

Nova's Nocturnal Nature Quiz: Classification Keys

Learning objective: To identify, name, and classify living things using branching keys, and understand the importance of observable characteristics.

Join Nova the owl for a night-time expedition! Use your scientific knowledge of classification to help Nova sort the creatures she spots in the forest. Read each question carefully and select or write your best answer.

Answer Key: 1.C, 2.True, 3.Invertebrate, 4.A, 5.False, 6.D, 7.True, 8.Vertebrate, 9.B, 10.Branching Key.

Greater Depth Guidance: For question 8, pupils should identify that the backbone is the primary characteristic separating these groups. In the extension task, look for logical grouping (e.g., size, diet, or habitat) rather than random sorting.

Word bank: Vertebrate · Invertebrate · Classification · Branching Key · Characteristic · Organism · Habitat · Dichotomous

1. 1. Nova finds a creature with no backbone. What is the correct scientific term for this group? A) Mammal B) Vertebrate C) Invertebrate D) Amphibian * (1 mark)

2. 2. True or False: A classification key is a tool used to identify organisms based on their visible characteristics. (1 mark)

3. 3. If a creature has a hard exoskeleton and multiple jointed legs, would it be classified as a vertebrate or an invertebrate? (1 mark)

4. 4. Which of these is a suitable 'Yes/No' question for a branching key? A) Does it have six legs?* B) What colour is it? C) Where does it live? D) How fast can it run? (1 mark)

5. 5. True or False: You can only use a classification key to identify plants, not animals. (1 mark)

6. 6. Why do scientists use classification keys? A) To make nature look messy. B) To confuse other scientists. C) To help identify unknown species efficiently.* D) To choose which animals are the friendliest. (1 mark)

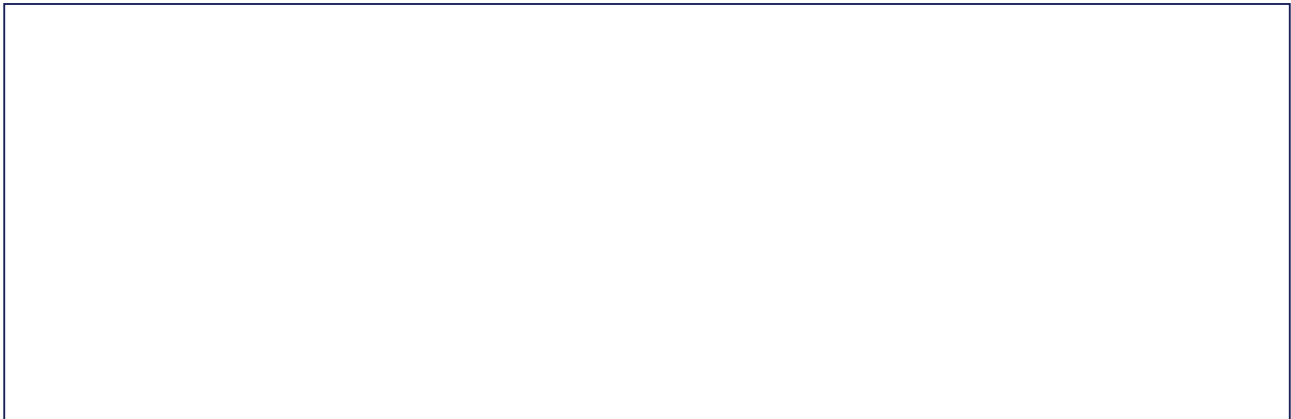
7. 7. True or False: A 'dichotomous' key always offers two choices at each branch. (1 mark)

8. 8. Explain why a fish is classified as a vertebrate but a snail is not. (1 mark)

9. 9. Which characteristic would be most useful for splitting a group of birds? A) The size of their nest. B) The shape of their beak.* C) The time they go to sleep. D) The type of tree they sit in. (1 mark)

10. 10. What is the name of the diagram that uses a series of questions to help identify living things? (1 mark)

Draw: Draw a simple branching key that sorts four different garden animals (e.g., a spider, a worm, a beetle, and a woodlouse) based on whether they have legs or not.



Extension challenge: 1. Justify your answer: Why is it important that classification keys use observable characteristics rather than opinions? 2. Compare and contrast the methods used to classify mammals versus insects. 3. What might happen if a scientist discovered an organism that did not fit into any existing category in their key? 4. Explain why a 'Yes/No' question is more effective for a key than a question with many possible answers. 5. Create a new classification key for five different types of classroom stationery (e.g., pens, rulers, glue sticks). 6. Evaluate: Is it possible for an organism to belong to more than one group? Explain your reasoning.