

Grade 4 Science Assessment: Earth and Space

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

Read each question carefully. Use your scientific knowledge to provide clear and accurate answers. Write in full sentences where indicated.

Nova the barn owl is observing the night sky from her perch in the old oak tree. She notices that the Sun disappears in the evening and the Moon appears, while the stars seem to move slowly across the sky throughout the night.

Word bank: Orbit · Rotate · Axis · Solar System · Spherical · Gravity · Day and Night

1. Nova knows the Earth is spherical. Give two pieces of evidence or observations that suggest the Earth is a sphere. (2 marks)

2. Explain why we experience day and night on Earth. Use the words 'rotate' and 'axis' in your answer. (3 marks)

3. How long does it take for the Earth to complete one full orbit around the Sun? What is this period of time called? (2 marks)

4. Max the monkey is trying to calculate the number of planets in our solar system. List the eight planets in order, starting from the one closest to the Sun. (4 marks)

5. Describe the relationship between the Moon and the Earth. How long does it take for the Moon to orbit the Earth? (3 marks)

6. Why do the Sun and the Moon appear to move across the sky during the day and night? Does the Sun actually move around the Earth? Explain your reasoning. (4 marks)

7. Imagine you are explaining to a friend why we have different seasons on Earth. Write a paragraph explaining the role of the Earth's tilt on its axis as it orbits the Sun. Use your scientific vocabulary to make your explanation clear. (5 marks)

Draw: Draw a diagram showing the Earth orbiting the Sun. Label the Sun, the Earth, the Earth's axis, and draw an arrow to show the direction of the orbit.



Extension challenge: Total: /25