

Nova's Autumn Discovery Flashcards

Learning objective: To identify and explain the seasonal changes occurring in autumn, focusing on plant life cycles, animal behaviour, and the Earth's orbit.

Use these flashcards to test your knowledge of autumn science. Read the front of the card, attempt to answer, and then check the definition provided.

Deciduous tree

A type of tree that sheds its leaves annually at the end of the growing season, typically in autumn.

Chlorophyll

The green pigment in leaves that absorbs light energy for photosynthesis; it breaks down in autumn, revealing other colours.

Hibernation

A state of deep inactivity where some animals, like hedgehogs, lower their body temperature and heart rate to survive winter food shortages.

Migration

The seasonal movement of animals from one region to another, often to find warmer climates or better food sources.

Autumnal Equinox

The point in the Earth's orbit when day and night are of approximately equal length, marking the start of autumn.

Dormancy

A period in a plant's life cycle when growth and development temporarily stop to survive cold weather conditions.

Why do leaves change colour in autumn?

As daylight decreases, trees stop producing chlorophyll. This allows other pigments, such as carotenoids (yellow/orange), to become visible.

Explain why many birds migrate during autumn

Birds migrate to escape dropping temperatures and the scarcity of insects and seeds, ensuring their survival during winter months.

Compare and contrast hibernation and dormancy

Both are states of reduced activity to conserve energy, but hibernation refers specifically to animals, while dormancy refers to plants or seeds.

Justify why deciduous trees shed their leaves

Losing leaves prevents water loss through transpiration when the ground is frozen and helps the tree conserve energy during the winter.

What might happen if a tree kept its leaves throughout a harsh winter?

The tree might lose too much moisture, and the weight of snow on broad leaves could cause branches to break.

Explain the relationship between the Earth's tilt and the change of seasons

As the Earth orbits the Sun, its tilt means different hemispheres receive varying amounts of direct sunlight, causing seasonal changes.