

Nova's Night Sky Adventure

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

Read the passage carefully and answer the questions below in full sentences.

Nova the barn owl sat on her favorite branch, gazing up at the shimmering stars. She loved studying the solar system. 'Did you know,' Nova hooted softly to her friends, 'that our Earth is constantly on the move?' The Earth travels in a giant, circular path around the Sun, which we call an orbit. It takes our planet exactly 365 days, or one whole year, to complete this journey. While it orbits the Sun, the Earth also spins like a spinning top on its own invisible axis. This spinning motion is what gives us day and night; when our part of the world faces the Sun, it is daytime, and when it rotates away, we experience night. Nova pointed her wing toward the sky. 'There are seven other planets in our solar system, all following their own paths around the Sun. They are held in place by a powerful force called gravity.' Whether it is a chilly winter evening or a bright summer morning, the Earth never stops its rhythmic dance through space, keeping us all safe as we travel through the galaxy together.

Word bank: orbit · solar system · axis · planet · astronomy · gravity

1. How long does it take for the Earth to complete one full orbit around the Sun? (1 mark)

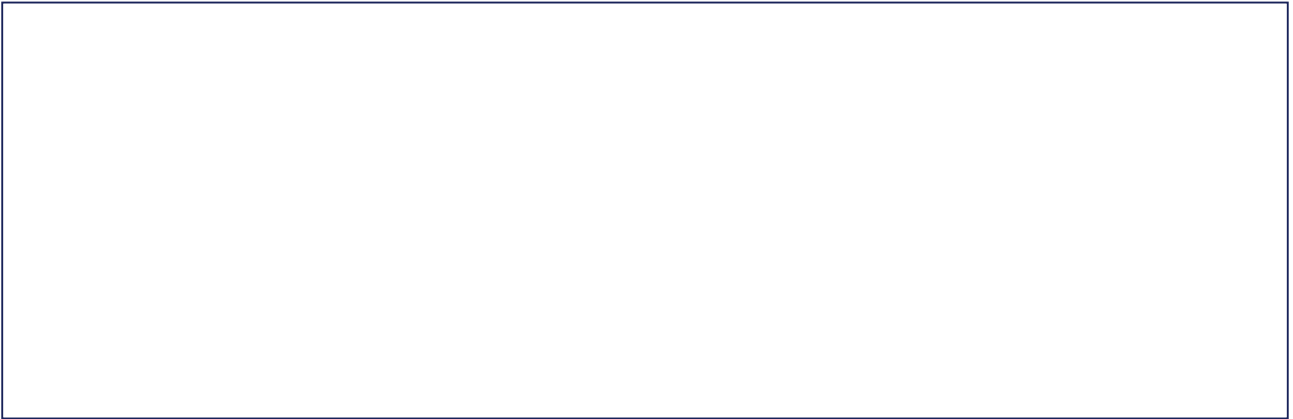
2. According to the text, what causes us to have day and night? (2 marks)

3. Why does Nova describe the Earth's movement as a 'rhythmic dance'? (2 marks)

4. Based on the text, what would happen if the Earth stopped spinning on its axis? (2 marks)

5. Nova finds space fascinating. Why do you think it is important for scientists to study the movement of planets? Explain your answer. (3 marks)

Draw: Draw a diagram showing the Earth orbiting the Sun. Make sure to include arrows to show the direction of the orbit and the Earth spinning on its axis.



Extension challenge: Research one other planet in our solar system. Write three facts about it and explain how long it takes that planet to orbit the Sun compared to Earth.