

Year 6 Science Assessment: Earth and Space

Learning objective: To assess knowledge of the solar system, planetary movement, and the scientific evidence for spherical bodies.

Read each question carefully. Answer in full sentences where required. Use the provided word bank to help you with your scientific terminology.

Nova the barn owl is stargazing from the top of an old oak tree. She is recording the position of the planets and observing how the Earth moves in relation to the Sun. Max the monkey is helping her by calculating the time it takes for the Earth to complete one full turn.

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

1. Explain why the Earth is described as a spherical body. How do we know it is not flat? (2 marks)

2. What is the difference between the Earth's rotation on its axis and its orbit around the Sun? How long does each process take? (3 marks)

3. Name all eight planets in our solar system in order, starting from the one closest to the Sun. (4 marks)

4. Max the monkey notices that the Sun appears to move across the sky during the day. Explain why this happens even though the Sun is stationary relative to the Earth. (3 marks)

5. Explain the role of gravity in keeping the planets in orbit within our solar system. (3 marks)

6. Why do we experience different seasons throughout the year on Earth? Include the effect of the Earth's tilt in your explanation. (5 marks)

7. If a rocket costs £1,250,000 to launch and it carries 5 identical satellites, what is the cost to launch each individual satellite? (5 marks)

Draw: Draw a diagram showing the Earth, the Sun, and the Moon. Label the orbits and indicate which way the Earth rotates.



Extension challenge: Total: /25