The Meadow Explorer’s Classification Challenge

Learning objective: To identify and classify living things into broad groups according to observable characteristics and based on similarities and differences.

Bea the honeybee needs your help to organize the meadow creatures. Use the provided list of characteristics to create a branching classification key. Follow the path for each creature to determine its scientific group (e.g., Mammal, Insect, Bird, Fish, or Arachnid). Draw your key in the box provided, ensuring each 'Yes' or 'No' question leads to the correct identification.

Word bank: Vertebrate · Invertebrate · Exoskeleton · Warm-blooded · Cold-blooded · Classification Key · Characteristic · Species

1. 1. Explain why a spider is classified as an arachnid rather than an insect. Use the terms 'legs' and 'body segments' in your explanation. (2 marks)

2. 2. If you were creating a key for a shark and a dolphin, which question would you use to separate them: 'Does it live in the water?' or 'Does it breathe air using lungs?' Give a reason for your choice. (2 marks)

3. 3. Why is it important for scientists to use a standard classification system when discovering a new animal? (2 marks)

4. 4. Sort these into Vertebrates or Invertebrates: Ladybird, Hedgehog, Earthworm, Sparrow, Salmon. (2 marks)

5. 5. If you found an animal with feathers, based on your classification knowledge, which group must it belong to? (1 mark)

Draw: Draw a clear branching classification key that starts with the question 'Does the creature have a backbone?' and splits into 'Vertebrate' and 'Invertebrate' branches. Include at least four creatures from the meadow in your final leaves.

Extension challenge: Imagine you have discovered a new creature in the garden that has six legs, wings, and a hard shell. Write a short paragraph describing how you would add this to Bea's key and what question you would ask to define it.