

## Year 4 Science Assessment: Our 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. Write your answers clearly in the spaces provided. You have 30 minutes to complete this assessment.

Nova the barn owl loves to sit on the tallest oak tree at night to study the sky. She knows that we live on a planet that is constantly moving. By understanding how the Earth moves in relation to the Sun and the Moon, we can explain why we have days, nights, and different times of the year.

*Word bank: Sun · Earth · Orbit · Rotate · Axis · Solar System · Gravity · Moon*

**1. Nova observes that the Sun appears to rise in the east and set in the west. Explain which movement of the Earth causes this to happen. (2 marks)**

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**2. How long does it take for the Earth to complete one full orbit around the Sun? Give your answer in days. (1 mark)**

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**3. Name the force that keeps the planets in their orbit around the Sun. (1 mark)**

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**4. There are eight planets in our solar system. List three of them, excluding Earth. (3 marks)**

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**5. Describe the difference between the Earth 'rotating' on its axis and the Earth 'orbiting' the Sun. (4 marks)**

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**6. Why do we see the Moon at night even though it does not produce its own light? Explain the relationship between the Sun, the Moon, and the Earth. (4 marks)**

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7. Imagine you are an astronaut travelling through space. Write a short journal entry (5 sentences) describing what you see outside your window. Include the Sun, at least two planets, and mention the effect of gravity on your movement. (5 marks)

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8. If a space mission costs £4,500 to launch a small satellite, and a space agency plans to launch 3 satellites, what is the total cost in pounds? (5 marks)

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**Draw:** Draw a diagram of the Earth orbiting the Sun. Make sure to label the Earth, the Sun, and show the path of the orbit with a dashed line.



*Extension challenge: Total: /25*