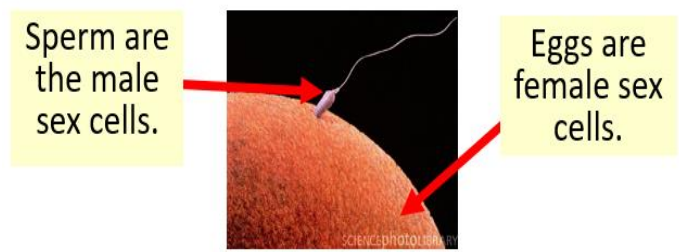


Living things and their habitats

Key Vocabulary	
asexual reproduction	One parent is needed to create an offspring, which is an exact copy of the parent.
fertilise	The action of fusing the male and female sex cells in order to develop an egg.
gestation	The length of a pregnancy.
life cycle	The journey of changes that take place throughout the life of a living thing including birth, growing up and reproduction .
metamorphosis	An abrupt and obvious change in the structure of an animal's body and their behaviour.
pollination	The transfer of pollen to a stigma to allow fertilisation .
reproduction	The process of new living things being made.
sexual reproduction	Two parents are needed to make offspring which are similar but not identical to either parent.

In sexual reproduction, sex cells from male and female animals **join** together. This is called **fertilisation**.



Sometimes the offspring is **internally** formed (inside) the female's body and sometimes it is **externally** formed (outside) the female's body.

Living things reproduce to produce offspring of their own kind either by:

- Sexual reproduction
(involving two parents)
- Asexual reproduction
(cloning)

Example of plants that reproduce asexually and are identical copies of their parents:



I will learn

- To know how sexual/asexual reproduction occurs in plants
- To compare the differences between sexual and asexual reproduction in plants
- To understand amphibian and insect lifecycles
- To understand bird and mammal lifecycles

I should already know:

- To stay alive and healthy, all living things need certain conditions that let them carry out life processes.
- That plants can be sorted into different groups e.g. flowering plants or non-flowering plants.

Thinking Deeper

True or false? Explain and correct any facts that are false.

- | | | |
|-------------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| true <input type="checkbox"/> | false <input type="checkbox"/> | 1. Metamorphosis means 'to warm up'. |
| true <input type="checkbox"/> | false <input type="checkbox"/> | 2. Complete metamorphosis describes what happens to insects, such as butterflies, flies and beetles. |
| true <input type="checkbox"/> | false <input type="checkbox"/> | 3. Butterflies have three life cycle stages: egg, larva and adult. |
| true <input type="checkbox"/> | false <input type="checkbox"/> | 4. Insects, such as grasshoppers, crickets and cockroaches have three stages during their life cycle, known as incomplete metamorphosis. |
| true <input type="checkbox"/> | false <input type="checkbox"/> | 5. The three stages of incomplete metamorphosis include egg, nymph and adult. |

Humans develop inside their mothers and are dependent on their parents for many years until they are old enough to look after themselves.



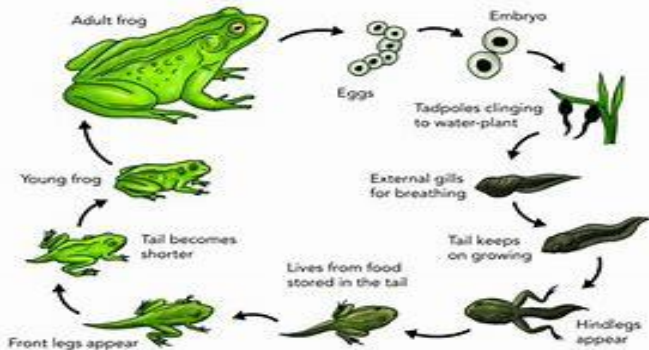
Amphibians such as frogs are laid in eggs then, once hatched, go through many changes until they become an adult.



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.



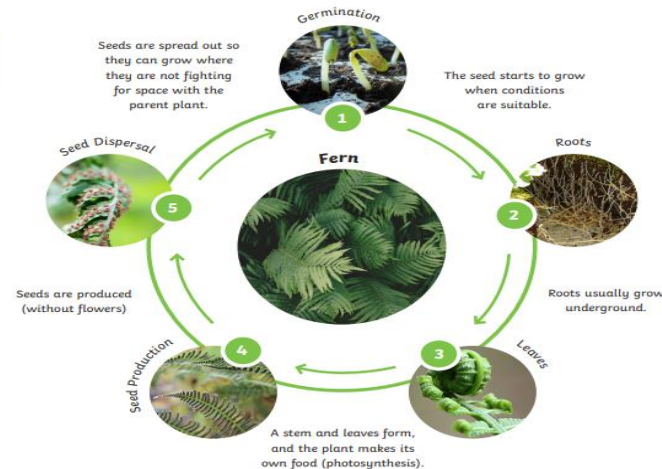
Reproduction in mammals

Mammals use **sexual reproduction** to produce their offspring.

- The male sex cell, called the sperm, **fertilises** the female sex cells.
- The **fertilised** cell divides into different cells and will form a baby with a beating heart.
- The baby will grow inside the female until the end of the **gestation** period when the baby is born.

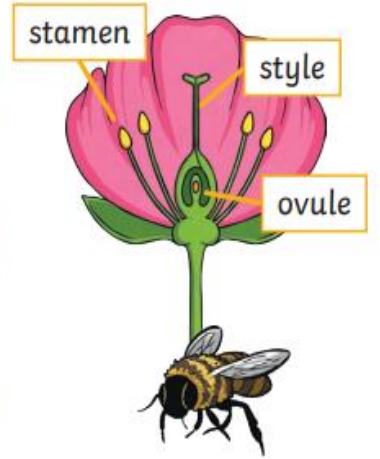


Echidnas and platypus are mammals but they lay eggs rather than giving birth to live young.

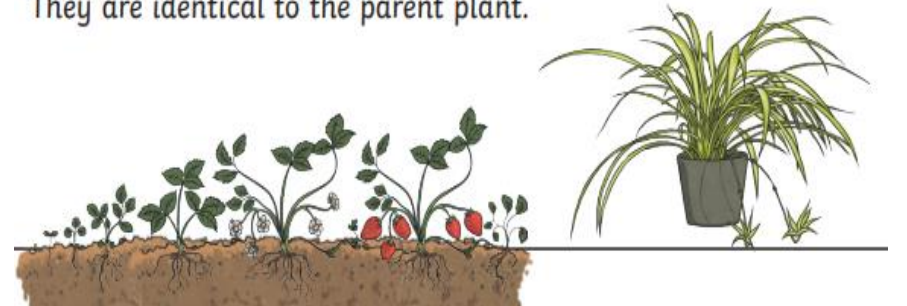


Plants

Most plants contain both the male sex cell (pollen) and female sex cell (ovules), but most plants can't **fertilise** themselves. Wind and insects help to transfer pollen to a different plant. The pollen from the stamen of one plant is transferred to the stigma of another. The pollen then travels down a tube through the style and fuses with an ovule.



Some plants, such as strawberry plants, potatoes, spider plants and daffodils use **asexual reproduction** to create a new plant. They are identical to the parent plant.



Sexual reproduction in flowering plants works by pollination.

Pollen produced by the male parts (stamen) of the plant need to touch the female parts (carpal) of another plant.

This results in fertilisation, and eventually seeds are released.

These grow into offspring.

1) What are the **two** types of reproduction?

2) Complete the blanks in this sentence about plant reproduction:

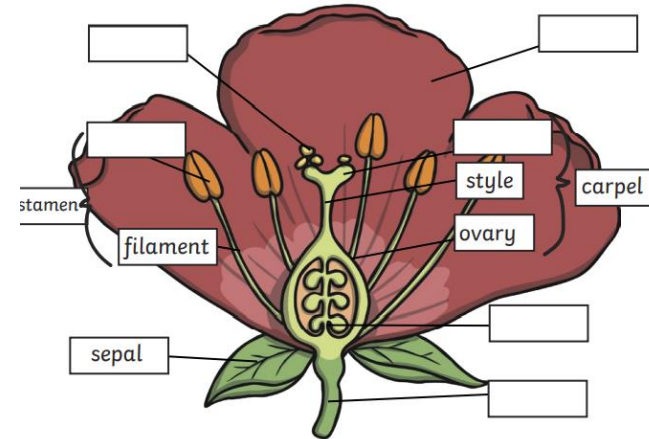
Female plant cells are found in _____ and male cells are found in _____.

3) Name a way that an asexual plant reproduces.

4) Describe the lifecycle of a whale?

5) How do insects metamorphose?

7) Label the parts of the flower



Keywords: anther, stem, ovule, pollen, petal, stigma

8) The petals job is to _____.

The stigma's job is to _____.

The role of the anther is to _____.

It is the ovary's job to _____.