

## Springtime Science with Bea the Bee

*Learning objective: To identify and describe the functions of parts of flowering plants, understand the life cycle of plants, and explain the importance of pollination during the spring season.*

Read each question carefully and use your knowledge of plant biology and the spring season to provide detailed, scientific answers.

*Word bank: pollination · germination · photosynthesis · stamen · carpel · nectar · sepal · life cycle*

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

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**2. Compare and contrast the roles of the stamen and the carpel in a flowering plant. Why are both required for reproduction? (3 marks)**

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**3. Spring provides warmer temperatures and longer daylight hours. Justify why these environmental changes are crucial for the germination of seeds. (2 marks)**

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**4. What might happen to the local ecosystem if all the spring-flowering plants were removed from a meadow? (3 marks)**

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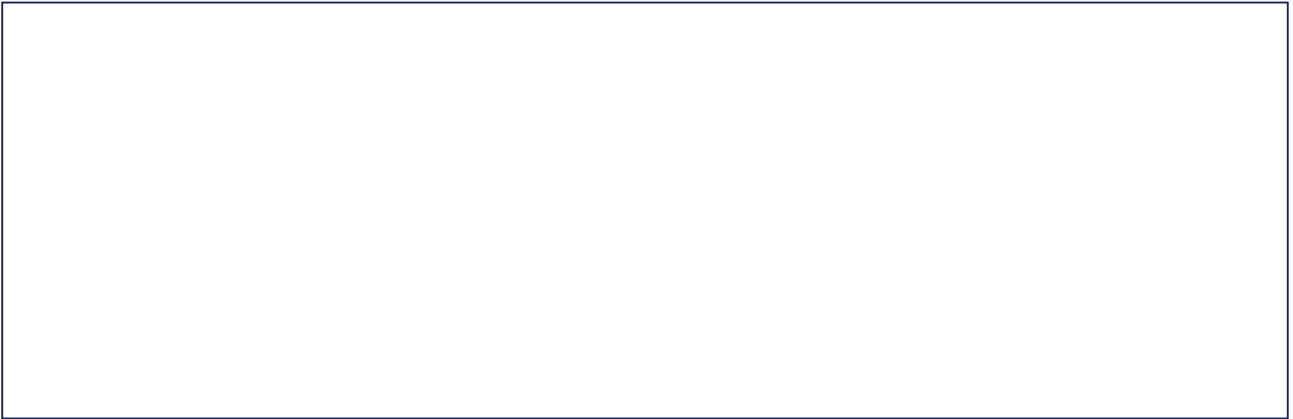
**5. A gardener buys a packet of seeds for £2.45 and a bag of soil for £4.75. If they pay with a £10 note, calculate the change and explain how the gardener should care for the seeds to ensure they successfully germinate. (3 marks)**

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**Draw:** Draw a scientific diagram of a flowering plant. Label the roots, stem, leaves, petals, stamen, and carpel. Add an arrow showing where a bee might land to collect nectar.



*Extension challenge: Design an experiment to test which location in your classroom provides the best conditions for a seed to germinate. Write a hypothesis, list your variables, and explain how you will ensure your results are fair and reliable.*