

Botanical Explorations with Nova the Owl

Learning objective: To describe the life cycles of flowering plants and identify the functions of different parts of a plant.

Use this writing scaffold to compose a scientific report on a plant of your choice. Use the word bank to help you include scientific terminology and ensure your explanation flows logically.

Plants are fascinating living organisms that have evolved ingenious ways to reproduce and thrive in their unique habitats.

Word bank: germination · pollination · fertilisation · stamen · carpel · photosynthesis · consequently · furthermore · in contrast · subsequently

1. Introduction: Identify your chosen plant and explain its significance in the ecosystem. Start by stating: 'The [plant name] is a remarkable specimen because...' (2 marks)

2. Plant Anatomy: Describe the primary functions of the roots, stem, and leaves. Start by stating: 'To survive, the plant relies on its roots to... while the leaves are responsible for...' (3 marks)

3. Reproduction: Explain the process of pollination and fertilisation in your plant. Start by stating: 'The reproductive cycle begins when...' (3 marks)

4. Seed Dispersal: Compare and contrast how your plant ensures its seeds travel away from the parent plant. Start by stating: 'Unlike other plants that rely on the wind, the [plant name] uses...' (3 marks)

5. Justification: Why is it vital for a plant to disperse its seeds as far away as possible from the parent plant? Justify your answer using scientific reasoning. (4 marks)

6. Critical Thinking: What might happen to the life cycle of your chosen plant if the population of pollinating insects were to decrease significantly? (4 marks)

Extension challenge: Nova the Owl has challenged you to design a 'Super Plant' that could survive on a planet with very little sunlight. Write a short paragraph explaining the unique adaptations your plant would need to perform photosynthesis and gather water in such extreme conditions.