

# Y5 – Living things and their habitats

**Inspiration** **Partnership with parents**

<p><b>Key Questions</b></p> <ul style="list-style-type: none"> <li>- What is a life cycle?</li> <li>- How do life cycles differ for different animals?</li> <li>- What are the life processes of reproduction in an animal?</li> <li>- What are the life processes of reproduction in a plant?</li> </ul>	<p><b>Working Scientifically</b></p> <ul style="list-style-type: none"> <li>- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>- using test results to make predictions to set up further comparative and fair tests</li> <li>- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>- identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>	<p>- Also covered in:</p> <p>Y3- Animals including humans.</p> <p>Y4- Living things and their habitats</p> <p>Y6- Living things and their habitats</p>
<p><b>By the end of this unit children will be able to:</b></p> <ul style="list-style-type: none"> <li>- Describe the life cycle of different mammals, amphibians, insects and birds.</li> <li>- Explain how reproduction occurs in an animal and a plant.</li> </ul>		

**Knowledge**

A mammal is a warm-blooded creature that gives birth to live babies. A mammal has fur or hair. The largest mammal in the world is the blue whale and the smallest is the bumblebee bat.

An amphibian is a cold-blooded creature. Amphibians can breathe in and out of water. Frogs and toads are amphibians.

An insect is a creature whose body is split into three sections called the head, the thorax and the abdomen. Insects have an exoskeleton. There are around one million species of insects, including ants, bees and butterflies.

A bird is a vertebrate. It has a beak, feathers and wings, although not all birds can fly

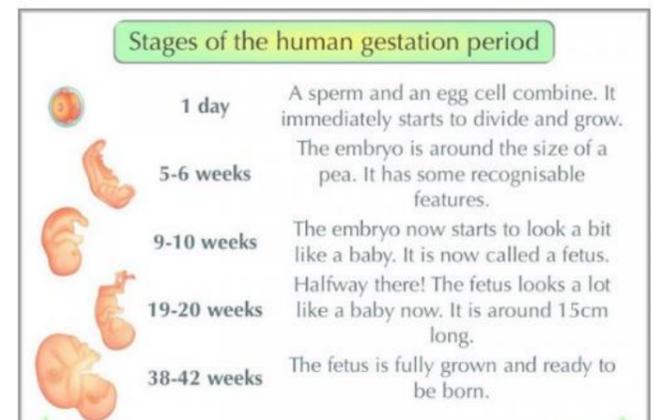
All animals, including humans, are born, they get older and bigger and some will go on to have children. In the end, all animals die. We call this a life cycle.

Life cycles in mammals  
 Embryo growing inside the mother, where it is completely reliant upon the mother.  
 Main period of growth and developing independence from the parents.  
 Independent adult usually seeks company from the opposite sex and mates. Adult female nurses their young

Life cycle of an amphibian  
 The female lays a mass of eggs which are fertilized by the male.  
 After 2-25 days the tadpole hatches from the egg.  
 It swims and eats plants. It breathes through gills.  
 The tadpole grows fins and a stronger tail. Then, it develops lungs and hind legs.  
 The tadpole grows front legs and its tail shortens. It uses nutrients in its tail as food. It jumps out of the water on to land  
 The tail disappears and it starts to eat insects instead of plants. It takes 2-4 years to become an adult, when it can lay eggs.

Insects come under two categories. ‘Metamorphosis’ means ‘to change’  
 Insects like butterflies have four stages in their life-cycle. They lay an egg on a leaf and the egg hatches into a larva (or caterpillar) which does not look like the adult butterfly. The caterpillar grows and turns into a pupa (which is sometimes called a chrysalis). The body of the butterfly develops inside the pupa and the adult butterfly emerges. It then finds a mate and the cycle will start again. This is called complete metamorphosis because the young are different to the adult  
 Incomplete metamorphosis- The life cycle of these insects has three stages: egg, nymph and adult. Insects in this category include grasshoppers, crickets and cockroaches

To reproduce, animals need a male and female. Together they can create offspring, or babies. Some animals, such as chickens, fish and snakes, lay eggs which contain their offspring. Other animals, including humans, tigers and sheep, grow their babies inside them until they are developed enough to be born.  
 The stages of plant life cycles are : seed dispersal, germination, pollination, fertilisation,



<p><b>Topic Specific Vocabulary</b></p> <p>Life cycle, mammal, amphibian, insect, bird, <b>Complete Metamorphosis, incomplete metamorphosis, reproduction, seed dispersal, germination, pollination, fertilisation, stamen, stigma, carpel, ovary, fertilised egg, embryo, fetus,, sperm, egg, gestation period</b></p>	<p><b>NC Subject content</b></p> <ul style="list-style-type: none"> <li>- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>- describe the life process of reproduction in some plants and animals.</li> </ul>
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**Subject Specific/Academic Vocabulary**  
 This vocabulary should be explicitly taught in context. Other tier 2 words should also be explored as they are encountered.

Year 3	Year 4	Year 5	Year 6
Benefit, impact, issues, occur, process, sequence, source, variables	Appropriate, consequences, identified, procedure, range, relevant, significant, specific, theory, transfer	Factors, affect, analyse, contribute, demonstrate, outcome, react, volume,	Component, exclude, function, imply, initial, justify, sufficient.

**We are scientists**