

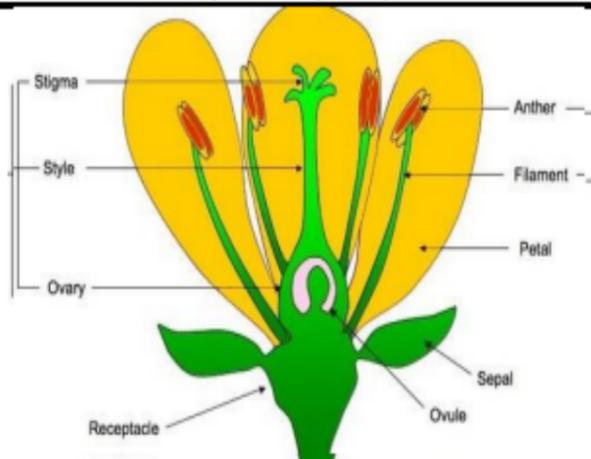
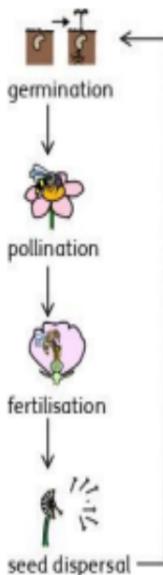


What will I know by the end of the unit?

What is reproduction?

- **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

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

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.



Key Vocabulary

Plant reproduction: Plants are able to reproduce in two ways - sexual and asexual reproduction.

Sexual reproduction: A cyclical process: germination, pollination, fertilisation and dispersal.

Asexual reproduction: involves plants producing an identical copy of themselves, for example, some create bulbs (daffodils) and tubers (potatoes).

Germination: Growth from a seed with roots forming under the soil and a stem, leaves and flower shoots above the surface.

Pollination: Pollen is produced by the flower and is carried by insects or blown by the wind to another flower.

Fertilisation: The pollen reaches another flower and makes its way to the ovary, where it is fertilised.

Dispersal: The seeds are scattered by animals on the wind.

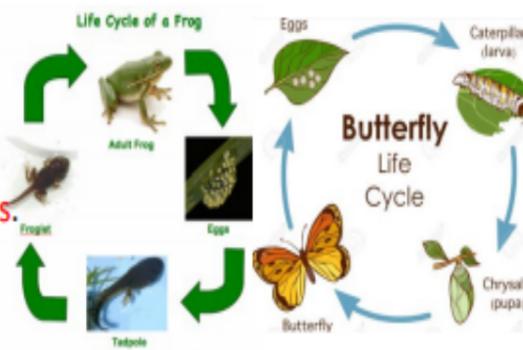
Life cycle: The series of changes that an animal goes through in life, including reproduction - mammals, amphibians, insects and birds.

Gestation: the period of time that a mammal carries her offspring, or babies, inside her body before giving birth and this varies depending on the mammal.

Embryo: An animal or a plant in its earliest stage of development.

Metamorphosis: A process some animals go through to become adults. It is a series of physical changes, especially common in insects.

Frogs start off life as a mass of eggs called **frogspawn**. The eggs then hatch into **tadpoles**. They then gradually grow a **set of back legs, and front legs**. They **lose their gills, and their tail shrinks**.



Both animals go through **metamorphosis**.

A butterfly starts its life as an egg, which hatches into a caterpillar. Eventually, the caterpillar forms a **chrysalis**. Inside the chrysalis, it undergoes **metamorphosis**, before emerging as an adult butterfly.

Focus Scientists



Jane Goodall, a **behaviourist**, is best known for her 60 year research on social interactions of wild chimpanzees.



Sir David Attenborough, a **naturalist**, who has dedicated his life to the study of natural history.