

Plants - Scientific enquiry

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Investigations	Planting a bean – observations	Planting seeds and bulbs – comparing sunflower and narcissus seeds. Cress growing	How do plants receive water? – stem and food colouring.			
Working scientifically <ul style="list-style-type: none">• Research	What are the most common British plants and where can we find them?	How does a cactus survive in a desert with no water? (Link to Habitats)	What are all the different ways that seeds disperse?			
Working scientifically <ul style="list-style-type: none">• How scientific ideas have changed over time	How did Beatrix Potter help our understanding of mushrooms and toadstools? In the 1500s, tobacco plants were grown in Britain for medicine. How have our ideas about these plants changed?	How did George Washington Carver use science to improve farming in America? What ideas did botanist Arthur Tansley have about habitats in 1935?	How does the research (2018) of Kim R McConkey with regard the fruit forest tree (Platymitra macrocarpa) in Thailand demonstrate the importance of protecting elephants in particular, in order to maintain fruit tree stocks? What will happen if the population of elephants diminish and why, despite other animals eating from this tree?			
Working scientifically <ul style="list-style-type: none">• Identifying and classifying	How can we sort the leaves that we collected on our walk? How can we organise all the zoo animals?	How can we identify the trees that we observed on our tree hunt?	How many different ways can you group our seed collection?			
Working scientifically <ul style="list-style-type: none">• Pattern seeking	Do trees with bigger leaves lose their leaves first in autumn? Is there a pattern in where we find moss growing in the school grounds?	Do bigger seeds grow into bigger plants?	What colour flowers do pollinating insects prefer?			
Working scientifically <ul style="list-style-type: none">• Observing over time	How does a daffodil bulb change over the year? How does my sunflower change each week?	What happens to my bean after I have planted it?	What happens to celery when it is left in a glass of coloured water? How do flowers in a vase change over time?			

	How does the oak tree change over the year?					
Working scientifically • Comparative tests	Which type of compost grows the tallest sunflower? Which tree has the biggest leaves?	Do cress seeds grow quicker inside or outside?	Which conditions help seeds germinate faster? Which soil absorbs the most water?			
Working scientifically • Fair tests	What can we change to help a sunflower grow taller?	How does the amount of water we give cress seeds affect their growth?	How does the length of the carnation stem affect how long it takes for the food colouring to dye the petals?			
Specialist Vocabulary	Common names of flowers, deciduous – evergreen tree names, leaves, flower (blossom), petals, fruit, roots, bulb, seed, trunk, branches, stem	Germination, growth, survival, seeds, bulbs, temperature, healthy	Roots, stem,/trunk, leaves, flowers, air, light, water, nutrients, soil, transported, life cycle, pollination, seed formation, seed dispersal			
Equipment to be used	Magnifying glasses	Magnifying glasses	Measuring cylinders Ruler			