Nova’s Fall Discovery Flashcards

Learning objective: To identify and describe the seasonal changes that occur in the UK during fall, specifically focusing on deciduous trees, animal behavior, and changes in daylight hours.

Read the front of the card to test your knowledge of fall science. If you are aiming for Greater Depth, try to explain the 'Why' behind each answer.

What is a deciduous tree?

A tree that sheds its leaves annually during the fall months.

Why do leaves change color from green to yellow, orange, or red?

As daylight decreases, trees stop producing chlorophyll (the green pigment used for photosynthesis), allowing other hidden pigments to become visible.

What is the term for animals like hedgehogs spending the winter in a deep, inactive sleep?

Hibernation.

Explain the process of migration in birds.

Birds travel long distances to warmer climates to find food and survive the colder winter conditions.

How does the length of daylight change as we move deeper into fall?

The days become shorter and the nights become longer as the Earth's tilt moves the UK further away from direct sunlight.

Define 'dormancy' in plants.

A period where a plant's growth and development temporarily stop to conserve energy during harsh conditions.

Why do trees drop their leaves in fall instead of keeping them?

Dropping leaves helps the tree conserve water and energy, and prevents branches from breaking under the weight of heavy snow or ice.

What is the name of the green pigment that helps plants create food using sunlight?

Chlorophyll.

Compare and contrast: How does an evergreen tree differ from a deciduous tree in fall?

Deciduous trees lose their leaves to save energy, whereas evergreens retain their leaves all year round.

Justify why many animals gather and store nuts or seeds during fall.

Animals must prepare for the winter months when food sources like fresh plants and insects become scarce or unavailable.

What might happen to an ecosystem if the fall season became significantly warmer for many years?

It might disrupt the cycle of migration, hibernation, and plant growth, potentially causing a mismatch in food availability for local wildlife.

Nova asks: If a tree stopped producing chlorophyll earlier than usual, how would that affect the timing of leaf fall?

It would likely cause the leaves to change color earlier and potentially drop sooner, as the tree begins its preparation for dormancy ahead of schedule.