

Topic:	Year group	Term
Life cycles	5	Spring

Background knowledge

In years 2 and 3 , the children have looked at life cycles of animals in simple terms naming the different stages e.g. frog spawn, tadpoles, froglets and frogs.

Children should explore the four main stages of the life cycle of a mammal - foetus, young, adolescent and adult. Highlight to children that some mammals, called "monotremes", lay eggs instead of giving birth to live young.

Children should explore the metamorphosis of a frog, looking at frogspawn, tadpoles, froglets and adult frogs.

Children should explore the complete metamorphosis of different insects, such as a butterfly, honeybee and ladybird. Mention to children that some insects only go through three life stages (egg, nymph and adult) and this is called "incomplete metamorphosis".

Children should be able to describe the life cycle of a bird, including the five different stages - egg, hatchling, nestling, fledgling and adult. Children should look at different examples of birds that can fly, such as owls, and birds that cannot fly, such as penguins.

Common misconceptions

- Children may think that humans are not animals and therefore are not classed as mammals.
- Children may think frog eggs (frogspawn) have a hard outer covering like bird eggs. Explain that frogspawn has a soft jelly-like covering for protection instead of a hard shell.
- Children may incorrectly classify spiders as insects. Spiders are classified as arachnids because they have eight legs and two body sections. Children do not need to be introduced to the term "arachnids" in Year 5 as this is introduced within the Year 6 curriculum.
- Some children may think that eggs hatch into fully formed birds.
- Children may think that all birds build nests in trees. Show children examples of birds that construct nests on the ground, on cliffs and in burrows.

What should I already know?

Year 2

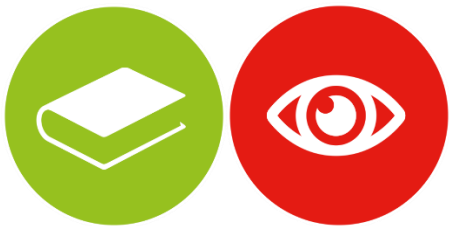
I can explain the basic stages in a life cycle for animals including humans

Year 3

I can describe the flowering plant's life cycle

Year 4.

I can group living things in different ways including animal groups (mammals, amphibians etc.)

National Curriculum Objectives / Key Skills	The Journey
Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. <u>Working scientifically</u> Use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas' (non-statutory). Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations. <u>Scientific enquiry</u> 	1. Life cycles of mammals 2. Life cycles of amphibians (frogs) 3. Life cycles of insects 4. Life cycles of birds

Outcomes

Working towards: I can describe some of the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

Expected: I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

Exceeding: I can describe in detail explain why the differences in the life cycles of a mammal, an amphibian, an insect and a bird.

Key Vocabulary

Monotreme - a mammal that lays eggs, such as the platypus and the spiny anteater

Offspring - the young of a living thing

Mammary gland - the organ of female mammals that produces milk

Mammal - an animal with a spine and fur or hair on its body, which gives birth to live young and feeds it young on milk

Life cycle - a series of stages a living thing goes through during its life

Amphibian - a vertebrate that lives on land and in water and usually lays eggs

Frogspawn - the eggs of a frog

Tadpole - a baby frog that has a long tail and no legs

Froglet - an adolescent frog with a tail and legs

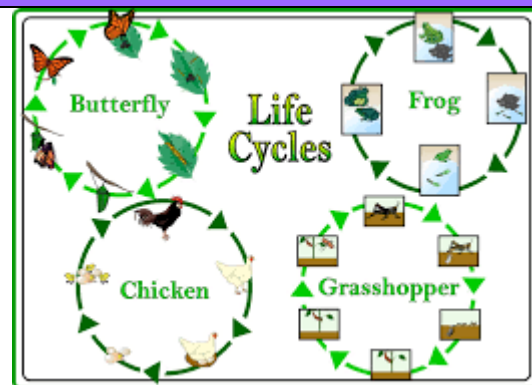
Metamorphosis - the process by which the young form of an insect or amphibian changes into an adult form

Larva - the youngest form of an insect

Pupa - an insect after it has been a larva and before it becomes an adult, usually enclosed in a cocoon or hard case

Insect - a small animal that has three body sections, six legs and antennae

Timeline / Diagrams



Hatchling - a baby bird that had just hatched from an egg Nestling - a young bird that cannot fly yet and depends on its parents for food and protection Fledgling - a young bird that has grown feathers	
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Key people / places
STEM career; Wildlife biologist Famous scientist; David Attenborough.

Assessment questions / outcomes
Sort the animal into mammal, reptiles, insects, amphibians, birds and fish. State a feature of each group. Draw the life cycle of one type of animal. How does it differ to that of a bird? Describe an animal's life cycle in detail.