Year 5 Science

Living things and habitats

Things you should already know;

- That living things can be grouped in a variety of ways.
- How to use classification keys to help group, identify and name a variety of living things in your environment .
- Know that environments can change and that this can sometimes pose dangers to living things.

New Learning for Year 5.

- Know the differences in the life cycles of a mammal, an amphibian, an insect and a bird.
- Understand how different plants and animals reproduce

Key Knowledge

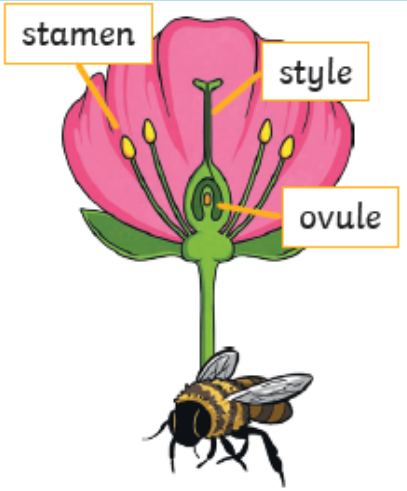
- Know and label different parts of a plant—Anther, filament, stigma, style, ovary, carpel, ovule.
- Know the stages of the life cycle of a flowering plant—germination, flowering, pollination, fertilisation, seed dispersal.. Compare this to a non-flowering plant.
- Life cycle of a human—fertilised egg, embryo, gestation, baby, toddler, child, teenager, adult, old age & death
- Mammals are warm blooded, give birth to live young and can only reproduce using sexual reproduction.
- Life cycles of other animals (such as amphibians and insects) are very different to mammals.
- metamorphosis is when an animal dramatically changes the structure of its body to grow up (explore this is butterflies and frogs).
- The life cycle of birds is different because they lay eggs. Fertilisation happens before the egg is laid and the embryo develops inside the egg.

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.

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.



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Key Vocabulary

Life cycle	The changes a living thing goes through, including reproduction.
reproduce	To process of new living things being made.
fertilises	To cause an egg or seed to start to develop into a new young animal or plant by joining it with a male cell.
metamorphosis	An abrupt and obvious change in the structure of an animals body and their behaviour.
Asexual reproduction	One parent is needed to create an offspring, which is an exact copy of the parent.
pollination	The transfer of pollen to a stigma to allow fertilisation.

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.

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

Sticky Learning.

Can you answer any of these questions in your book?

Scan this QR code. Watch the videos about life cycles and complete the two quizzes.

Research and find our the names of mammals that lay eggs, rather than give birth to live young (there are only two).

Draw and label the different stages a frog goes through from laying eggs to becoming an adult.

Can you name a living thing that:

- Lays eggs to reproduce?
- Gives birth to live young?
- Lays eggs but then, once hatched, goes through many changes before becoming an adult?
- Uses metamorphosis to reproduce?