Year 4 Science Assessment: Classification Keys

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

Read each question carefully. Use your scientific knowledge to classify living things based on their observable characteristics. Write your answers in the spaces provided.

Nova the owl has been exploring the woodland. She has discovered a variety of living things and needs to organise them. She has found a beetle, a frog, a hedgehog, and a butterfly. To help her, you must use your knowledge of biological classification to distinguish between these creatures.

Word bank: Vertebrate · Invertebrate · Habitat · Characteristic · Classification · Branching key · Amphibian · Mammal

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

2. Look at the following list: beetle, frog, hedgehog, butterfly. Identify which of these are invertebrates and explain your choice. (2 marks)

3. Max the monkey is trying to sort animals. Write one 'Yes/No' question he could use at the start of a branching key to separate mammals from amphibians. (2 marks)

4. Construct a simple branching key to classify the following: a spider, a sparrow, a goldfish, and a dog. Use at least two different physical characteristics to separate them. (4 marks)

5. Compare and contrast a vertebrate and an invertebrate. What is the main structural difference that determines how they are classified? (3 marks)

6. Bea the honeybee finds a new, unknown insect in the garden. Justify why it is important to observe its physical characteristics before deciding where to place it on a classification key. (4 marks)

7. Extended Response: Imagine you are a scientist discovering a newly identified species in the rainforest. Describe the process you would use to classify this animal. What specific questions would you include in your branching key, and why? Explain your reasoning clearly. (8 marks)

Draw: Draw a scientific diagram of a branching key that classifies three different types of minibeasts found in a garden.

Extension challenge: Challenge: If a new species was discovered that shared characteristics of both mammals and reptiles, how might this change the way we use current classification keys? Write a paragraph justifying your answer. Total: /25