Nova’s Autumnal Observations: The Life Cycle of Trees

Learning objective: To understand the life cycle of flowering plants and deciduous trees, specifically focusing on the seasonal changes that occur during autumn.

Nova the barn owl has been watching the trees in the forest change as the days get shorter. Read the list of life cycle stages below. Your task is to sequence them correctly from 1 to 6 to show the life cycle of a deciduous tree starting from spring. Then, explain why the tree loses its leaves in autumn.

Word bank: Photosynthesis · Deciduous · Chlorophyll · Dormancy · Germination · Seed dispersal

1. Sequence these stages by numbering them 1-6: [ ] The tree enters dormancy for winter. [ ] A seed falls and begins germination. [ ] The tree grows new leaves in spring. [ ] The tree produces flowers or seeds. [ ] Leaves change colour and fall off in autumn. [ ] The tree grows taller and develops branches. (3 marks)

2. Why do deciduous trees stop producing chlorophyll in their leaves during the autumn months? (2 marks)

3. Explain why it is an advantage for a tree to drop its leaves before the harsh winter weather arrives. (2 marks)

4. Max the monkey wants to buy seeds for his garden. If one packet costs £1.25 and he buys 4 packets, how much does he spend in total? (2 marks)

5. Nova notices that squirrels collect nuts in autumn. How does this behaviour help the life cycle of the oak tree? (2 marks)

Draw: Draw a scientific diagram of a deciduous tree in autumn. Label the trunk, the remaining branches, and the fallen leaves on the ground. Add a small sketch of a seed or acorn near the roots.

Extension challenge: Research a local tree species. Write a short paragraph describing how its seeds are dispersed (e.g., by wind, animals, or water) to ensure the next generation of trees can grow.