Nova’s Cosmic Flashcards: Earth and Space

Learning objective: To describe the movement of the Earth and other planets relative to the Sun in the solar system, and to describe the movement of the Moon relative to the Earth.

Use these flashcards to test your knowledge of our solar system. Read the term or question on the left, then check the answer on the right. For the Greater Depth questions, try to explain your reasoning clearly.

What is the name of the imaginary line that the Earth spins around?

An axis.

How long does it take for the Earth to complete one full orbit around the Sun?

Approximately 365 and a quarter days (one year).

Explain why we experience day and night on Earth.

The Earth rotates on its axis; the side facing the Sun experiences daylight, while the side facing away experiences night.

Define the term 'geocentric model'.

An outdated belief that the Earth was at the centre of the solar system with everything else orbiting it.

How long does it take for the Moon to complete one full orbit around the Earth?

Approximately 28 days.

Justify why the Sun appears to move across the sky during the day.

It is an illusion caused by the Earth’s rotation on its axis, making it seem as though the Sun is moving.

Compare and contrast the movement of the Earth and the Moon.

Both are spherical bodies that rotate and orbit, but the Earth orbits the Sun while the Moon orbits the Earth.

What might happen if the Earth stopped rotating on its axis?

One side of the Earth would be in constant daylight and extreme heat, while the other would be in permanent darkness and extreme cold.

Explain why we have leap years.

Because the Earth takes roughly 365.25 days to orbit the Sun, we add an extra day every four years to keep our calendar synchronised.

Nova the Owl asks: Why does the Moon appear to change shape throughout the month?

The Moon does not change shape; we see different amounts of its sunlit side as it orbits the Earth.