

Science | WPC | 2021-22 | Living Things and their Habitats

1. Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
2. Describe the life process of reproduction in some plants and animals

Assessment guidance	Key learning	Key vocabulary	
Living things and their habitats	Shows understanding of a concept using scientific vocabulary correctly	<p>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.</p> <p>Animals including humans have offspring which grow into adults. In humans and some animals these offspring will be born live, such as babies or kittens, and then grow into adults. In other animals, such as chickens or snakes, there may be eggs laid that hatch to young which then grow to adults.</p> <p>Some young undergo a further change before becoming adults e.g. caterpillars to butterflies. This is called a metamorphosis.</p> <p>Plants reproduce both sexually and asexually. Bulbs, tubers, runners and plantlets are examples of asexual plant reproduction which involves only one parent.</p> <p>Gardeners may force plants to reproduce asexually by taking cuttings. Sexual reproduction occurs through pollination, usually involving wind or insects.</p>	<p>Life cycle</p> <p>Reproduce</p> <p>Sexual</p> <p>Sperm</p> <p>Fertilises</p> <p>Egg</p> <p>Live young</p> <p>Metamorphosis</p> <p>Asexual</p> <p>Runners</p> <p>Bulbs</p> <p>Cuttings</p>
	Applying knowledge in familiar related contexts, including a range of enquiries	<p>Use secondary sources and, where possible, first hand observations to find out about the life cycle of a range of animals</p> <p>Compare the gestation times for mammals and look for patterns e.g. in relation to size of animal or length of dependency after birth</p> <p>Look for patterns between the size of an animal and its expected life span</p> <p>Grow and observe plants that reproduce asexually e.g. strawberries, spider plant, potatoes</p> <p>Take cuttings from a range of plants e.g. African violet, mint</p> <p>Plant bulbs and then harvest to see how they multiply</p> <p>Use secondary sources to find out about pollination</p>	

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Lesson Progression	
1	Explain the difference between sexual and asexual reproduction, recap and identify the function of parts of a flower and describe the ways that plants are pollinated in order to reproduce.
2	Identify the advantages and disadvantages of sexual and asexual reproduction in plants. Independently follow instructions to conduct a practical experiment to demonstrate different ways to make new plants, making scientific observations and concluding on findings.
3	Describe the process of reproduction in mammals and compare the life cycles of different mammals (e.g. a monotreme, a marsupial and a placental).
4	Explain metamorphosis and give examples, describe the life cycles of amphibians and insects, giving similarities and differences between the two.
5	Compare the life cycles of plants, mammals, amphibians, insects and birds, explaining their similarities and differences.
Throughout	Check progress of plant cutting (asexual reproduction) and make scientific observations about growth and progress.