

Nova's Guide to Evolution and Adaptation

Learning objective: To understand how living things have changed over time and how they adapt to their environments to survive.

Read the passage below carefully and answer the questions using evidence from the text.

Nova the owl sat on her favourite oak branch, observing the forest floor below. She explained to her friends that life on Earth has been changing for millions of years, a process known as evolution. Every living thing is perfectly suited to its environment because of small changes passed down through generations, called inheritance. For example, a polar bear's thick fur is an adaptation that helps it survive in freezing temperatures. If a creature is born with a trait that helps it find food or stay safe, it is more likely to grow up and have offspring of its own. This process is called natural selection. Over thousands of years, these helpful traits become common in a species. However, if an environment changes too quickly, some creatures may struggle to survive. Nova noted that fossils are like nature's history book, showing us how animals from long ago compare to the ones we see today. Evolution is a slow, steady journey that has shaped the incredible variety of life we see across the globe, from the deepest oceans to the highest mountain peaks.

Word bank: adaptation · evolution · inheritance · natural selection · offspring · species

1. According to the passage, what is the definition of evolution? (2 marks)

2. What does Nova suggest fossils act like in order to help us understand the past? (1 mark)

3. Why is it important for an animal to have a trait that helps it find food? (2 marks)

4. Based on the text, what might happen to a species if its habitat changes very rapidly? (2 marks)

5. Do you think humans have influenced the evolution of other animals? Explain your reasoning. (3 marks)

Draw: Draw an imaginary animal that has developed a specific adaptation to survive in a hot, sandy desert environment. Label the adaptation.



Extension challenge: Research a specific animal and identify two adaptations it has that help it survive in its natural habitat. Write a short paragraph explaining how these traits help it.