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| **F:\Learning bugs\Foundation Subjects\Dolly the Fly - Science.jpgLyng Primary School Knowledge Organiser** | | | |
| **Topic:** | **Life cycles and reproduction** How are life cycles different between species? | Year 5 | Spring 2 |



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| **What Step On and Goldilocks words will I use?** | |
| **Spelling** | **Definition** |
| Adolescence | A young organism that is in the process of developing into a young adult |
| Asexual reproduction | A process where a plant produces a new plant from a part of itself |
| Characteristic | A feature that allows something to be sorted into a group |
| Juvenile | The stage following infancy where growth and development continue but adulthood hasn’t been reached. |
| Cuttings | A method of asexual reproduction where a piece of the plant like the stem or leaf is cut and planted to grow a new plant |
| Fledgling | A young bird that has grown feathers and is learning to fly |
| Gestation | The period in which the offspring develop inside the female |
| Germination | The process where a seed spouts and grows into a new plant and requires water. |
| Chrysalis | Protective case formed during the pupal stage of butterflies |
| Incubation | Keeping eggs warm so the offspring can grow and develop |
| Metamorphosis | Process of transforming from an immature form to an adult form |
| Nymph | Juvenile stage of the 3 stages of insects. Small and lacks wings |
| Ovule | The female part of the plant that after fertilisation develops the seed |
| Pupa | The cocoon stage of an insect life cycle |
| Tuber | Swollen unground stem/root filled with nutrients |
| Hatchling | A bird that has recently hatched from its egg |
| Nestling | A young bird that cannot fly |

**What should I already know?**

Children should have some knowledge of living things and life cycles including information about:

* Life cycle of plants
* Life cycle of an insect
* Parts of a plant
* Classification of living things
* Habitats

**Notable scientists**

Maria Sibylla Merian – discovered metamorphosis – focused on entymology

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| **Investigate!** |
| * Observing and comparing parts of flowering plants * Researching life cycles of different mammals * Comparing life cycles of different birds * How does temperature affect egg hatching * Compare and describe the life cycle of an insect with an amphibian * Represent root growth overtime on a line graph |

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**What will I know by the end of the unit?**

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| How does a plant develop? | Describe the plant life cycle  Describe sexual reproduction in plants  Dissect a flower |
| How do mammals develop? | Describe the life cycle of a mammal  Compare life cycles of different mammals  Describe sexual reproduction in mammals |
| How do birds develop? | Describe the life cycle of a bird  Compare the life cycle of a bird to a mammal  Compare different life cycles of birds |
| How do amphibians develop? | Describe the life cycle of an amphibian  Compare life cycles of different amphibians  Analyse data |
| How do insects develop? | Describe the 3 and 4 stage life cycle of an insect  Compare the life cycles of insects and amphibians  Make predictions about data |
| How plants reproduce asexually? | Describe the changes to a cutting as it grows.  Explain the difference between a clone and other offspring  Analyse data |

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| **Topic** | **Science** | Year 5  *Life cycles and reproduction* | Spring 2 |

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| 1. What is the female part of the flower called? | **S** | | **E** |
| 1. Stamen |  |  | |
| 1. Anther |  |  | |
| 1. Style |  |  | |
| 1. Pistil |  |  | |

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| 5. Which groups often provide a lot of parental care? | **S** | **E** |
| 1. Mammals only |  |  |
| 1. Insects and amphibians |  |  |
| 1. Birds and mammals |  |  |
| 1. Amphibians only |  |  |

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| 6. What word describes changing from a distinctly different larval stage to an adult? | **S** | **E** |
| 1. Metamorphosis |  |  |
| 1. Adolescence |  |  |
| 1. Transformation |  |  |
| 1. Pupating |  |  |

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| 2. Which of these methods of asexual reproduction is not natural? | **S** | **E** |
| 1. Tubers |  |  |
| 1. Runners |  |  |
| 1. Cutting |  |  |
| 1. Budding |  |  |

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| 7. What is the larval stage of a frog called? | **S** | **E** |
| 1. Froglet |  |  |
| 1. Tadpole |  |  |
| 1. Frog |  |  |
| 1. Amphibian |  |  |

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| 3. Which statement is true only for asexual reproduction? | **S** | **E** |
| 1. New offspring is made |  |  |
| 1. The offspring has characteristics of both parents |  |  |
| 1. Two parents are required |  |  |
| 1. The offspring has identical characteristics to a single parent |  |  |

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| 4. Which stage is the first in the mammal life cycle? | **S** | **E** |
| 1. Gestation |  |  |
| 1. Juvenile |  |  |
| 1. New born |  |  |
| 1. Adolescent |  |  |