

Nova's Galactic Guide: Exploring Our Solar System

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

Use this scaffold to structure your report about our solar system. Nova the owl wants to know how much you have discovered about space! Use the word bank to help your writing flow, and ensure you include specific scientific terms.

High above the Earth, the Sun sits at the centre of our solar system, acting as a powerful gravitational anchor for all the planets that orbit it.

Word bank: orbit · spherical · axis · gravitational pull · rotate · celestial · consequently · furthermore · in contrast · illuminated

1. Introduction: Define what the solar system is and identify the star at its centre. Start with: The solar system is a vast collection of... (2 marks)

2. Planetary Motion: Explain how planets move around the Sun. Start with: Each planet follows a unique path known as an orbit, which... (3 marks)

3. Earth's Rotation: Compare how the Earth rotates on its axis to how it travels around the Sun. Start with: While the Earth travels around the Sun, it also rotates on its axis, which causes... (3 marks)

4. Comparing Planets: Explain why planets remain in the solar system rather than drifting away. Start with: The planets are held in their positions because... (3 marks)

5. Justify your answer: Why do we experience day and night on Earth? Use the term 'axis' in your explanation. (4 marks)

6. Critical Thinking: What might happen to the planets if the Sun's gravitational pull were to suddenly weaken? Explain your reasoning. (4 marks)

Extension challenge: Design a 'Travel Brochure' for a planet of your choice. Include a section explaining the length of a 'year' on that planet compared to Earth, justifying how its distance from the Sun affects its climate and the time it takes to complete one full orbit.