Nova’s Autumnal Observation Log

Learning objective: To identify and explain the life cycle changes of deciduous trees and the environmental factors that trigger seasonal transitions.

Join Nova the barn owl on her evening patrol! Use this experiment-record template to document the changes in your local environment as the seasons transition into fall. Observe the trees, ground, and temperature to complete your findings.

Word bank: deciduous · chlorophyll · photosynthesis · dormant · temperature · adaptation · pigment

1. Tree Identification: Describe the appearance of a local deciduous tree. What color are the leaves and what is happening to them? (2 marks)

2. The Science of Color: Why do leaves change color in fall? Explain what happens to the green pigment (chlorophyll) inside the leaves. (3 marks)

3. Environmental Factors: Nova wants to know why trees lose their leaves. How does the change in daylight hours and temperature affect the tree's survival? (3 marks)

4. Life Cycle Stage: Based on your observations, is the tree preparing for a period of dormancy? Explain your reasoning. (2 marks)

5. Scientific Prediction: If the weather were to stay warm and sunny throughout November, how might this change the timeline of the tree's fall transition? (3 marks)

Extension challenge: Research a specific species of deciduous tree native to the UK. Create a small fact-file explaining how its seeds are dispersed during the fall months.