Spring Science Assessment: Life Cycles and Growth

Learning objective: To demonstrate understanding of life cycles, plant reproduction, and seasonal changes in the natural world.

Read each question carefully. Use your scientific knowledge to provide detailed answers. Ensure you use correct terminology where appropriate.

As spring arrives, the world begins to wake up. Bea the honeybee notices the temperature rising and flowers starting to bloom. In the meadow, seeds that have been dormant all winter begin to sprout, while birds build nests to prepare for their new arrivals. This seasonal shift is a vital part of the life cycle for many living things.

Word bank: germination · pollination · fertilisation · stamen · carpel · life cycle · photosynthesis · adaptation

1. Bea the honeybee visits a flower to collect nectar. Explain the process of pollination and why it is essential for the plant's life cycle. (3 marks)

2. Name the two main parts of the flower involved in reproduction and describe their functions. (4 marks)

3. What are the three main conditions a seed requires to begin the process of germination? (3 marks)

4. Nova the owl has noticed that many animals are born in the spring. Suggest two reasons why spring is an advantageous time for young animals to be born compared to winter. (4 marks)

5. Explain how a plant produces its own food. Include the names of the reactants and products involved in this process. (6 marks)

6. Extended Writing Task: Describe the life cycle of a flowering plant, starting from a seed and ending with the production of new seeds. Use scientific vocabulary. (5 marks)

Draw: Draw a labelled diagram of a flower, clearly identifying the stamen, carpel, petals, and sepals.

Extension challenge: Total: /25. Imagine you are a scientist observing a woodland area. Write a short paragraph explaining how a change in spring rainfall might affect the local plant population.