

Science Y5 Spring 1 – Living things and their habitats

In this unit of work the children will describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. They will compare local wildlife to those in contrasting environments and find similarities and differences. They will describe the life processes of reproduction in some plants and animals.

In this unit children will:

- Observe life cycle changes in a variety of living things for example plants in a flower boarder and animals in their local habitat.
- They will research the work of naturalists and animal behaviourists such as David Attenborough and Jane Goodall.
- Find out about the different types of reproduction, including sexual and asexual in plants, and sexual reproduction in animals.
- Observe and compare the lifecycles of plants and animals in their local environment with other plants and animals around the world.

Prior Learning

F.S Know how to care for living things

Y1 Naming common animals and the structure of plants

Y2 Lifecycles of humans/animals/plants

Y3 Function and parts of a plant

Y4 Animals can be grouped into vertebrates and invertebrates

Cross Curricular Links

Art – Landscapes/habitats

Key Vocabulary

Cell – The smallest part of a plant or animal that is able to function independently.

Dispersed – Scattered, separated or spread through a large area.

Embryo – An unborn animal or human being in the very early stages of development.

Fertilisation – Male and female gametes meet to form an embryo or seed.

Gamete– The name for the 2 types of male and female cell that join together to make a new creature.

Life cycle – The series of changes that an animal or plant passes through from the beginning of life until death.

Metamorphosis – A person, or thing develops and changes into something completely different.

Ovary – A female organ which produces eggs.

Pollination – To fertilise it with pollen.

Key Knowledge

- Reproduction is when an animal or plant produces one or more individuals similar to itself.
- Sexual reproduction requires 2 parents with male and female gametes (cells). They will produce offspring that is similar to but not identical to its parent.
- Asexual reproduction will produce offspring that is identical to the parent. It only requires one parent.
- In the reproduction of plants male gametes are found in the pollen and female gametes can be found in the ovary. Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects. The pollen travels down and meets the ovule. When this happens, seeds are formed – this is fertilisation. Seeds are then dispersed so that germination can begin again.
- The life cycles of mammals, birds, amphibians and insects have similarities and differences.
- One difference is that amphibians go through the process of metamorphosis. This is when the structure of their body changes significantly as they grow eg tadpole to frog and caterpillar to butterfly.



- Lifecycles of mammals, amphibians, insects and birds all differ.
- Female frog lays a clump of eggs in water, which are fertilised by the male. This is frogspawn and has an embryo surrounded by jelly. After a week the frog larvae known as frogspawn, emerge from their eggs. These then turn into young frogs and then to adult frogs.

Key Questions

- What is similar about the life cycle of a mammal, amphibian, insect and bird? What is different?
- Why are the life cycles of local plants and animals different to those for example in the rainforest, ocean or desert?
- What has the work of David Attenborough taught us?