

Nova's Autumnal Equinox Quiz

Learning objective: To understand the seasonal changes in the UK, including the life cycles of plants, the behaviour of animals in autumn, and the Earth's position in relation to the Sun.

Join Nova the Barn Owl on a nocturnal quest through the woods! Read each question carefully and select the best answer. Remember to use your scientific vocabulary.

Answer Key: 1. B (Chlorophyll), 2. False, 3. Migration, 4. C (Deciduous), 5. True, 6. A (Shorter daylight hours), 7. True, 8. Dormancy, 9. B (To conserve energy), 10. False. Explanation for Greater Depth: Autumnal changes are triggered by the tilt of the Earth on its axis, leading to less direct sunlight and lower temperatures, which signals plants to withdraw nutrients from leaves.

Word bank: Deciduous · Hibernation · Equinox · Migration · Photosynthesis · Chlorophyll · Daylight · Dormancy

1. 1. What is the name of the green pigment in leaves that breaks down during autumn, revealing orange and yellow colours? A) Carotene B) Chlorophyll* C) Glucose D) Starch (1 mark)

2. 2. True or False: All trees lose their leaves during the autumn months. (1 mark)

3. 3. What is the scientific term for birds travelling long distances to warmer climates to find food during winter? (1 mark)

4. 4. Which term describes trees that shed their leaves annually? A) Evergreens B) Conifers C) Deciduous* D) Flowering (1 mark)

5. 5. True or False: Autumn occurs because the Earth is moving closer to the Sun in its orbit. (1 mark)

6. 6. Why do temperatures drop in the UK during autumn? A) Shorter daylight hours* B) The Earth stops rotating C) Clouds block the Sun D) The Moon is closer (1 mark)

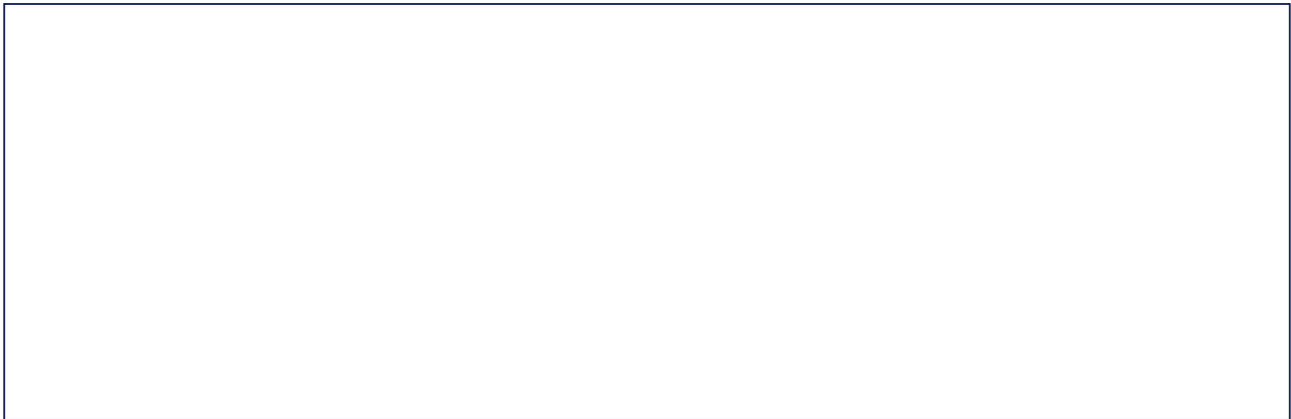
7. 7. True or False: Some animals, like hedgehogs, enter a state of hibernation to survive the lack of food in winter. (1 mark)

8. 8. What do we call the state of 'suspended animation' or rest that plants enter during the colder months? (1 mark)

9. 9. Why do squirrels gather and bury nuts in autumn? A) To decorate their homes B) To conserve energy and store food for winter* C) Because they are bored D) To help trees grow (1 mark)

10. 10. True or False: Photosynthesis increases in the UK during the month of October. (1 mark)

Draw: Draw a diagram of a tree in autumn. Label the roots, the trunk, and the falling leaves, and draw the Sun at a lower angle in the sky to show why the days are shorter.



Extension challenge: 1. Explain why deciduous trees shed their leaves rather than keeping them through winter. 2. Compare and contrast the strategies of a migratory bird and a hibernating mammal. 3. Justify your answer: Is a shorter day an advantage or a disadvantage for a plant? 4. What might happen to the local food web if autumn temperatures remained as high as summer temperatures? 5. Research the 'Autumnal Equinox'; why does it have this name? 6. Design an experiment to measure the rate of leaf fall in your local park over a fortnight.