

Nova's Stargazing Mission: The Solar System

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

Read each question carefully and use your knowledge of the solar system to answer. Nova the owl is counting on you to help her map the night sky!

Nova is perched high in the branches, looking through her telescope. She knows that our solar system is a busy place, with eight planets all travelling around a giant star at the centre. She also knows that these planets are held in their paths by the invisible pull of gravity.

Word bank: Sun · orbit · planet · axis · Earth · spherical · gravity

1. Name the star at the centre of our solar system and explain why the planets stay near it rather than floating away into deep space. (2 marks)

2. How long does it take for the Earth to complete one full orbit around the Sun? What do we call this period of time on Earth? (2 marks)

3. True or False: The Earth is a perfect cube shape. Use your knowledge of space to correct the statement if it is false. (2 marks)

4. Explain the difference between the Earth rotating on its axis and the Earth orbiting the Sun. What does each movement cause? (3 marks)

5. If a rocket costs £450 to launch a small satellite and we need to launch 6 satellites to map the planets, what is the total cost in pounds? (2 marks)

Draw: Draw a diagram of the Sun and the Earth. Use arrows to show the path of the Earth's orbit and show the Earth spinning on its axis.



Extension challenge: Nova wants to know how many planets are in our solar system. List them in order starting from the one closest to the Sun. Can you create a mnemonic to help you remember the order?