

Grade 4 Science Assessment: The Lifecycle of Living Things

Learning objective: To demonstrate understanding of the life cycles of mammals, amphibians, insects, and birds, and to recognize the stages of human growth and development.

Read each question carefully. Use your scientific knowledge to answer in full sentences where required. Ensure your spelling is accurate.

Bea the honeybee and Nova the owl are observing the natural world. They notice that every living thing—from the tiny egg in a nest to the large mammals roaming the plains—follows a unique life cycle. Understanding how living things grow and change is key to understanding the world around us.

Word bank: metamorphosis · gestation · asexual · reproduction · larva · pupa · embryo · offspring

1. Define the term 'reproduction' and explain why it is essential for the survival of a species. (2 marks)

2. Bea the honeybee is an insect. Describe the process of metamorphosis by listing the four stages of a butterfly's life cycle in the correct order. (2 marks)

3. Nova the owl is a bird. Compare the life cycle of a bird to that of a mammal. Give one key difference in how their offspring develop. (3 marks)

4. Many plants can reproduce asexually. Explain what 'asexual reproduction' means in the context of a strawberry plant or a potato. (3 marks)

5. Explain the stages of human development from infancy to old age. Include at least three key stages in your answer. (4 marks)

6. If a farmer wants to understand how his sheep reproduce, he must look at the gestation period. What is a gestation period, and why does it differ between different types of mammals? (6 marks)

7. Extended Writing: Imagine you are a scientist like Bea or Nova. Write a short report (5 marks) explaining the life cycle of a frog. Describe the transition from water-based life to land-based life, ensuring you use the correct scientific terminology such as 'spawn', 'tadpole', and 'amphibian'. (5 marks)

Draw: Draw and label a diagram showing the life cycle of a flowering plant, highlighting the stages from seed to mature plant.



Extension challenge: Total: /25