



## The Canons CE Primary School



### Year 5 – Living Things and Their Habitats

| Prior Learning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | In Year 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Future Learning                                                                                                                                                                                                                                                                                                                                          |
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| <p>In Year 2 children will be taught to:</p> <ul style="list-style-type: none"><li>• identify that animals have offspring which grow into adults. (<i>Animals including humans</i>)</li></ul> <p>In Year 3 children will be taught to:</p> <ul style="list-style-type: none"><li>• describe the process of pollination</li><li>• describe how seeds are dispersed</li><li>• describe how seeds are formed</li><li>• describe how water is transported through a plant</li><li>• identify the requirements of a plant for life and growth (air, water, light, nutrients from soil, and room to grow) and how they vary from plant to plant</li><li>• describe how the structure of the plant links to its function</li><li>• describe the functions and different parts of a flowering plant</li><li>• identify the different parts of a flowering plant (roots, stem/trunk, leaves, flowers). (<i>Plants</i>)</li></ul> | <p>In Year 5 children will be taught to:</p> <ul style="list-style-type: none"><li>• compare the life cycles of plants in their local environment to different habitats around the world (such as the rainforest or in the Arctic)</li><li>• describe asexual reproduction in plants</li><li>• identify the processes of sexual reproduction in plants</li><li>• identify the processes of sexual reproduction in animals</li><li>• describe the similarities and differences between the life cycles of different animals to include mammals, amphibians, insects and birds</li><li>• describe the similarities and differences between the life cycles of different plants.</li></ul> <p><b>Key Vocabulary</b></p> <p>life cycle, reproduce, sexual, sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings</p> | <p>In Year 6 children will be taught to:</p> <ul style="list-style-type: none"><li>• use their research of animals unknown to them in order to classify them</li><li>• describe the main features of particular groups such as vertebrates and invertebrates</li><li>• give reasons why living things can be classified into different groups.</li></ul> |
| Famous Scientists                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Common Misconceptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Possible Evidence to be Secure                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>Some children may think:</p> <ul style="list-style-type: none"><li>• all plants start out as seeds</li><li>• all plants have flowers</li><li>• plants that grow from bulbs do not have seeds</li><li>• only birds lay eggs.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>Children can:</p> <ul style="list-style-type: none"><li>• draw the life cycle of a range of animals identifying similarities and differences between the life cycles</li><li>• explain the difference between sexual and asexual reproduction and give examples of how plants reproduce in both ways.</li></ul>                                       |



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### Working Scientifically

#### National Curriculum Statutory Requirements

1. Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
2. Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings where appropriate.
3. Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
4. Use test results to make predictions to set up further comparative and fair tests.
5. Report and present findings from enquiries, including conclusions, casual relationships and explanations of result, in oral and written forms such as displays and other presentations.
6. Identify scientific evidence that has been used to support or refute ideas or arguments.

Highlighted = main focus during this topic

#### Teaching Ideas – Different Types of Scientific Enquiry

| Comparative and Fair Testing                                      | Identifying and Classifying                                                                  | Observation Over Time                                                                       | Pattern Seeking                                                           | Research                                                                   |
|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------|
| How does the level of salt affect how quickly brine shrimp hatch? | Compare this collection of animals based on similarities and differences in their lifecycle. | How do brine shrimp change over their lifetime?<br>How does a bean change as it germinates? | Is there a relationship between a mammal's size and its gestation period? | What are the differences between the life cycle of an insect and a mammal? |

#### Teaching Ideas – How Pupils Could Work Scientifically

#### Teaching Ideas – Possible Evidence to be Secure

(Bracketed Number = National Curriculum Statutory Requirement Link)

- Use secondary sources and, where possible, first-hand observations to find out about the life cycle of a range of animals. (1, 5)
- Compare the gestation times for mammals and look for patterns e.g. in relation to size of animal or length of dependency after birth. (5)
- Look for patterns between the size of an animal and its expected life span. (1)
- Grow and observe plants that reproduce asexually e.g. strawberries, spider plants, potatoes. (2, 3)
- Take cuttings from a range of plants e.g. African violet, mint.
- Plant bulbs and then harvest to see how they multiply. (1, 2)
- Use secondary sources to find out about pollination. (5)

Children can:

- present their understanding of the life cycle of a range of animals in different ways e.g. drama, pictorially, chronological reports, creating a game (5)
- identify patterns in life cycles (6)
- compare two or more animal life cycles they have studied (5)
- explain how a range of plants reproduce asexually (5)