Life Cycle of a plant: Seed → Germination → Seedling → Mature Plant

Life Cycle of a Frog: eggs → tadpole → tadpole with 2 legs → tadpole with 4 legs → froglet → adult frog

Year 5 Living Things and Their Habitats
Science Knowledge Organiser
Knowledge   Skills   Vocabulary

Parts of a flower: Petal, Anther, Stamen, Filament, Stigma, Ovary, Ovule, Nectary, Sepal
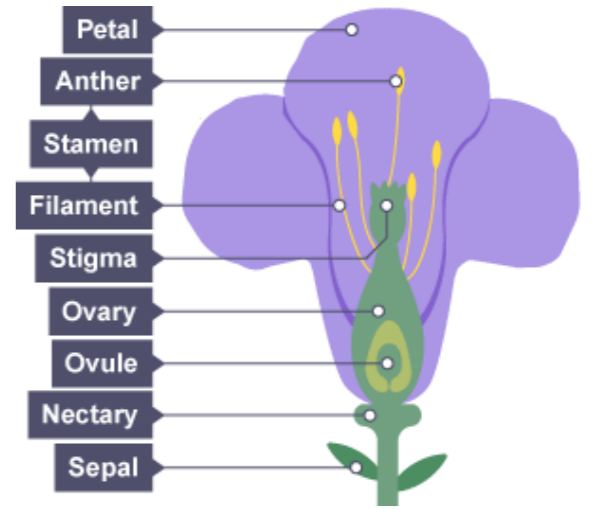
Curriculum Coverage

- 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 .

The Life Cycle of a Dog: Adult grows old → Babies grow inside mother → Puppy is born → Puppy grows → Adult can reproduce

Life Cycle of a Chicken: Adult → Egg → Embryo → Hatchling → Chick → (back to Adult)
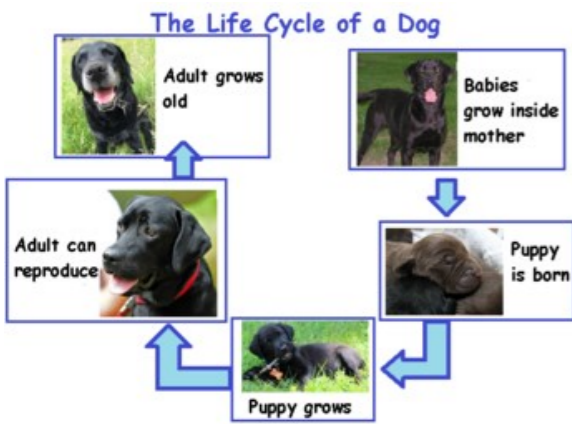
Skills Progression

To plan different types of scientific enquiries to answer questions, including recognising and controlling variables.

To take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.

To record data and results of increasing complexity using scientific diagrams and labels, tables, bar and line graphs.

To use test results to make predictions to set up further comparative and fair tests.

To report and present 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.

To be able to identify the correct type of enquiry to answer a question.

To be able to recognise which secondary sources will be most useful to their research.

Knowledge Progression

Can I plan and run an experiment to allow me to observe the life-cycle of a plant?

Can I identify and label the different parts of a flowering plant, and understand their purpose?

Can I plan and run an experiment to understand how external factors affect the life-cycle of a plant?

Can I find out how different plants disperse their seeds, and understand why this is important?

How do animal life-cycles differ to those of a plant, and from each other?

Scientific vocabulary

Animals – amphibians, reptiles, birds, mammals, insects, fish

Animal development – egg, larva, pupa, nymph, adult, metamorphosis

Parts of a flower – petal, stamen (anther + filament), carpel (stigma + style + ovary + ovule)

Processes – pollination, fertilisation, germination, life-cycle, metamorphosis

Scientific enquiry

How do plants reproduce? What processes are involved in plant reproduction? Do all plants reproduce in the same way? What are the functions of different parts of a flowering plant? What are the different stages of plant growth within its life cycle? What do plants need to thrive?

How do different types animals reproduce, grow and develop? What processes do different animals go through from birth to maturity? What are the life cycle stages for different types of animals such as amphibians, birds and mammals?

Scientific Inquiry
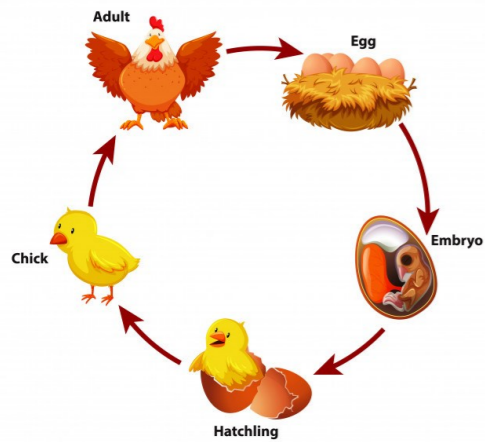
Pattern Seeking

Fair Testing

Identifying and Classifying

Observing over Time

Researching