

Year 6 Science Assessment: Earth and Space

Learning objective: To demonstrate knowledge of the solar system, planetary movement, and the scientific evidence for a spherical Earth.

Read each question carefully. Use your scientific knowledge to provide clear and accurate answers. Ensure you use correct scientific terminology.

Nova the barn owl is perched on the branch of an ancient oak tree, gazing up at the night sky. She is mapping the positions of the planets and reflecting on how they move through space. Max the monkey is busy nearby, trying to calculate how long it takes for the Earth to complete one full journey around the Sun.

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

1. Name all eight planets in our solar system in order, starting from the planet closest to the Sun. (2 marks)

2. Explain the difference between the Earth's rotation and the Earth's orbit. How long does each process take? (3 marks)

3. Nova observes that the Moon appears to change shape throughout the month. Explain why we see different 'phases' of the Moon. (3 marks)

4. In the past, many people believed in a 'geocentric' model of the universe. What does this mean, and which model do we use today? (3 marks)

5. Describe two pieces of evidence that prove the Earth is spherical rather than flat. (4 marks)

6. If a space mission to transport supplies to a lunar base cost £4,500,000, and the budget was shared equally between 5 international agencies, how much would each agency contribute? Show your working. (5 marks)

7. Why do we experience day and night on Earth? Use the term 'axis' in your explanation. (5 marks)

Draw: Draw a diagram showing the relative positions of the Sun, Earth, and Moon during a solar eclipse. Label each object clearly.



Extension challenge: Total: /25