

Nova's Nocturnal Nature Classification Challenge

Learning objective: To create and interpret a branching classification key to identify living things based on specific observable characteristics.

Nova the Owl has been observing creatures in the forest. Your task is to design a branching classification key. Use the 'Yes/No' question format to separate the animals listed below into their correct groups. Remember, each question must result in a clear path to identifying a specific creature.

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

1. Using the animals: Earthworm, Fox, Frog, and Grass Snake, create a branching key. Start with the question: 'Does the animal have a backbone?'. Justify why this is a useful first question for classification. (3 marks)

2. Compare and contrast the physical characteristics of a frog and a snake. Why would they be placed on different branches of a key? (3 marks)

3. Explain why it is important for scientists to use a standard classification system when discovering new species. (2 marks)

4. What might happen if you used 'colour' as the main characteristic to classify these animals? Would this be an effective system? Justify your answer. (3 marks)

5. If you discovered a new creature that has a backbone, lays eggs, and has scales, where would it fit in your branching key? Explain your reasoning. (2 marks)

6. Create a new 'Yes/No' question that could further divide the 'Mammal' branch. Why is this specific question helpful for identification? (2 marks)

Draw: Draw a clear, neat branching diagram (a tree-like structure) that shows how to identify an Earthworm, a Fox, a Frog, and a Grass Snake using the 'Yes/No' questions you developed.



Extension challenge: Research a 'dichotomous key'. Can you create a more complex key that includes eight different animals? Challenge yourself by including at least one invertebrate and one vertebrate that shares a similar habitat.