**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 | |
| **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) | | | | | |
|  |  |  | |  | |
| **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] | | | |
| 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 relationships  and 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** |  | | | | | | | |  |  | | --- | --- | | **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 | | |
| **Research** |  | | | | | | |
| **Pattern seeking** |  | | | | | | |
| **Comparative and fair testing** |  | | | | | | |
| **Identifying, classifying and grouping** |  | | | | | | |  | |