



Year 5 Science Knowledge Organiser: Living things and their habitats



Subject Specific Skills

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

Prior Learning

- Recognise that living things can be grouped in a variety of ways
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- Recognise that environments can change and that this can sometimes pose dangers to living things

Key Vocabulary

Asexual reproduction: One parent is needed to create an offspring which is an exact copy of the parent.

Carpel: Female part of the plant

Egg: Female sex cell in plants and animals. Egg cells are produced by the ovaries.

Fertilisation: The joining of male and female sex cells to produce offspring.

Germination: The process by which a plant emerges from its seed and begins to grow.

Life cycle: The series of changes that an animal or plant goes through from the beginning to the end of its life.

Metamorphosis: A process some animals go through to become adults. It is a series of obvious physical changes.

Petals: To help hold nectar and attract insects

Pollen: The male sex cell in plants. The anther of a flower produces pollen.

Pollination: The transference of pollen to a flower, or plant to allow fertilisation. Happens in sexual reproduction

Reproduction: The process by which a species produces a new organism (offspring).

Sexual Reproduction: Two parents are needed to make offspring which are similar but not identical to either parent.

Sperm: The male sex cell. In animals, sperm is produced by the testes.

Stamen: Male part of the flowering plant.

Stigma: Part of the female reproductive part of the flower. Pollen grains from other flowers get stuck to me

Key Knowledge:

Reproduction is when an animal or plant produces one or more individuals similar to itself:

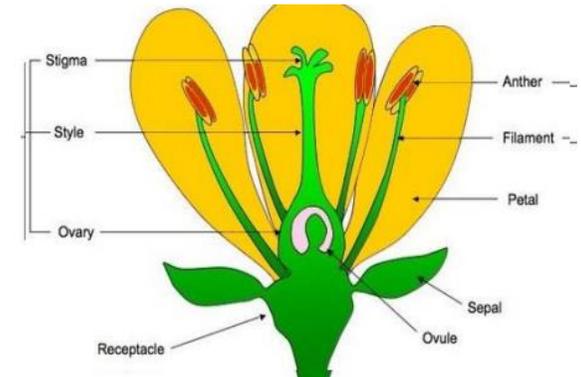
Sexual reproduction:

- requires two parents with male and female gametes (cells)
- will produce offspring that is similar to but not identical to the parent

Asexual reproduction:

- will produce offspring that is identical to the parent
- requires only one parent

Key Individual:
David
Attenborough
Steve Irwin
Jane Goodall



How do plants reproduce?

- Male gametes can be found in the pollen.
- Female gametes can be found in the ovary (they are called ovules).
- Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects.
- The pollen then travels down and meets the ovule. When this happens, seeds are formed - this is called fertilisation.
- Seeds are then dispersed so that germination can begin again.
- Some plants, such as daffodils and potatoes, can also produce offspring using asexual reproduction.

What are examples of life cycles?

- The life cycles of mammals, birds, amphibians and insects have similarities and differences.
- One difference is that amphibians and insects go through the process of metamorphosis. This is when the structure of their bodies changes significantly as they grow (for example, from tadpole to frog or caterpillar to butterfly).

