

Phase: 5/6

Subject: Science

Focus: Living Things and their habitats

Term: Spring 2

Prior Learning

- Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans)
- Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants)

Vocabulary

Life Cycle	The journey of changes that take place throughout the life of a living thing, including birth, growing up and reproduction.
Reproduce	The process of new living things being made.
Sexual reproduction	Two parents are needed to make offspring that are similar but not identical to either parent.
Asexual reproduction	One parent is needed to create offspring, which is an exact copy of the parent.
Gestation	The length of a pregnancy
Sperm	A cell which is produced in a male animal and can fertilize a female's egg to reproduce.
Fertilise	The action of fusing the male and female sex cells in order to develop an egg
Egg	The female reproductive cell in animals and plants
Live Young	The opposite of hatched from an egg.
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
plantlets	A small or young plant
Bulbs	A resting stage of a plant (such as the lily, onion, hyacinth, or tulip) that is usually formed underground
cuttings	Also known as striking/cloning, is a technique for asexually reproducing plants, in which a piece of stem is part buried in the soil, including at least one leaf node. The cutting is able to produce new roots, usually at the node.

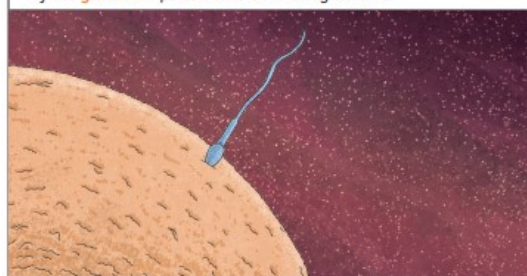
Knowledge

- As part of their life cycle, plants and animals reproduce. Most animals reproduce sexually. This involves two parents where the sperm from the male fertilises the female egg.
- Animals, including humans, have offspring which grow into adults. In humans and some animals, these offspring will be born live, such as babies or kittens, and then grow into adults.
- In other animals, such as chickens or snakes, there may be eggs laid that hatch to young which then grow to adults. Some young undergo a further change before becoming adults e.g. caterpillars to butterflies. This is called a metamorphosis.
- Plants reproduce both sexually and asexually. Bulbs, tubers, runners and plantlets are examples of asexual plant reproduction which involves only one parent.
- Gardeners may force plants to reproduce asexually by taking cuttings. Sexual reproduction occurs through pollination, usually involving wind or insects.

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.

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.



Sir David Attenborough and Dame Jane Goodall

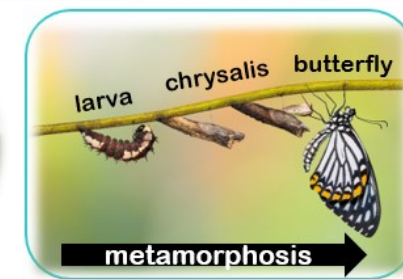
Both Sir David Attenborough and Dame Jane Goodall are leading **naturalists**, and study living things. They both present the life of animals on earth and have made **important documentaries** so we can learn about the world around us.

Because of their impact on the world, they have both been awarded honours by the Queen!



By the end of the unit I should know..

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



<u>Question 1 - How many parents are needed to create offspring through asexual reproduction?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
3		
2		
1		

<u>Question 2—What happens during fertilisation?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
Pollen is transferred to the stigma		
An animal's body changes to become an adult		
The male and female sex cell fuse together and		

<u>Question 3 - Which word means the length of a pregnancy?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
gestation		
pollination		
metamorphosis		

<u>Question 4—In which type of reproduction is an offspring made that is similar but not identical to its parent?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
sexual		
asexual		
Sexual and asexual		

<u>Question 5— Which type of animals are NOT usually hatched from eggs that are laid?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
Reptiles		
amphibians		
mammals		

<u>Question 6— From which living thing is this statement true? Most of them contain both the female and male sex cell?</u>	<u>Start of Unit</u>	<u>End of Unit</u>
plants		
birds		
reptiles		