



Knowledge is Power...

Ivington C of E Primary and Preschool

Reaching together



Key Vocabulary

Life Cycle	the series of changes in the life of an organism including reproduction.
Reproduce	produce offspring by a sexual or asexual process.
Sexual	involving the fusion of gametes.
Fertilises	cause (an egg, female animal, or plant) to develop a new individual by introducing male reproductive material.
Asexual	not involving the fusion of gametes.
Plantlets	a small or young plant.
Runners	a shoot, typically leafless, which grows from the base of a plant along the surface of the ground and can take root at points along its length.
Tubers	a much-thickened underground part of a stem or rhizome, e.g., in the potato, serving as a food reserve and bearing buds from which new plants arise.
Bulbs	a rounded underground storage organ present in some plants, notably those of the lily family, consisting of a short stem surrounded by fleshy scale leaves or leaf bases, lying dormant over winter.
Cuttings	a piece cut from a plant for propagation.
Metamorphosis	An abrupt and obvious change in the structure of an animal's body and their behaviour.
Pollination	The transfer of pollen to a stigma to allow fertilisation.

Living Things and Their Habitats

Aims

- I can explain the difference between sexual and asexual reproduction.
- I can describe asexual reproduction in plants.
- I can describe the process of reproduction in mammals.
- I can describe Jane Goodall's work with chimpanzees.
- I can explain metamorphosis and give examples.
- I can identify the stages of a bird's life cycle.
- I can identify the function of the parts of a flower.
- I can identify advantages and disadvantages to sexual and asexual reproduction in plants.
- I can describe different types of mammals.
- I can explain why chimpanzees are endangered.
- I can describe the life cycles of amphibians and insects.
- I can describe the similarities and differences between different plants' and animals' life cycles.
- I can describe ways that plants are pollinated in order to reproduce.
- I can explain different ways to make new plants. I can describe and compare the life cycles of different mammals.
- I can describe the similarities and differences between the life cycles of amphibians and insects

Prior knowledge

- Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans)
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants)

National Curriculum Aims

- Describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird.
- Describe the life process of reproduction in some plants and animals.

Subject Specific Knowledge - Pupils will learn:

- As part of their life cycle, plants and animals reproduce.
- Most animals reproduce sexually. This involves two parents where the sperm from the male fertilises the female egg.
- Animals, including humans, have offspring which grow into adults.
- In humans and some animals, these offspring will be born live, such as babies or kittens, and then grow into adults.
- In other animals, such as chickens or snakes, there may be eggs laid that hatch to young which then grow to adults.
- Some young undergo a further change before becoming adults e.g., caterpillars to butterflies. This is called a metamorphosis.
- Plants reproduce both sexually and asexually.
- Bulbs, tubers, runners and plantlets are examples of asexual plant reproduction which involves only one parent.
- Gardeners may force plants to reproduce asexually by taking cuttings.
- Sexual reproduction occurs through pollination, usually involving wind or insects.

Reproduction in mammals

Mammals use **sexual reproduction** to produce their offspring.

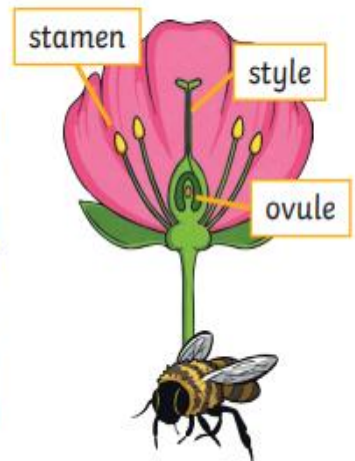
- The male sex cell, called the sperm, **fertilises** the female sex cells.
- The **fertilised** cell divides into different cells and will form a baby with a beating heart.
- The baby will grow inside the female until the end of the **gestation** period when the baby is born.



Echidnas and platypus are mammals but they lay eggs rather than giving birth to live young.

Plants

Most plants contain both the male sex cell (pollen) and female sex cell (ovules), but most plants can't **fertilise** themselves. Wind and insects help to transfer pollen to a different plant. The pollen from the stamen of one plant is transferred to the stigma of another. The pollen then travels down a tube through the style and fuses with an ovule.



Some plants, such as strawberry plants, potatoes, spider plants and daffodils use **asexual reproduction** to create a new plant. They are identical to the parent plant.

