

Nova's Night-time Classification Challenge

Learning objective: To understand how to use and create classification keys to identify living things.

Read the text carefully and answer the questions below. Use full sentences and refer back to the passage to support your answers.

Nova the barn owl loves observing the woodland near the BookFlik library. One evening, Nova decided to help her friends understand how scientists group living things. She explained that a classification key is like a detective's map. By asking a series of 'yes' or 'no' questions about an organism's characteristics, you can identify exactly what it is. For example, you might ask, 'Does the creature have a backbone?' If you answer 'yes', you are looking at a vertebrate. If the answer is 'no', it is an invertebrate. Nova pointed to a beetle scuttling on the forest floor. She asked, 'Does it have six legs?' The answer was 'yes', confirming it was an insect. Classification keys are essential tools because they help us organise the vast diversity of life on Earth. By observing features like wings, skin texture, or the number of limbs, we can sort animals into specific groups. Nova reminds us that every detail matters when you are a scientist exploring the natural world.

Word bank: classification · organism · dichotomous · characteristics · invertebrate · vertebrate · habitat

1. According to the passage, what is the first question you might ask to determine if a creature is a vertebrate or an invertebrate? (2 marks) (2 marks)

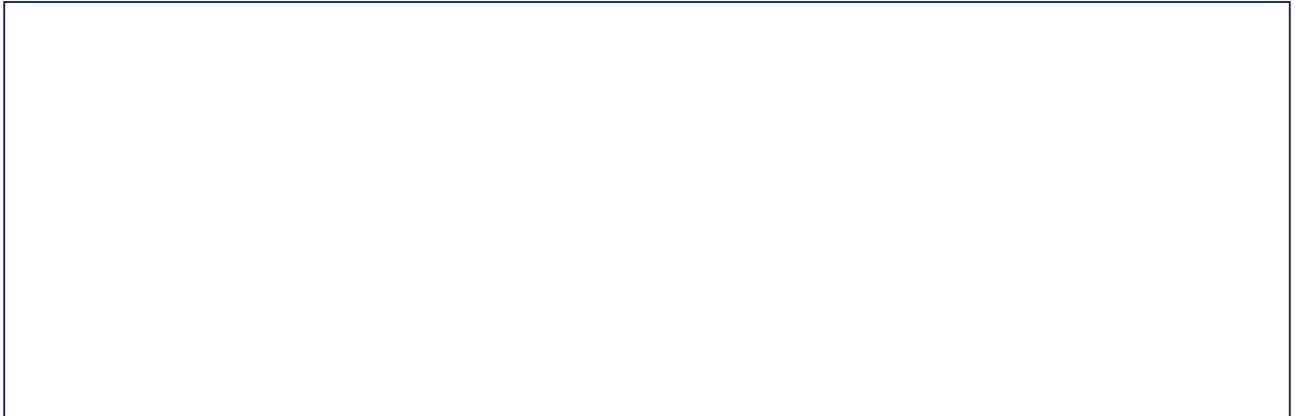
2. What specific feature helped Nova identify the creature on the forest floor as an insect? (2 marks) (2 marks)

3. Why does Nova describe a classification key as being 'like a detective's map'? (2 marks) (2 marks)

4. Explain why it is important for a scientist to pay close attention to small details, such as the number of limbs, when using a key. (3 marks) (3 marks)

5. Justify your answer: If you discovered an unknown creature with eight legs, would it be classified as an insect based on Nova's method? Why or why not? (3 marks) (3 marks)

Draw: Draw a simple classification key that helps a scientist identify three different woodland animals (e.g., a squirrel, a worm, and a butterfly) using 'yes' or 'no' questions.



Extension challenge: Compare and contrast: Why might a classification key be more useful than a simple list of animal names? What might happen if a key only had one question instead of a series of questions? Write a paragraph justifying the need for multiple steps in a classification key.