

Year 5

Unit: Living things and their habitats

Intent:

To describe the differences in the life cycles of a mammal, an amphibian, an insect, and a bird.
To describe the life processes of reproduction in some plants and animals.

Prior learning

Year 2 – Notice that animals, including humans, have offspring which grow into adults.

Year 3 – Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation, and seed dispersal.

Later learning (not in Year 5)

KS3 – Reproduction in humans (as an example of a mammal).

KS3 – Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal.

Key Questions:

How many parents are needed to create offspring through asexual reproduction?

What happens during fertilisation?

What is metamorphosis?
Name an animal that goes through metamorphosis.

Name an animal that is likely to transfer pollen to a different plant.

Which type of animals are not usually hatched from eggs that are laid?

What is a life cycle?

Humans develop inside their mothers and are dependent on their parents for many years until they are old enough to look after themselves.



Amphibians such as frogs are laid in eggs then, once hatched, go through many changes until they become an adult.



Some animals, such as butterflies, go through **metamorphosis** to become an adult.



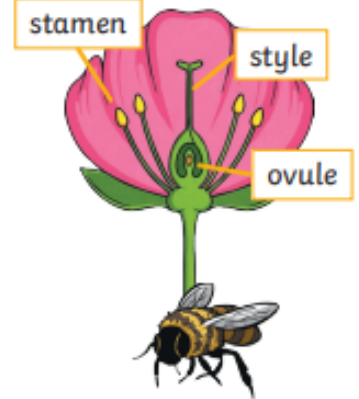
Birds are hatched from eggs and are looked after by their parents until they are able to live independently.



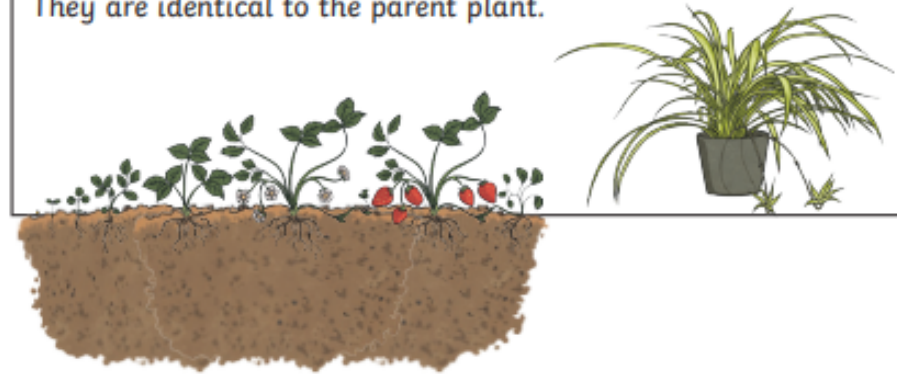
Some living things, such as plants, contain both the male and female sex cells. In others, such as humans, they contain either the male or female sex cell.

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

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.



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.

Vocabulary

Asexual reproduction	One parent is needed to create an offspring, which is an exact copy of the parent.
Fertilise	The action of fusing the male and female sex cells in order to develop an egg.
Gestation	The length of a pregnancy.
Life cycle	The journey of changes that take place throughout the life of a living thing, including birth, growing up, and reproduction.
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.
Reproduction	The process of new living things being made.
Sexual reproduction	Two parents are needed to make offspring which are similar but not identical to either parent.