

Year 6 – Knowledge Organiser

Topic – Life Cycles (Science)

What should I already know?

Animals can be grouped into **vertebrates** (and then further into fish, reptiles, amphibians, birds and mammals) and **invertebrates**

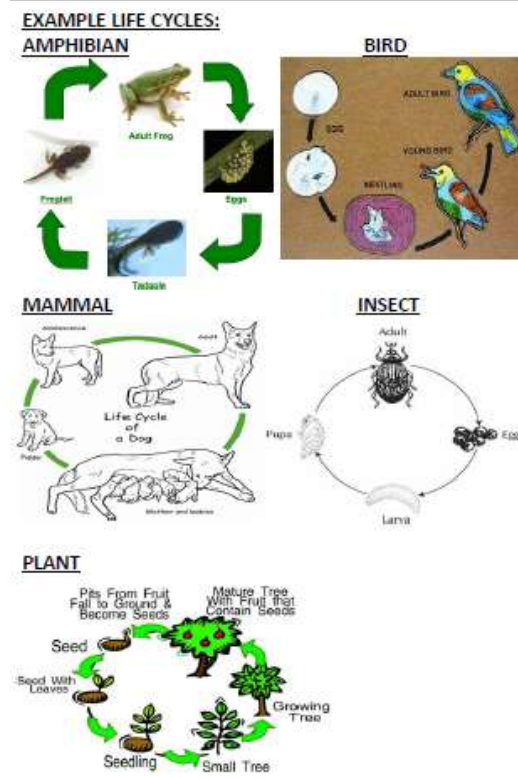
Some examples of **life cycles** (including those of **plants**)

The processes of **dispersal**, **fertilisation** and **germination**

Reproduction is one of the seven life processes.

Parts of a **plant**, their features and what their **functions** are.

Diagrams



Vocabulary

Life cycle – the stages a living thing goes through in its life

Reproduction – the process by which a living organism creates a likeness to itself

Asexual reproduction – offspring gets genes from one parent so they are clones of their parents

Sexual reproduction – offspring get genes from both parents so they inherit a mix of features from both

Genes – carry information that determine your traits (features and characteristics)

Offspring – a person's child or children

Inherit – receive from one's parents

Amphibian – a cold-blooded vertebrate animal e.g. frogs, toads, newts

Bird – a warm-blooded egg-laying vertebrate animal with wings, feathers and a beak

Insect – a small animal that has 6 legs

Mammal – a warm-blooded vertebrate animal, has hair or fur and give birth to live young. Females secrete milk for their young

Scientific enquiry

- **Dissect a flower** and identify the different parts of it. Label the different parts and explain their **functions**.
- Grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs.
- Compare the **life cycles** of mammals, amphibians, insects and birds. What is similar about their **life cycles**? What is different?
- Observe **life cycle** changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment.
- Compare the **life cycles** of **plants** and animals in the local environment with other **plants** and animals (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences.
- Observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow.

What will I know by the end of the unit?

REPRODUCTION IN PLANTS

Pollen is carried by insects or blown by the wind from one flower to another. The pollen travels to the ovary where fertilisation occurs and seeds are made. Seeds are dispersed by animals or the wind and some seeds will grow into new plants.

REPRODUCTION IN ANIMALS

For most animals which live on the land, offspring are fertilised inside the mother's body. This happens in 1 of 3 ways:

- 1)** The young develop inside the female and are born alive (most mammals).
- 2)** Fertilised eggs are laid outside the female's body and develop in the egg getting nourishment from the yolk.
- 3)** In some animals the eggs are held within the female and hatch as they are laid e.g. a fruit fly.