

The Wonder of Life: Understanding Reproduction

Learning objective: To describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird, and identify the process of reproduction as a key stage in the life cycle of living things.

Use this writing frame to document the life cycles of different organisms. Research the life stages of your chosen animals and explain how they reproduce and nurture their young. Remember to use scientific vocabulary and clear, chronological order.

Reproduction is a fundamental biological process that ensures the survival of all living species by creating new offspring.

Word bank: reproduction · offspring · metamorphosis · gestation · incubation · mammal · amphibian · nurture · subsequently · furthermore · in contrast · significantly

1. Introduction: Define reproduction and explain why it is essential for the continuation of a species. Start your paragraph by saying: 'Reproduction is a vital process because...' (2 marks)

2. Mammalian Life Cycles: Describe the process of reproduction in mammals, mentioning gestation and the way parents care for their young. Start with: 'In the case of mammals, such as the lion, the life cycle begins when...' (3 marks)

3. Comparing Life Cycles: Compare and contrast the reproductive strategies of a bird and an amphibian. Start with: 'While birds typically lay hard-shelled eggs to protect their developing embryos, amphibians often...' (3 marks)

4. Metamorphosis: Explain the unique reproductive and developmental journey of an insect. Start with: 'Unlike many other animals, insects often undergo a dramatic transformation known as...' (3 marks)

5. Justification: Why might some species produce a large number of offspring with little parental care, while others produce few with significant care? Explain your reasoning: 'I believe that species with low parental care rely on...' (4 marks)

6. Conclusion: Summarise the main similarities and differences you have discovered across the different animal groups. Start with: 'In conclusion, although the methods of reproduction vary significantly across the animal kingdom, the ultimate goal remains...' (2 marks)

Extension challenge: Nova the owl is curious about how environmental changes might affect a species' ability to reproduce. Write a short paragraph explaining what might happen to a bird population if their nesting environment was suddenly destroyed. Justify your answer using scientific reasoning.