

The Secrets of the Meadow with Bea the Bee

Learning objective: To recognise that living things can be grouped in a variety of ways and to explore the characteristics of vertebrates and invertebrates.

Read the text carefully below, then answer the questions that follow. Ensure you use full sentences and refer back to the text to support your answers.

Bea the honeybee spends her days buzzing through the meadow, observing the incredible diversity of life. She explains that all living things are classified into two main groups: vertebrates and invertebrates. Vertebrates, such as the lion Leo or the elephant Ellie, possess a sturdy backbone or spinal column. This internal skeleton provides structure and protects their vital organs as they grow. In contrast, invertebrates, like the tiny insects and spiders Bea visits, lack a backbone. Instead, many invertebrates have a hard outer shell called an exoskeleton, which acts like a suit of armour. Some creatures, such as earthworms, have neither a backbone nor an exoskeleton, relying on their soft bodies to move through the soil. By studying these traits, scientists can organise the natural world into logical groups. Whether an organism is large or small, every living thing plays a vital role in our ecosystem. Bea notes that observing these differences helps us appreciate the delicate balance of nature and the unique survival strategies that every species has developed to thrive in its specific habitat.

Word bank: vertebrate · invertebrate · classification · characteristic · organism · environment

1. According to the text, what is the main difference between a vertebrate and an invertebrate? (2 marks)

2. What is the function of an exoskeleton, and which type of animal typically has one? (2 marks)

3. Why might a soft-bodied creature like an earthworm find it harder to protect itself compared to a beetle with an exoskeleton? (2 marks)

4. Explain why scientists find it useful to classify living things into groups rather than observing them individually. (2 marks)

5. Justify the statement: 'Every living thing plays a vital role in our ecosystem.' Do you agree? Explain your reasoning. (3 marks)

Draw: Draw a T-chart labelled 'Vertebrates' and 'Invertebrates'. In each column, draw two examples of creatures mentioned in the text and label their structural features, such as the backbone or the exoskeleton.



Extension challenge: Research a creature that is not mentioned in the text. Classify it as a vertebrate or invertebrate and write a short paragraph explaining its specific survival adaptations. Compare and contrast its habitat to that of a honeybee.