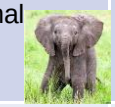
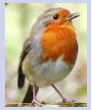
Life cycles

Life Cycle	A life cycle shows how things are born, how they grow and how they produce All animals, including humans, are born, they get older and bigger and some will go on to have children. We call this a life cycle.

Life cycles of a mammal, insect, bird and an amphibian

Life cycle of a mammal 	• Live young born • Grow from babies to adults • Reproduce • Live young born
Life cycle of an insect 	• Egg • Growth to adult or metamosphosis to adult • Reproduce • Egg
Life cycle of a bird 	• Egg • Growth to adult • Reproduce • Egg
Life cycle of an amphibian 	• Egg in water • Growth to adult • Reproduce • Egg In water

Life cycle of mammals and birds

Similarities	Differences
3 main stages • First stage is where embryo forms and grows • Second stage is where young is supported by parents. • Third stage is adult stage where reproduction takes place.	• Mammals give birth to live young • Birds lay eggs • Mammal usually nursed by mother • Young birds usually fed by adult male and female.

Amphibians

The lifecycle of a frog involves 5 main stages

Start

The tadpole grows fins and a stronger tail. Then it develops lungs and hind legs.

The female lays mass of **eggs** which are fertilised by the male.

The tail disappears and it starts to eat insects instead of plants. It takes 2-4 years to become an **adult frog**, when it can lay eggs.

The tadpole grows front legs and tail shortens. Uses nutrients in tail as food. It jumps out of water onto land.

After 2-25 days the **tadpole** hatches from the egg. It swims and eats plants. It breathes through gills.

Amphibians:
- live in water and on land
- moist slimy skin
- lays eggs
- babies different from adults

Key Vocab

1	**Metamorphosis**	A process some animals go through to become adults. It is a series of physical changes
2	**Amphibian**	Cold-blooded vertebrate animals (e.g. frogs) that have gills and live in water as larvae but breathe air as adults
3	**Gestation**	The period of time that a mammal carries her offspring, or babies, inside her body before giving birth
4	**Embryo**	An animal or a plant in its earliest stage of development
5	**Placentals**	Mammals give birth to live young and they are fully developed
6	**Monotremes**	The young hatch from eggs.
7	**Marsupials**	Mammals that are not fully developed and fed in a pouch

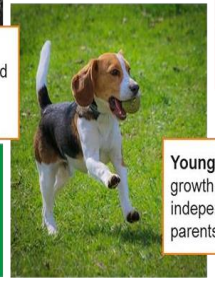
Mammals

There are three types of mammals: Placentals, Monotremes and marsupials.

The lifecycle of a mammal involves 3 main stages

Gestation: Embryo growing inside the mother, where it is completely reliant upon the mother.

Independent adult usually seeks company from the opposite sex and mates. Adult female nurses their young.



Young: Main period of growth and developing independence from the parents.

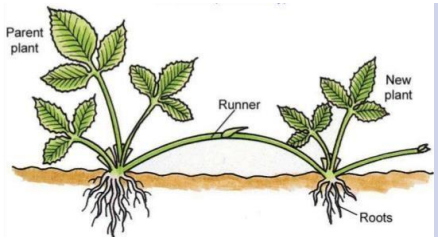
Mammals:
- have hair or fur
- warm-blooded
- feed babies milk
- give live birth

Reproduction

What is reproduction?	Living things create other living things Animals have babies Plants have seeds which turn into new plants

Reproduction in Plants

Sexual reproduction (2 parents)	• When the pollen from one flower joins the egg and of the new flower and a seed or many seeds are formed
Asexual reproduction (1 parent)	• This is when a small part of a plant breaks off and it starts to grow until it is the same size as the plant that it came from and this is repeated (flowers are now needed)



Asexual reproduction in a strawberry plant

Reproduction in Animals

Usually sexual	• Reproduction in animals is most commonly involving 2 parents

Insects

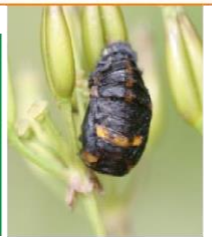
Most insects undergo complete metamorphosis. This involves 4 main stages

The **adult** breaks out of the pupa and matures.

The **pupa** is formed when the larva moults for the last time. Pupa have a hard protective coating and are often camouflaged. The larva transforms completely inside the pupa.

Eggs are laid by the female insect.

Insects:
- hatch from eggs
- some look like parents and shed skin as grow
- some go through metamorphosis young and adult are different.

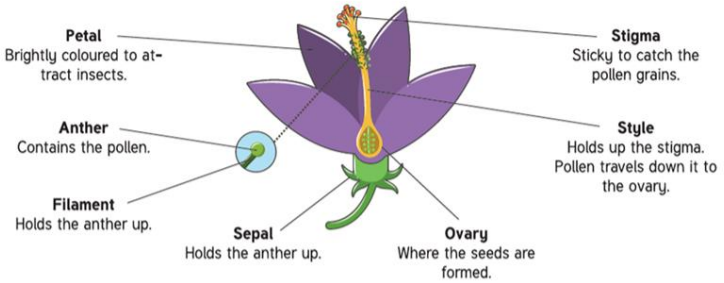


The eggs hatch into **larva**. The larva look nothing like the adult. This varies depending on species. Common forms are caterpillars, maggots, grubs.

Parts of a flowering plant-prior learning

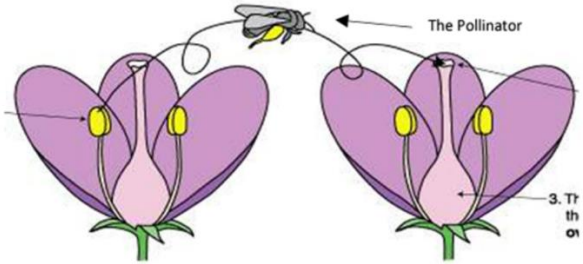
The flower

The flower's main job is to create new seeds to grow new plants. There are lots of different parts of the flower.



Insect Pollination

This type of reproduction is called **sexual reproduction.** Sexual reproduction happens when a male cell **(gamete)** and a female **(gamete)** join.
In this case the pollen joins the ovule. This is called **fertilisation.**



Plants that are pollinated by animals and insects must use a lot of energy creating colourful flowers, nectar and scents to encourage creatures to land on them and spread their pollen. Not all plants have evolved this way.

Bulb

Tuber

Runner