

Adaptations in the Natural World with Nova the Owl

Learning objective: To identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Read each question carefully. Use your scientific knowledge of habitats and biological adaptations to provide detailed answers. Remember to explain the 'why' behind each adaptation.

Nova the owl is observing the woodland at night. She notices that different creatures have evolved specific features to help them live successfully in their homes. Think about the physical and behavioural changes that allow living things to thrive in their specific ecosystems.

Word bank: evolution · environment · camouflage · predator · prey · characteristic · survive · inherited

1. Nova observes a polar bear in the Arctic. Explain two physical adaptations that help the polar bear survive in such freezing temperatures. (2 marks)

2. Why is camouflage considered an important adaptation for both predators and prey? Give one example of an animal that uses camouflage. (2 marks)

3. Plants in a desert, such as cacti, have adapted to survive with very little water. Describe two features of a cactus that help it store water or prevent water loss. (2 marks)

4. If an environment changes suddenly, such as a forest being cleared, what might happen to the animals that are highly adapted to living only in that forest? (2 marks)

5. Explain the difference between an inherited characteristic and an adaptation developed during an animal's lifetime. (2 marks)

Draw: Imagine a new creature that lives in a floating city in the clouds. Draw this creature and label three specific adaptations that would help it survive in a high-altitude, windy environment.



Extension challenge: Research a specific animal that has become extinct. Write a short paragraph explaining which of its adaptations were no longer suited to its changing environment.