Nova’s Springtime Science Discovery

Learning objective: To understand the biological and environmental changes that occur during the spring season.

Read the passage below carefully and answer the questions using evidence from the text.

As the Earth tilts on its axis towards the Sun, spring arrives, bringing warmer temperatures and longer daylight hours. Nova the barn owl watches from her oak tree as the landscape transforms. The increase in sunlight triggers photosynthesis in plants, which encourages new growth after the cold winter months. Below her, seeds tucked deep within the soil begin the process of germination, sensing the moisture and rising heat. It is a busy time for the local ecosystem. Bea the honeybee emerges from her hive, searching for the first nectar-rich blossoms of the year. Meanwhile, many bird species complete their migration, returning to their nesting grounds to raise their young. The change in season is not just about warmth; it is a biological signal. The extended daylight gives plants more energy to grow, providing the essential food sources needed for insects and animals to thrive. Nova notes that the delicate balance of spring is the foundation for a healthy, vibrant summer. Everything in nature is interconnected, from the smallest sprouting seedling to the busy insects waking from their winter slumber.

Word bank: germination · photosynthesis · migration · equinox · ecosystem

1. What are two factors mentioned in the text that trigger the start of spring? (2 marks)

2. According to the passage, why do many bird species return to their nesting grounds at this time of year? (2 marks)

3. Why is the increase in daylight hours particularly important for plants? (2 marks)

4. How does the activity of Bea the honeybee demonstrate that the ecosystem is interconnected? (3 marks)

5. Nova describes spring as a 'biological signal'. Why do you think she uses this phrase? Justify your answer using the text. (3 marks)

Draw: Draw a diagram of a garden in spring. Include a seedling germinating in the soil, a bee visiting a flower, and the sun shining brightly to represent the energy plants need for photosynthesis.

Extension challenge: Research the term 'vernal equinox'. Write a short paragraph explaining why this event is significant for the changing of the seasons in the Northern Hemisphere.