

The Wonders of Life Cycles with Nova the Owl

Learning objective: To describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird.

Read the text carefully and answer the questions below. Use full sentences and refer back to the passage to support your answers.

Nova the barn owl peers through her telescope at the meadow below, observing the diverse ways living things grow. Life cycles vary significantly across the animal kingdom. Mammals, such as the field mouse, give birth to live young and nurture them with milk. The length of time a mammal spends developing inside its mother, known as gestation, differs greatly between species. In contrast, amphibians like the common frog undergo a dramatic transformation called metamorphosis. They begin as jelly-like eggs in water, hatch into tadpoles, and eventually grow limbs and lungs to live on land. Insects, such as the busy honeybee, follow a similar but distinct path, often passing through a pupa stage. Birds, however, lay hard-shelled eggs in protected nests. Unlike mammals, bird parents must incubate their eggs to keep them at a steady temperature until they hatch. While the methods of reproduction and development are varied, every species is perfectly adapted to ensure the survival of its offspring within its specific environment.

Word bank: metamorphosis · amphibian · mammal · gestation · reproduction · larva · nurture

1. Identify two distinct differences between the life cycle of a mammal and the life cycle of a bird mentioned in the text. (2 marks)

2. According to the passage, what specific term is used to describe the transition a frog makes from an aquatic tadpole to a land-dwelling adult? (1 mark)

3. Explain why birds must incubate their eggs, whereas mammals do not need to do this. (2 marks)

4. What might happen to the population of a frog species if the water bodies in their habitat were to dry up during the tadpole stage? Justify your answer. (2 marks)

5. Compare and contrast the development of an insect and an amphibian. Why do you think both have evolved to change their physical form so drastically during their life cycles? (3 marks)

Draw: Draw a diagram showing the life cycle of a frog or a butterfly, using labels to show the different stages of metamorphosis.



Extension challenge: Research a species of your choice that is not mentioned in the text. Create a labelled life cycle chart and write a short paragraph explaining how that animal provides care or protection for its young.