**Year 5 Science Curriculum – Spring 2**

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| **Theme: Plant and Animal lifecycles** |
| **Curriculum objectives** | **Vocabulary** | **Links across the curriculum** |
| To describe the life process of reproduction in some plants and animals.To describe the [differences in] the life cycles of a [mammal, an amphibian, an insect and] a bird. | **Dissect** | To separate into pieces | **Anther** | The end of the stamen which produces pollen. | ICT:* Secondary research
* Presentation of information

English:* Oracy
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| **Asexual** | When an organism can reproduce by itself. | **Fertilisation** | The joining of a male reproductive cell with a female reproductive cell to produce a new organism. |
| **Metamorphosis** | When an animal changes from one form into another, | **Propagation** | Producing new plants without seeds. |
| **Seed dispersal** | The movement of seeds away from the parent plant. | **Style** | The part of the carpel that leads from the stigma to the ovary. |
| **Tier 3 vocabulary** [SNAP23\_Y5\_M4\_lifecycles\_ms.docx (live.com)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fstatic.collins.rhapsode.com%2FSnap_Science%2FTeaching_Science%2FYear_5%2FSNAP23_Y5_M4_lifecycles_ms.docx&wdOrigin=BROWSELINK) |
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| **Prior knowledge:** *What specifically have pupils learned that is relevant to this unit that they are building upon?* | **Future knowledge:** *What specifically will pupils learn in the future that is relevant to this unit?* |
| Children have previously learnt:* that animals have offspring which grow into adults (Year 2 Biology – Animals, including humans)
* that flowers play an important part in the life cycle of flowering plants, including pollination, seed formation and seed dispersal (Year 3 Biology – Plants).
 | This prepares children for later learning:- about human growth (Year 5 Biology – Animals, including humans)- about evolution and inheritance (Year 6 Biology – Evolution and inheritance). |
| **Lesson Sequence** | **Key Knowledge** | **Key Skills** |
| How do flowering plants produce seeds? | * The life cycle of flowering plants
* Revisit learning about pollination and seed formation
* Dissect a flower and identify and draw the reproductive organs.
* Create a resource to explain to someone else the process of how flowering plants reproduce.
 | Working scientifically:* recording data and results of increasing complexity using scientific diagrams and labels, [classification keys, tables, scatter graphs, bar and line graphs]
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| Do all plants have the same reproductive parts? | - Compare two different flowers.- Go on a nature walk outside and compare more flowers.- Different flowers have different numbers of petals, stamens or carpels, and that this helps botanists to identify them. | Working scientifically:● 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 relationship sand explanations of and degree of trust in results, in oral [and written] forms [such as displays and other presentations]Scientific enquiry type:● pattern seeking |
| How can we grow more plants without any seeds? | - Aasexual reproduction creates plants that are identical to the parent- Propagation - grow more plants from cuttings.- Consider why gardeners use vegetative propagation as a means of growing more plants, | Working scientifically:● reporting and presenting findings from enquiries, including conclusions, causal relationshipsand explanations of and degree of trust in results, in oral [and written] forms [such as displays and other presentations]. |
| How do birds change over their lifetime? | - Birds lay eggs with hard shells, and that these may or may not be fertilised.- Observe the inside of an egg.- Research the life cycle of a chicken and represent it in a diagram. | Working scientifically:● recording data and results of increasing complexity using scientific diagrams and labels, [classification keys, tables, scatter graphs, bar and line graphs]. |
| Do all mammals have the same gestation period? | - Compare the life cycles of four mammals.- Look for a pattern between the gestation period of different mammals and their adult weight.- Compare the life cycle of a mammal with the life cycle of a bird. | Working scientifically:● 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 degree of trust in results, in oral and written forms such as displays and other presentations].Scientific enquiry type:● pattern seeking. |
| How do amphibians change throughout their lifecycle? | - Sequence the life cycle of a common frog.- Research the differences between tadpoles and adult common frogs.- Discuss the importance of frogs in the wider ecosystem.- Compare amphibian and bird life cycles. | Working scientifically:● reporting and presenting 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. |
| **Themes and links** |
| **Themes (types of enquiry)** | **Where these are covered:** | **Links across the science curriculum** |
| **Observation over time** |  |

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| **EYFS**  |  |
| **1**  | Properties and used of materials |
| **2**  | Growing seeds and bulbs |
| **3**  | Forces, friction and magnets |
| **4**  | Human impact on the environment |
| **5**  |  |
| **6** | Human circulation |

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| **Research** |  |
| **Pattern seeking** |  |
| **Comparative and fair testing** |  |
| **Identifying, classifying and grouping** |  |  |