

Nova's Guide to the Solar System

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

Use this scaffold to write a scientific report about our solar system. Nova the owl wants you to explain how the Earth moves and why we experience day, night, and the passing of the seasons.

High above the Earth, Nova the owl looks down at our blue planet, which is just one of eight planets orbiting the Sun in our vast solar system.

Word bank: orbit · rotate · axis · spherical · heliocentric · consequently · furthermore · simultaneously · gravitational pull

1. The Earth's Rotation: Explain how the Earth moves on its axis by starting with: 'The Earth rotates on its axis once every twenty-four hours, which results in...' (2 marks)

2. Orbiting the Sun: Describe the Earth's journey around the Sun. Use the sentence starter: 'It takes approximately 365 days for the Earth to complete one full orbit, which is known as...' (2 marks)

3. The Seasons: Why do we have different seasons? Start your explanation with: 'The seasons occur because the Earth's axis is tilted, meaning that as it orbits the Sun...' (3 marks)

4. Planetary Comparison: How does Earth differ from the other planets in our solar system? Start with: 'While other planets in our solar system have different orbital periods, Earth is unique because...' (2 marks)

5. Scientific Evidence: Reflect on how we know these things. Start with: 'Astronomers have gathered evidence by observing...' (2 marks)

Extension challenge: Research the position of the Moon. Write a short paragraph explaining the relationship between the Earth and the Moon, and why the Moon appears to change shape in the night sky.