Year 6 Science Assessment: Living Things and Their Habitats

Learning objective: To demonstrate understanding of the classification of living things, including microorganisms, plants, and animals, and to explain the characteristics used for grouping.

Read each question carefully. Answer in full sentences where required. Ensure you use scientific vocabulary correctly.

Nova the barn owl has been observing a woodland habitat. She noticed that living things can be sorted into broad groups based on their observable features. Some organisms are so small they can only be seen with a microscope, while others are large and complex. Understanding how these organisms function helps us protect their natural environments.

Word bank: Vertebrate · Invertebrate · Microorganism · Classification · Kingdom · Bacteria · Fungi · Characteristics · Species

1. Nova identifies a fox as a vertebrate. Explain what this means in terms of the animal's physical structure. (2 marks)

2. Bea the honeybee is studying microorganisms. Name two different types of microorganisms and describe one way they can be helpful to humans. (3 marks)

3. Why do scientists use a classification system to organise living things? Give one reason. (2 marks)

4. Look at the following list of organisms: Mushroom, Oak Tree, Earthworm, Yeast. Group these into two categories and explain your reasoning for the categories chosen. (4 marks)

5. Pip the caterpillar is looking at a beetle and a spider. Explain the key physical difference that allows us to classify them as different types of invertebrates. (3 marks)

6. Compare and contrast the characteristics of plants and fungi. How do they obtain their energy differently? (6 marks)

7. Imagine you have discovered a new living thing in your garden. Describe five observable characteristics you would look for to help classify it into a known kingdom. (5 marks)

Draw: Draw a labelled diagram of a simple classification key that splits four different animals (e.g., a fish, a bird, a spider, and a snail) into two groups based on a specific physical characteristic.

Extension challenge: Total: /25. Challenge: Research Carl Linnaeus and write one sentence about why his work is still important to scientists like Nova today.