**Year 3 Science Curriculum – Summer 2**

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| **Theme: Flowering plants and plant growth** | | | | | | | | | |
| **Curriculum objectives** | | | **Vocabulary** | | | | | | **Links across the curriculum** |
| To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves [and flowers].  To explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.  To investigate the way in which water is transported within plants. | | | **Compare** | To estimate, measure or note the similarity or difference between items. | **Compete** | | When two or more living things both require something which is in limited supply. | | Art   * Using nature to draw repeating patterns (Autumn 1 – William Morris)   English   * The Last Garden by Rachel Ip * Oracy for questions and answers   ICT:   * Secondary research | |
| **Feature** | A distinctive characteristic of a living or non-living thing. | **Function** | | The purpose of something | |
| **Space** | The area or volume between, inside or around objects | **Transport** | | To move something about | |
| **Investigate** | To find out more about a process or object by measuring or observing it | **Research** | | To find information | |
| **Adaptation** | A feature of a living thing which helps it survive in a particular habitat | **Adapted** | | Suited to survive in a particular habitat | |
| **Anchor (verb)** | To hold something down | **Capture** | | To catch and hold | |
| **Nutrient** | A substance that is essential for life and health | **Comparative test** | | An enquiry which identifies how two variables are linked | |
| **Tier 3 vocabulary** |  |  | |  | |
| **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:   * to describe a plant’s basic structure, using the terms roots, stems/trunks, leaves and flowers (Year 1 Biology – Plants). * That seeds need water to germinate and that most do not need light (Year 2 Biology – Plants) * That mature plants need water, light and a suitable temperature to grow and stay healthy (Year 2 Biology – Plants). | | | | | | This prepares children for later learning:   * about the life cycle of flowering plants (Year 3 Biology – Plants). | | | |
| **Lesson Sequence** | | **Key Knowledge** | | | | **Key Skills** | | | |
| What do leaves do? | | * Revisit the needs of mature plants to grow healthily. * What are the signs for if a plant is healthy or not * Plan a comparative test enquiry to find the effect of removing a plant’s leaves. * Leaves capture sunlight. * The more sunlight a plant receives, the faster and bigger it will grow. | | | | Working scientifically:  - asking relevant questions and using different types of scientific enquiries to answer them  - setting up simple practical enquiries, comparative and fair tests  Scientific enquiry type:   * comparative testing | | | |
| What do roots and stems do? | | * Compare the growth of the plants with and without leaves set up in Lesson 1. * Roots anchor the plant in the ground and absorb water and nutrients. * Water is transported around the plant in tubes which run from the roots through the stem to the leaves and flowers. * Plants need nutrients for healthy growth. The nutrients animals need are found in the food they eat. Explain that the nutrients plants need are found in the soil and absorbed through the roots, but they are not the food that they need for growth and energy. * The functions of the stem and demonstrate how water is transported around the plant. Children will learn more about evaporation as a process in Year 4 so you may need to provide a simple explanation here. | | | | Working scientifically:   * setting up simple practical enquiries, comparative and fair tests   Scientific enquiry type:   * observing over time | | | |
| What are the functions of the parts of a flowering plant? | | * A plant makes its own food from air and water, using the Sun’s light. | | | | Working scientifically:  - asking relevant questions and using different types of scientific enquiries to answer them  - making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers  - reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions  Scientific enquiry type:   * comparative testing | | | |
| What happens if plants do not have enough space? | | * Plants which are overcrowded do not have enough space and will compete for sunlight, water and nutrients. | | | | Working scientifically:  - setting up simple practical enquiries, comparative and fair tests  - using results to [draw simple conclusions,] make predictions for new values, [suggest improvements and raise further questions]  Scientific enquiry type:   * comparative testing | | | |
| How are plants different? | | - Different plants live in different habitats.  - How the shapes and functions of a plant’s leaves, stems and roots help it survive in a particular habitat.  - A plant is adapted to live in its habitat. | | | | Working scientifically:  - identifying differences, similarities [or changes] related to simple scientific ideas and processes  Scientific enquiry type:   * research | | | |
| **Themes and links** | | | | | | | | | |
| **Themes (types of enquiry)** | **Where these are covered:** | | | | | | | **Links across the science curriculum** | |
| **Observation over time** | * Lesson 2 * Lesson 4 | | | | | | | |  |  | | --- | --- | | **EYFS** |  | | **1** | Identifying plants and their parts | | **2** | Growing healthy plants | | **3** | Flowering plants and plant growth | | **4** | Classification of plants and animals | | **5** | Human health | | **6** | Body health | | |
| **Research** | * Lesson 2 * Lesson 1 * Lesson 3 * Lesson 6 | | | | | | |
| **Pattern seeking** | * Lesson 5 | | | | | | |
| **Comparative and fair testing** | * Lesson 4 * Lesson 5 | | | | | | |
| **Identifying, classifying and grouping** | * Lesson 2 * Lesson 3 * Lesson 4 | | | | | | |  | |