Year 5 Science Assessment: Classification Keys

Learning objective: To identify, describe, and classify living things using branching keys and scientific criteria.

Read each question carefully. Use your scientific knowledge of classification to provide detailed answers. Ensure your spelling is accurate and your explanations are clear.

Nova the barn owl has been observing the wildlife in the local woodland. She has spotted a badger, a common garden snail, a smooth newt, a robin, and a spider. To help her friends identify these creatures, she is building a classification key based on observable physical characteristics.

Word bank: Vertebrate · Invertebrate · Characteristic · Branching key · Taxonomy · Organism · Habitat · Classification

1. Define the term 'classification' and explain why scientists use keys to identify living things. (2 marks) (2 marks)

2. Look at the organisms Nova spotted. Categorise them into two groups: Vertebrates and Invertebrates. (2 marks) (2 marks)

3. What is a 'branching key'? Explain why it is important that each question in a key has only two possible outcomes (yes or no). (3 marks) (3 marks)

4. If you were creating a key to distinguish between a robin and a badger, suggest two physical characteristics you could use. Justify why these are effective choices. (4 marks) (4 marks)

5. Compare and contrast the physical characteristics of the smooth newt and the garden snail. How would you group them differently in a key? (4 marks) (4 marks)

6. Imagine you have discovered a mysterious new species in your garden. Write a detailed procedure explaining how you would use a classification key to identify its group (e.g., mammal, insect, amphibian). Include the types of questions you would ask at each branch. (5 marks) (5 marks)

7. What might happen to the accuracy of a classification key if the physical characteristics chosen are subjective, such as 'is it pretty?' or 'is it fast?'. Explain your reasoning. (5 marks) (5 marks)

Draw: Draw a simple branching key that includes at least four of the animals Nova observed. Ensure your branches start with a clear, observable question.

Extension challenge: Total: /25. Extension Task: Research a specific group of animals (e.g., arachnids). Create a 'Greater Depth' key that includes at least three sub-species and uses complex terminology like 'exoskeleton' or 'segmentation'.