Science – Year 2

Plants

What creates a healthy plant?

NC objectives - **areas of study**	End point of area of study	Vocabulary		
		Basic	Adventurous	Technical
observe and describe how seeds and bulbs grow into mature plants find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Children are able to identify and name plants and trees found in the local area. They can talk about their own experiences of planting seeds and bulbs and watching them grow over the year. They can identify parts of plants confidently and know how to keep them healthy. Children use first hand experiences throughout the year to build up this knowledge through first hand experiences of planting and nurturing seeds into flowering and non-flowering plants, vegetables and trees.	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, light, shade, sun, warm, cool, water, grow, healthy growth, bulbs, stem,		Temperature, life cycle, germinate, reproduction

Knowledge

Substantive Knowledge

Retrieval- children in Y1 have planted seeds and watched them grow. They have named common flowering plants found locally and name some trees, naming the parts of them correctly.

- Lesson 1
- LO To name common flowering plants and trees.
- **Sunflower, dandelion, daisy, buttercup, daffodil, crocus, tulip, tree, flower, plant**
- Know a rose bush, a sunflower and a dandelion by sight (identify flowering plants in school grounds at the time- crocus, grape hyacinth etc)
- Know an oak tree, a birch tree and a horse chestnut tree by sight (identify trees in the school grounds at the time)

Disciplinary Knowledge

Working as Biologists they explore working as a botanist and gardener to plant and nurture bulbs and seeds into living plants.

Evidence

Children use first hand experiences to explore seeds and bulbs and their differences. They plant them and nurture them so that they grow to be healthy plants. They explore what plants need in order to grow well by carrying out a range of fair tests where things are planted and grown in different conditions. They make careful observations of growth and through photographs, drawings and simple measurements they document the growth, explaining their experiences using scientific vocabulary correctly. Using evidence, they ask further questions to be explored to further understand the growth of plants and how questions can be investigated.

Similarities and differences

Through exploration and observation children are able to talk about the similarities and differences in how plants grow and stay healthy. They can make comparisons,

• Lesson 2 • LO To know the parts of a flowering plant. • Know that a flowering plant consists of **roots, stem, leaves and flowers,** and that a tree's stem is called a **trunk** (explore different plants and flowers to observe how these can be different in each) • Look at established potted plants/flowering plants and plant some seeds to nurture. • Lesson 3 • LO To know the conditions needed for plants to grow. • **Seeds, bulbs, temperature, healthy growth** • Know that seeds and bulbs need to be buried underground in soil and that they will grow into adult plants under the right conditions (water, warmth) • Plant bulbs to watch their growth over the term- how are they different to seeds? • Lesson 4 • LO To know what plants need to grow healthily. • **Healthy growth, sun, water, temperature,** • Know that plants that are deprived of light, food or air will not grow and will die. • Children place plants/ cress seeds in different places to show the difference in growth between those left in light/ dark and with and without water. • Lesson 5 • LO To know that plants produce offspring that can be planted. • **Reproduce, life cycle, germinate** • Know that plants produce offspring that can be replanted to form new plants. • Lesson 6 • LO To know George Washington Carver was an agricultural scientist. • **Scientist, research,** • Know how George Washington Carver was an American agricultural scientist who promoted alternative crops to cotton. •	group and classify them correctly. They set up tests to compare what plants need to stay healthy- proving plants need both light and water.

Concepts			
Biology	**Chemistry**	**Physics**	

SKILLS				
1. Compare	2. Explore	3. Identify	4. describe	5. classify
6. Question	7. observe	8. test	9. record	10. research

ASSESSMENT

KNOW MORE, REMEMBER MORE, DO MORE...

In this unit of learning, progress has been made when a learner knows more. This 'distance travelled' from the starting point is evidenced through them remembering more and doing more: in books, low stakes quizzes, retrieval, use of mind maps, answering the big question and being able to feel more confident about this unit.