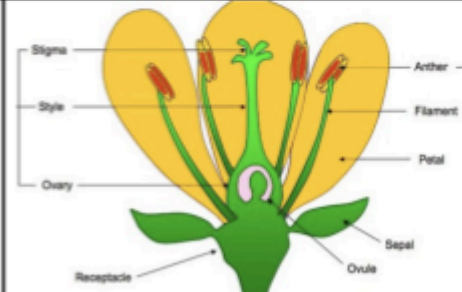
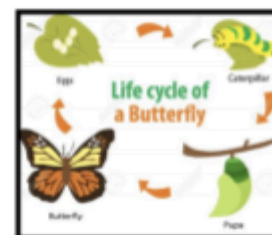
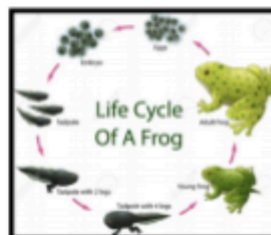
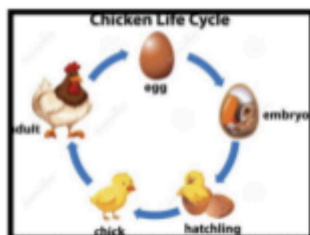
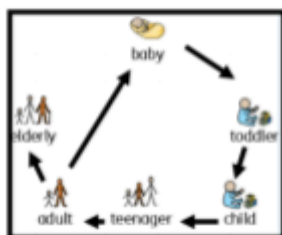


Vocabulary		What will I know by the end of the unit?	
anther	the part of a stamen that produces and releases the pollen	What is reproduction?	<ul style="list-style-type: none"> • Reproduction is when an animal or plant produces one or more individuals similar to itself: <ul style="list-style-type: none"> • Sexual reproduction: <ul style="list-style-type: none"> • requires two parents with male and female gametes (cells) • will produce offspring that is similar to but not identical to the parent • Asexual reproduction: <ul style="list-style-type: none"> • will produce offspring that is identical to the parent • requires only one parent
bulb	a root shaped like an onion that grows into a flower or plant		
cell	the smallest part of an animal or plant that is able to function independently	How do plants reproduce?  germination ↓ pollination ↓ fertilisation ↓ seed dispersal	<ul style="list-style-type: none"> • Male gametes can be found in the pollen. • Female gametes can be found in the ovary (they are called ovules). • Pollination occurs when pollen from the anther is transferred to the stigma by bees and other insects. • The pollen then travels down and meets the ovule. When this happens, seeds are formed - this is called fertilisation. • Seeds are then dispersed so that germination can begin again. • Some plants, such as daffodils and potatoes, can also produce offspring using asexual reproduction
dispersed	scattered, separated, or spread through a large area		
dissect	to carefully cut something up in order to examine it scientifically		
embryo	an unborn animal or human being in the very early stages of development		
fertilisation	male and female gametes meet to form an embryo or seed		
flower	the part of a plant which is often brightly coloured and grows at the end of a stem		
flowering	trees or plants which produce flowers		
function	a useful thing that something does		
gamete	the name for the two types of male and female cell that join together to make a new creature		
germination	if a seed germinates or if it is germinated , it starts to grow		
life cycle	the series of changes that an animal or plant passes through from the beginning of its life until its death		
mature	When something matures , it is fully developed		
metamorphosis	a person or thing develops and changes into something completely different		
ovary	a female organ which produces eggs		
ovule	a small egg		
petal	thin coloured or white parts which form part of the flower		
plant	a living thing that grows in the earth and has a stem, leaves, and roots		
pollen	a fine powder produced by flowers . It fertilises other flowers of the same species so that they produce seeds		
pollination	To pollinate a plant or tree means to fertilise it with pollen . This is often done by insects		
reproduction	when an animal or plant produces one or more individuals similar to itself		
seed	the small, hard part from which a new plant grows		
stigma	the top of the centre part of a flower which takes in pollen		
structure	the way in which something is built or made	What are examples of life cycles?	<ul style="list-style-type: none"> • The life cycles of mammals, birds, amphibians and insects have similarities and differences. • One difference is that amphibians and insects go through the process of metamorphosis. This is when the structure of their bodies changes significantly as they grow (for example, from tadpole to frog or caterpillar to butterfly).



Investigate!

- **Dissect a flower** and identify the different parts of it. Label the different parts and explain their **functions**.
- Grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs.
- Compare the **life cycles** of mammals, amphibians, insects and birds. What is similar about their **life cycles**? What is different?
- Observe **life cycle** changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment.
- Compare the **life cycles** of **plants** and animals in the local environment with other **plants** and animals (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences.
- Observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow.
- Compare what you already know about David Attenborough, and compare his work to that of Jane Goodall's.

<p>Working scientifically</p>	<p>The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. Use relevant scientific vocabulary to report on their findings. Answer questions and justify their conclusions based on evidence collected. Identify improvements, further questions and predictions.</p> <p>Questions can help us find out about the world and can be answered using a range of scientific enquiries. Ask a wide range of relevant scientific questions that broaden their understanding of the world around them and identify how they can answer them.</p> <p>A method is a set of clear instructions for how to carry out a scientific investigation. A prediction is a statement about what might happen in an investigation based on some prior knowledge or understanding. Plan and carry out a range of enquiries, including writing methods, identifying variables and making predictions based on prior knowledge and understanding.</p> <p>Specialised equipment is used to take measurements in standard units eg. data loggers plus sensors, such as light (lux), sound (dB) and temperature (°C); timers (seconds, minutes and hours); thermometers (°C), and measuring tapes (millimetres, centimetres, metres). Take increasingly accurate measurements, in standard units, using a range of chosen equipment.</p> <p>An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time. Within a group, decide which observations to make, when and for how long, and make systematic and careful observations. Use them to make comparisons, identify changes, classify and make links between cause and effect. Data can be recorded and displayed in different ways, including tables, bar and line charts, classification keys and labelled diagrams. Gather and record data and results of increasing complexity, selecting from a range of methods (scientific diagrams, labels, classification keys, tables, graphs and models). The results are information, such as measurements or observations, that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected. Identify improvements, further questions and predictions.</p>
<p>Living things and their habitats</p>	<p>A life cycle is the series of changes in the life of a living thing and includes these basic stages: birth, growth, reproduction and death. Mammals' life cycles include the stages: embryo, baby, adolescent and adult. Amphibians' life cycles include the stages: egg, larva (tadpole), adolescent and adult. Birds' life cycles include the stages: egg, baby, adolescent and adult. Some insects' (butterflies, beetles and bees) life cycles include the stages: egg, larva, pupa and adult. Compare the life cycles of animals, including a mammal, amphibian, insect and bird.</p> <p>Reproduction is the process of producing offspring and is essential for the continued survival of a species. There are two types of reproduction: sexual and asexual. Sexual reproduction involves two parents (one female and one male) and produces offspring that are different from the parents. Asexual reproduction involves one parent and produces offspring that is identical to the parent. Humans reproduce sexually, which involves two parents (one female and one male) and produces offspring that are different from the parents. Flowering plants reproduce sexually. The flower is essential for sexual reproduction. Other plants reproduce asexually. Bulbs, corms and rhizomes are some parts used in asexual reproduction in plants. Parts of a flower include the stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal. Pollination is when the male part of a plant (pollen) is carried, by wind, insects or other animals, to the female part of the plant (carpel). The pollen travels to the ovary, where it fertilises the ovules (eggs). Seeds are then produced, which disperse far away from the parent plant and grow new plants.</p> <p>Describe the life process of reproduction in some plants and animals. Group and sort plants by how they reproduce. Label and draw the parts of a flower involved in sexual reproduction in plants (stamen, filament, anther, pollen, carpel, stigma, style, ovary, ovule and sepal).</p>