C.E.SCHOOL	**Year** 5	**Topic:** Living things and their habitats
	National Curriculum links: • 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.	

Prior learning	**Future learning**
• Notice that animals, including humans, have offspring which grow intoadults. (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)	• Reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetusthrough the placenta. (KS3) • Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, includingquantitative investigation of some dispersal mechanisms. (KS3)

WHAT PUPILS NEED TO KNOW OR DO TO BE SECURE	
Show understanding of a concept using scientific vocabulary correctly	
Key learning	**Possible evidence**
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 beborn live, such as babies or kittens, and then grow into adults. In other animals, such as chickens orsnakes, there may be eggs laid that hatch to young which then grow to adults. Some young undergoa 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 reproduceasexually by taking cuttings. Sexual reproduction occurs through pollination, usually involving wind orinsects.	• Can draw the life cycle of a range of animals identifying similarities and differences between thelife cycles Can explain the difference between sexual and asexual reproduction and give examples of howplants reproduce in both ways
Key vocabulary	
life cycle, reproduce, sexual, fertilises, asexual, plantlets, runners, tubers, bulbs, cuttings	

Common misconceptions	
Some children may think: • all plants start out as seeds • all plants have flowers • plants that grow from bulbs do not have seeds • only birds lay eggs.	
Apply knowledge in familiar related contexts, including a range of enquiries	
Activities	**Possible evidence**
• Use secondary sources and, where possible, first-hand observations to find out about the lifecycle of a range of animals. • Compare the gestation times for mammals and look for patterns e.g. in relation to size of animalor length of dependency after birth. • Look for patterns between the size of an animal and its expected life span. • Grow and observe plants that reproduce asexually e.g. strawberries, spider plants, potatoes. • Take cuttings from a range of plants e.g. African violet, mint. • Plant bulbs and then harvest to see how they multiply. • Use secondary sources to find out about pollination.	• Can present their understanding of the life cycle ofa range of animals in different ways e.g. drama, pictorially, chronological reports, creating a game • Can identify patterns in life cycles • Can compare two or more animal life cycles theyhave studied • Can explain how a range of plants reproduceasexually
Lesson 1 **LO: to describe the process of sexual reproduction in flowering plants**	**Key Assessment Questions** Can children name and describe the functions of the main parts of flowers? Can children describe the life process of sexual reproduction in flowering plants? Can children identify and label the parts of a flower?
Lesson 2 **LO: to describe the process of asexual reproduction in plants**	**Key Assessment Questions** Do children understand what asexual reproduction is? Can children explain some ways in which plants reproduce asexually? Can children describe the life cycle of some asexually reproducing plant?

Lesson 3 **LO: to describe the process of sexual reproduction in animals**	**Key Assessment Questions** Can children define some of the ways in which sexual reproduction in animals occur? Can children compare species that reproduce in different ways and consider reasons why? Can children record data using scientific graphs/diagrams?
Lesson 4 **LO: to observe and compare the life cycles of animals in our local environment with other animals around the world** TAPS science lesson life cycle acting https://pstt.org.uk/application/files/5814/7021/6047/Y5eg_Living_Life_cycle_acting.pdf	**Key Assessment Questions** Can children establish casual links between the life cycle of animals and their environment? Can children compare the life cycles of animals living in different environments?
Lesson 5 **LO: to compare how different animals reproduce and grow**	**Key Assessment Questions** Can children use scientific vocabulary to explain some ways in which different animals reproduce? Can children give reasons for the difference between life cycles of different animals? Can children compare the life cycles and methods of reproduction of different animals?
Lesson 6 **LO: to learn about naturalists**	**Key Assessment Questions** Can children talk about what a naturalist does? Can children explain why the work of a naturalist is important?

If completing topic over a term, objectives can be covered over more than one lesson ensuring scientific enquiry skills (working scientifically) are being developed