

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 about our solar system and answer the questions below in full sentences.

Nova the barn owl loves to perch on the highest branch of the ancient oak tree to watch the stars. One chilly evening, she explained to her friends that we live on Earth, which is a large, spherical planet. Earth is part of a magnificent solar system that orbits the Sun, our local star. Nova pointed her wing toward the horizon. She explained that Earth does not stay still; it spins on its own axis once every 24 hours, which is why we have day and night. As the side of Earth facing the Sun experiences daylight, the opposite side is cast into the darkness of night. While Earth rotates, it also makes a much longer journey, travelling in a giant circular path around the Sun. This trip takes approximately 365 days to complete, creating our calendar year. Nova reminded everyone that the Sun is the centre of our system, holding all the planets in their places with its powerful gravitational pull. Looking up, she marvelled at how this constant, rhythmic dance keeps our world moving through the vast darkness of space.

Word bank: orbit · axis · spherical · solar system · rotation · gravity

1. How long does it take for the Earth to complete one full rotation on its axis? (1 mark)

2. What force does the Sun use to hold the planets in their places? (1 mark)

3. Why do we experience both day and night on Earth? (2 marks)

4. Based on the text, what is the main difference between Earth's rotation and its orbit? (2 marks)

5. Nova calls the movement of the planets a 'rhythmic dance'. Why do you think she uses this phrase to describe the solar system? (3 marks)

Draw: Draw a diagram of the Earth orbiting the Sun. Make sure to include an arrow showing the Earth spinning on its axis and label the side facing the Sun as 'Day' and the opposite side as 'Night'.



Extension challenge: Research the names of the other seven planets in our solar system and list them in order of their distance from the Sun.