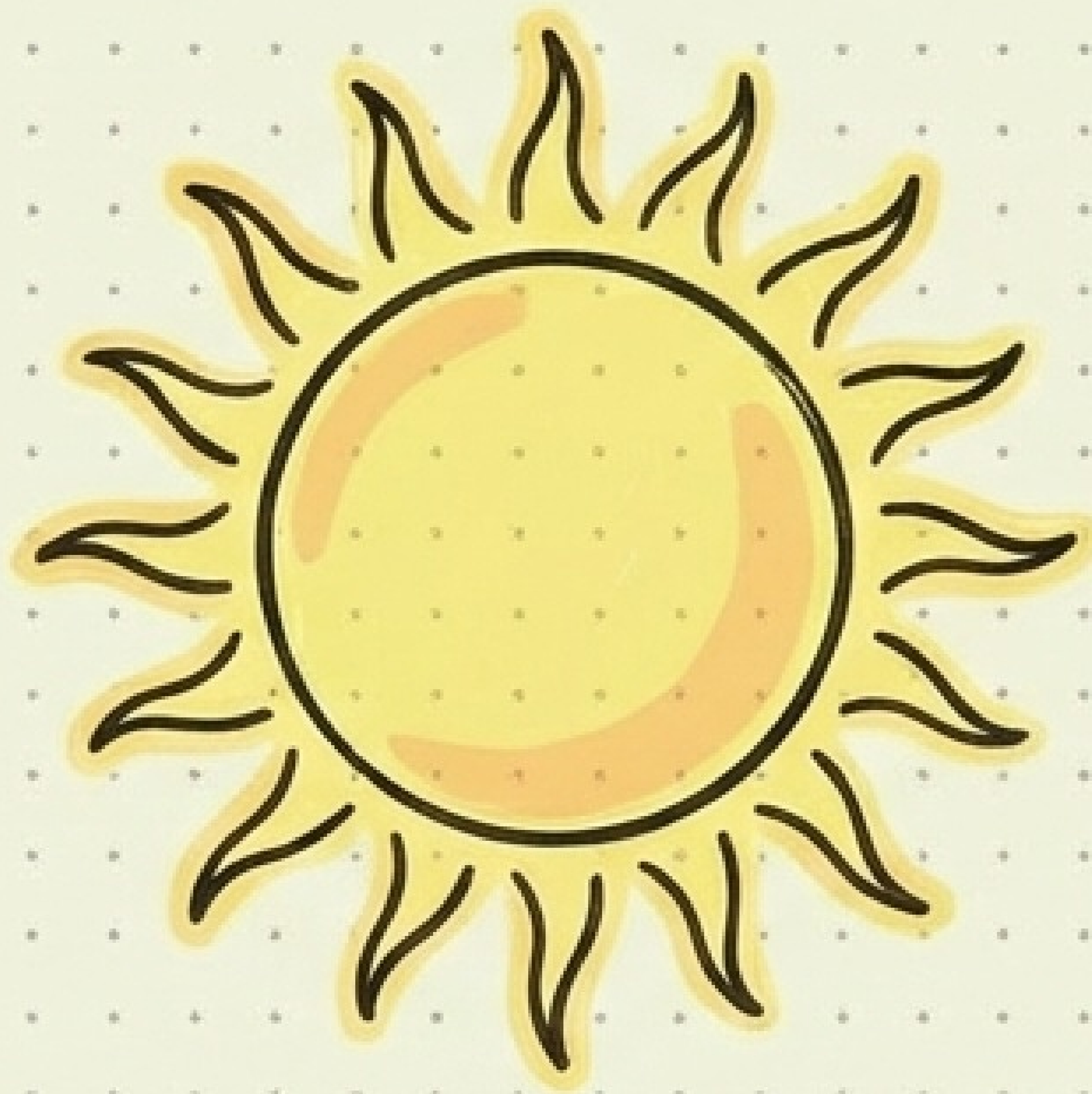
Occurs when the **Moon** passes between the Sun and Earth, blocking the Sun's light.

Lunar Eclipse



Occurs when **Earth** passes between the Sun and Moon, casting a shadow on the Moon.

7. Cosmic Impact on Environment



Provides heat and light necessary for life.



The Moon controls ocean tides.



Cosmic movements influence climate and seasonal patterns.

Knowledge Check: Question 1

The Moon completes one phase cycle in...

- a) 7 days
- b) 15 days
- c) 29.5 days
- d) 365 days



Knowledge Check: Question 2

When does the Full Moon rise?

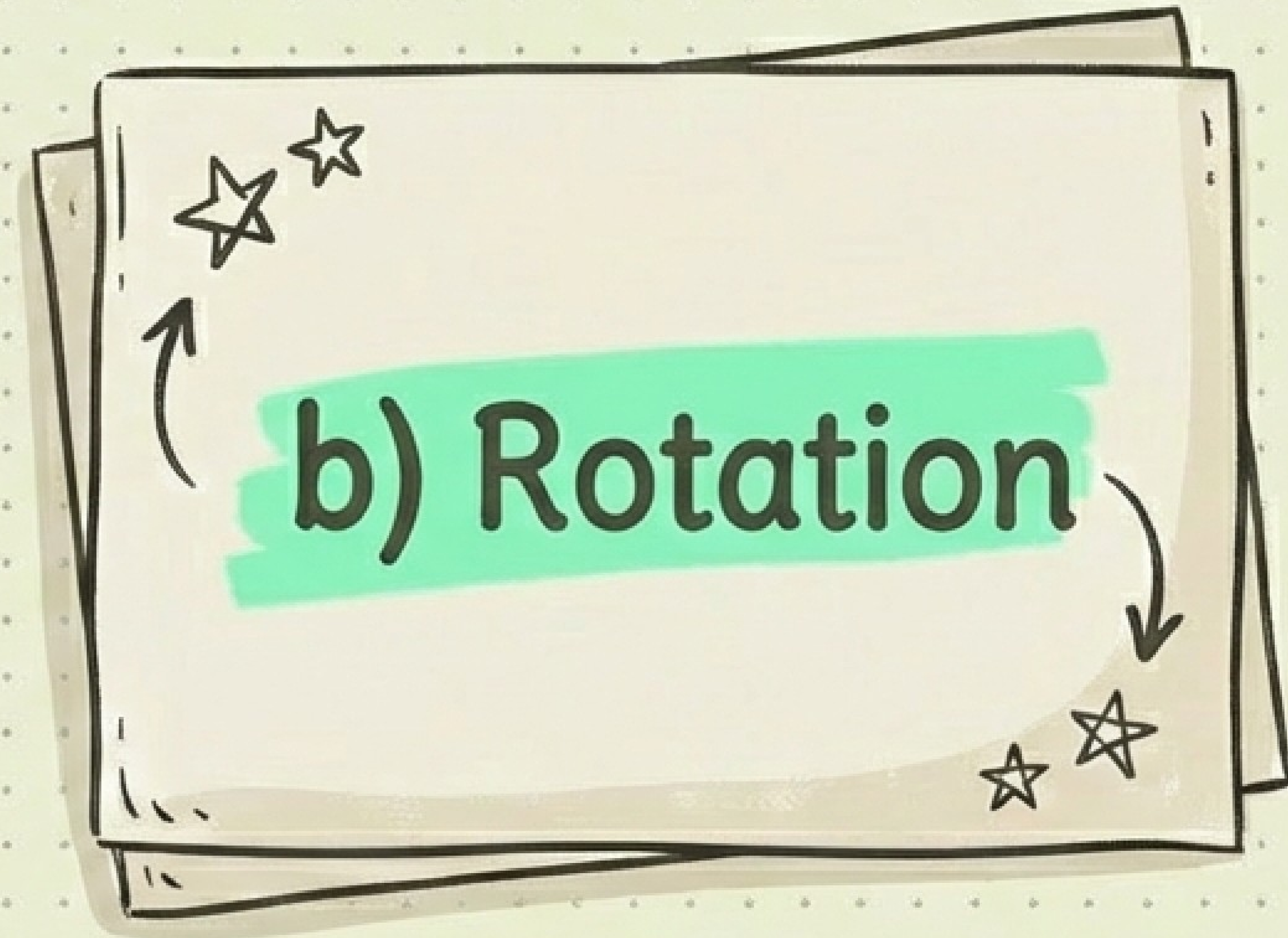
- a) Sunrise
- b) Sunset
- c) Midnight
- d) Noon



Knowledge Check: Question 3

Day and night occur due to...

- a) Revolution
- b) Rotation
- c) Eclipse
- d) Moon phases



Summary: The Key Numbers

24 Hours -
Earth's
Rotation
(Day/Night)

29.5 Days -
Moon's
Revolution
(One Phase
Cycle)

50 Minutes -
Daily shift in
Moonrise time

Sunset -
Rise time of
a Full Moon

Sunrise -
Rise time of
a New Moon

3rd Planet -
Earth's position
in the Solar
System