

Nova's Life Cycle Explorations: Reproduction in Plants and Animals

Learning objective: To understand the life cycles of mammals, amphibians, insects, and birds, and the process of reproduction in flowering plants.

Use these flashcards to test your knowledge of how different living things reproduce and grow. Nova the owl suggests reading the question aloud, then checking the answer on the back.

What is the primary difference between the life cycle of a mammal and the life cycle of an amphibian?

Mammals typically give birth to live young, whereas amphibians usually lay eggs in water, which then hatch into larvae that undergo metamorphosis.

Explain the role of pollination in the reproduction of a flowering plant.

Pollination is the transfer of pollen from the male part of a flower to the female part, which is essential for the plant to produce seeds.

What is the term for the process where a caterpillar transforms into a butterfly?

Metamorphosis.

Define 'asexual reproduction' in the context of plants.

Asexual reproduction occurs when a new plant grows from a single parent plant without the need for seeds or spores, such as through bulbs or runners.

Compare the life cycles of a bird and a mammal. What do they have in common?

Both birds and mammals care for their young after birth or hatching, and both start their life cycle from an embryo.

What might happen to a flowering plant population if the population of pollinating insects, like Bea the honeybee, were to suddenly decline?

The plants would struggle to reproduce because pollen would not be transferred effectively, leading to fewer seeds and a potential decrease in the plant population.

Justify why it is important for some seeds to be dispersed far away from the parent plant.

It prevents competition for resources like sunlight, water, and soil nutrients between the parent plant and its offspring, giving the new plant a better chance of survival.

What is the difference between an embryo and a seed?

An embryo is the early stage of a living organism, while the seed is the protective casing that contains the embryo along with a food supply for germination.

Explain why life cycles are essential for the survival of a species.

Life cycles ensure that a species can reproduce and replace older individuals, maintaining the population and allowing for the continuation of the species over time.

What are the common stages found in the life cycle of most birds?

The stages are egg, hatchling, fledgling (learning to fly), and adult.