



Biology Unit: Plants

What does progression of knowledge look like at St Leonard's?

Year	Progression of knowledge:
EYFS	<ul style="list-style-type: none"> ● Explore the world around them by growing, watering plants and observing plant growth ● Explore the garden or outdoor areas discovering a range of plants ● Learn how to plant seeds ● Investigate the life cycles of plants and what we use them for ● Link plants to the seasons and what happens to the leaves during winter ● Explore a range of flowers or leaves to observe and discuss similarities and differences ● Using role play activities to set up a "flower-shop" selling different types of flowers and plants
1	<ul style="list-style-type: none"> ● Flowering plants have a root, stem, leaves and a flower ● Trees can be deciduous which means the leaves are lost yearly- usually in the autumn ● Trees can be evergreen which means there are always leaves on the tree (leaves are continually replenished throughout the year) ● Trees and plants have roots, stems and leaves but plants have a softer stem ● Trees are made of roots, trunk, branches and leaves. ● Grasses and ferns consist entirely of leaves. ● In autumn, the leaves on deciduous trees change colour, fruits and nuts fall to the ground. Farmers can harvest the crops. ● In Spring, birds sing, trees produce leaves and flowers blossom and the landscape changes ● Trees are examples of plants
2	<ul style="list-style-type: none"> ● Plants can grow from seed or bulbs ● Seeds and bulbs germinate and grow into seedlings ● Seedlings grow into mature plants ● Plants need light, water, space, suitable temperature in order to grow ● Some plants grow best in full sun ● Some plants grow best in the shade ● Some plants need lots of water ● Some plants don't need much water ● Some plants grow quicker than others.
3	<ul style="list-style-type: none"> ● Plants contain roots to absorb water and nutrients from the soil ● Plant roots also anchor the plant to provide support ● Plants contain a stem/ trunk which is responsible for transporting water and nutrients around the plant. ● Plants contain flowers which contain the stamen, carpel, petal, ovule, sepal and stem ● Plants need light, water, space, suitable temperature in order to grow ● The level of nutrients required depends on the type of plant ● Insects like bees and wasps transfer the pollen from the male part of a flower to the female part of other flowers ● Seeds can also be dispersed by wind, animal fur, animals eating them (and excreting them), in water and if the seed pod explodes ● The roots absorb water from the soil, the stem transports it to the leaves, water evaporates from the leaves which causes more water to be absorbed from the soil
KS3 (NC)	<ul style="list-style-type: none"> ● The role of leaf stomata in gas exchange in plants ● Reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal ● The reactants in, and products of, photosynthesis, and a word summary for photosynthesis ● The dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere ● The adaptations of leaves for photosynthesis ● Plants making carbohydrates in their leaves by photosynthesis and gaining mineral nutrients and water from the soil via their roots ● Aerobic and anaerobic respiration in living organisms, including the breakdown of organic molecules to enable all the other chemical processes necessary for life