



# Lowerhouse Junior School

## Science Overview Sheet



### Year 5 – Life Cycles of Plants and Animals



**Rationale:** Teaching about plants in Year 5 science is crucial for understanding ecosystems and the environment. It helps students learn about plant life cycles, photosynthesis, and the importance of plants in food chains. This knowledge fosters environmental awareness, appreciation for nature, and the role of plants in sustaining life on Earth.

**Substantive Knowledge:**

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- Describe the life process of reproduction in some plants and animals.
- Name, locate and describe the functions of the main parts of reproductive system of plants

**Disciplinary Knowledge:**

- Classifying
- Observing over time
- Pattern Seeking

**Overview:**

**Lesson 1:** What is needed to create a nature diary?  
**Lesson 2:** How do plants reproduce?  
**Lesson 3:** How do life cycles of different animals compare?  
**Lesson 4:** How can secondary sources help to answer questions?  
**Lesson 5:** How does the size of an animal affect lifespan and gestation?  
**Lesson 6:** What is the difference between rainforest plants and local plants?

**Key Vocabulary:**

**Life cycle:** The series of stages through which a living organism passes from the beginning of its life until its death. For plants, this includes germination, growth, reproduction, and death.  
**Reproduce:** The biological process by which new individual organisms are produced. In plants, reproduction can be sexual or asexual.  
**Sexual:** A type of reproduction that involves the combination of genetic material from two parent organisms, typically involving the fusion of male and female gametes (sperm and egg cells).  
**Fertilises:** The process by which a male gamete (sperm) combines with a female gamete (egg) to form a zygote, leading to the development of a new organism.  
**Asexual:** A type of reproduction that does not involve the fusion of gametes. Offspring are produced by a single parent and are genetically identical to the parent.  
**Plantlets:** Small, young plants that are produced asexually and can grow into new, independent plants. They often form on the edges of leaves or stems.  
**Runners:** Horizontal stems that grow along the surface of the soil and produce new plants at nodes along their length. Strawberries are a common example of plants that reproduce using runners.  
**Tubers:** Enlarged structures in some plant species used as storage organs for nutrients. Tubers can give rise to new plants. Potatoes are a well-known example of tubers.  
**Bulbs:** Underground storage organs composed of a short stem surrounded by fleshy leaves or leaf bases. Bulbs can produce new plants. Examples include onions and tulips.  
**Cuttings:** Pieces of a plant (such as a stem, leaf, or root) that are cut off and planted to grow into a new plant. This is a common method of asexual reproduction in horticulture.

**Impact/Assessment**

**Most Children will be able to:** • draw the life cycle of a range of animals identifying similarities and differences between the life cycles • explain the difference between sexual and asexual reproduction and give examples of how plants reproduce in both ways • present their understanding of the life cycle of a range of animals in different ways e.g. drama, pictorially, chronological reports, creating a game • identify patterns in life cycles • compare two or more animal life cycles they have studied • explain how a range of plants reproduce asexually