Grade 4 Science Assessment: Habitats and Food Chains

Learning objective: To understand the roles of producers, consumers, and predators within a food chain.

Read each question carefully. Ensure your answers are clear and use scientific vocabulary where appropriate. You have 30 minutes to complete this paper.

Nova the owl is observing a woodland ecosystem. She watches a sun-drenched oak tree where green leaves grow. A small caterpillar nibbles on the leaves. Soon, a hungry robin swoops down to eat the caterpillar. Later, a larger hawk circles above, looking for its next meal. Max the monkey is watching too, noting that every creature depends on the energy starting from the sun.

Word bank: Producer · Consumer · Herbivore · Carnivore · Omnivore · Predator · Prey · Energy

1. Identify the 'producer' in the woodland passage. Explain why it is called a producer. (2 marks) (2 marks)

2. Using the creatures mentioned in the passage, write a food chain using arrows to show the flow of energy. (2 marks) (2 marks)

3. Define the term 'herbivore' and identify one animal from the passage that fits this description. (3 marks) (3 marks)

4. If all the robins in this woodland were to move away, what do you predict would happen to the caterpillar population? Give a reason for your answer. (4 marks) (4 marks)

5. Explain the difference between a predator and prey. Provide one example of each from a common garden ecosystem. (4 marks) (4 marks)

6. Imagine you are Bea the honeybee. Write a short report (5 sentences) describing your role in the food chain and why plants are essential for the survival of animals like you. (5 marks) (5 marks)

Draw: Draw a food chain that includes a blade of grass, a grasshopper, a frog, and a snake. Ensure you draw arrows in the correct direction to show the transfer of energy.

Extension challenge: Total: /25. Challenge: Research what happens to a food chain if a primary consumer is removed entirely. Write a one-paragraph explanation of your findings.