

Nova's Springtime Ecosystem Investigation

Learning objective: To identify and describe the life cycle of a flowering plant and observe the signs of seasonal change in the UK.

Use the drawing space to create a detailed scientific diagram of a spring garden. Label your drawing using the provided word bank. Ensure your diagram shows both the plant's structure and the environmental factors that encourage growth during the spring season.

Draw: Create a clear, scientific diagram on A4 paper. Include: A large, central flowering plant with roots visible in the soil. Add a detail bubble showing a close-up of the flower's internal reproductive organs (stamen and carpel). Include a honeybee near the petals. Use a clean, labelled style similar to a biology textbook, with arrows pointing to specific plant structures.



Label words: stamen · carpel · sepal · photosynthesis · germination · pollination · nectar · stomata

Steps:

1. Step 1: Draw a cross-section of a flowering plant. Label the reproductive parts, including the stamen and carpel. Explain the function of the stamen in the process of pollination.
2. Step 2: Draw a seedling emerging from the soil. Label this as 'germination'. What are the three essential conditions a seed requires to germinate?

3. Step 3: Sketch a honeybee visiting your flower. Describe the symbiotic relationship between the plant and the pollinator.
4. Compare and contrast: How do the environmental conditions of spring differ from winter in terms of light intensity and temperature, and why does this trigger plant growth?
5. Justify your answer: Why is it crucial for a plant to have colourful petals and produce nectar during the spring months?
6. What might happen if the spring season arrived significantly earlier due to changing climate patterns? Consider the impact on pollinators like Bea the honeybee.