

Year 1 - Plants

Prior Learning	In Year 1 What they need to know	Later learning: Children do not need to be taught this year.	Key Vocabulary ASE
Children know about similarities and differences in relation to places, objects, materials and living things. They talk about features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes (Early Learning Goal 14).	• identify and name a variety of common wild and garden plants, including deciduous and evergreen trees • identify and describe the basic structure of a variety of common flowering plants, including trees	In Year 2 pupils will be taught to: • 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	leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud <i>tentative language:</i> perhaps, maybe, I was wondering, Does anyone else think.....? NB: children should become familiar with names of trees in the local area and names of garden and wild flowering plants in the local area.
		In Year 3 pupils will be taught to: • Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • 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 • Investigate the way in which water is transported within plants • Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal	
		In Year 5 pupils will be taught: • To describe the life process of reproduction in some plants	

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Common Misconceptions

Some children may think:

- Plants are flowering plants grown in pots with coloured petals, leaves and a stem
- Trees are not plants
- All leaves are green
- All stems are green
- A trunk is not a stem
- Blossom is not a flower.

Possible Famous Scientists to study within unit

Beatrix Potter - Author & Botanist (1866 - 1943)

Gregor Mendel (1822 -1884)

Carl Linnaeus (1707 - 1778)

David Bellamy (1933 - 2019)

Working Scientifically - What they need to be able to do

1. Ask simple questions 

2. Recognise that questions can be answered in different ways 

3. Perform simple tests 

4. Observe closely 

5. Use simple equipment 

6. Talk about what they have found out 

Images taken from Primary-Science and PSTT.org

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Identifying and Classifying 	Comparative Testing Fair Testing 	Pattern Seeking 	Research 	Observation over time 		
How can we sort the leaves that we collected on our walk? What is the plant's name? Can you sort the parts of a plant into the correct groups? Allow children to classify leaves, flowers, and seeds, choosing their own criteria.	Which type of compost grows the tallest sunflower? Which tree has the biggest leaves?	Is there a pattern in where we find moss growing in the school grounds? Based on observations, encourage children to identify patterns e.g. after comparing the size of leaves on different plants, children may suggest "bigger plants have bigger leaves."	What are the most common British plants and where can we find them? Use secondary sources to name plants (including trees) based on observations of leaves, seeds, flowers, buds, and bark (Leafsnap UK on Apple App Store, SEEK INaturalist on google play and Apple App Store, textbooks, Woodland Trust resources)	How does a daffodil bulb change over the year? How does my sunflower change each week?		
Snap Science link to subject content - Plant Detectives (5 lessons) Enrichment activities to be set as challenges weekend/half termly or additional enquiry opportunities Main Enquiry type covered by SS: Identifying and Classifying, Research (secondary sources, pattern seeking)		Book Links Big Cat book links <table><tr><td>A Day at the Eden Project Kate Petty 978-0-00-718593-1 Band 5 Green</td><td>A young girl and her friend visit the Eden Project in Cornwall.</td></tr></table> Jack and the Beanstalk Ten Seeds by Ruth Brown Oliver's Vegetables by Vivian French			A Day at the Eden Project Kate Petty 978-0-00-718593-1 Band 5 Green	A young girl and her friend visit the Eden Project in Cornwall.
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Pupils could work scientifically by: • Make close observations of leaves, seeds, flowers etc. • Compare two leaves, seeds, flowers etc. • Classify leaves, seeds, flowers etc. using a range of characteristics. • Identify plants by matching them to named images.						

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- Make observations of how plants change over a period of time.
- When further afield, spot plants that are the same as those in the local area studied regularly,
- describing the key features that helped them.

By the end of the unit the children should know that.....(Sticky Knowledge)

- Plants grow from seeds/bulbs
- Plants need light and water to grow and survive
- Plants are important
- We can eat lots of plants



_____ has observed how one tree through the year which provides _____ with the opportunity to talk how it has changed - the leaves changing colour, falling off the branches and then growing back again. _____ has been given many opportunities at different points during the year to look at many different plants growing in the school grounds which means _____ has learnt to identify and name these plants. _____ has used their senses to explore these plants and can name and describe the parts of these plants with which _____ has become familiar.

Secure learning Indicators - PLAN knowledge matrices

Can name trees and other plants that they see regularly

Can describe some of the key features of leaves, the colour of the flower/blossom

Can point out trees which lost their leaves and those that have kept them the whole year

Can point to and name the parts of a plant, recognising that they are not always the same e.g. leaves and stems may not be green

Can sort and group parts of plants using similarities and differences

Can use simple charts etc... to identify plants

Can collect information on features that change during the year

Can use photographs to talk about how plants change over time.

Please see www.ase.org.uk for PLAN supporting science assessment resources (found also in TEAMS)

Assessment Indicators for working scientifically in Year 1

-Observe closely using simple equipment (context- identifying features of plants and trees)

Working Towards: Describe what they can see using everyday language. With support, label the basic structure of a plant.

Secure: Can describe and point to the basic structure of a plant and a tree using scientific language, e.g. leaves, flowers, petals, fruit, roots, bulb, seed, trunk, branch, stem. May begin to explain what the parts of the plant are for.

Mastery: Can use their observations to make comparisons between different plants or between different plant parts, e.g. that plant has a thicker/taller stem than that one, the petals are smaller than the leaves

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<u>EXPECTED</u> <i>N.B. Ks1 children do not need to remember the names evergreen and deciduous, but will have been made aware of what these terms mean</i> recognises and names a variety of plants from the following examples (certain plants may be specific to the child's particular local environment) <i>N.B. one of the plants named MUST be a deciduous or evergreen tree:</i> wild plants <i>e.g. grass, dandelion, daisy, buttercup, nettle, dock, clover, thistle, poppy, bluebell</i> garden plants <i>e.g. grass, rose, daffodil, sunflower, tulip, snowdrop, crocus, carrot, potato, radish, leek, tomato, onion, beetroot</i> herbs <i>e.g. mint, lavender, rosemary, thyme, chive, basil</i> trees <i>e.g. oak, ash, pine, horse chestnut, yew, sycamore, beech</i> hedgerows/bushes <i>e.g. elderflower, holly, hawthorn, laurel, bramble</i> knows that trees can be deciduous or evergreen	<u>EXCEEDING</u> - identifies a large variety of common wild and garden plants including deciduous and evergreen trees - explains the difference between a deciduous and an evergreen tree (i.e. states that the leaves fall from a deciduous tree in autumn) - sorts and/or groups common plants and trees and can justify their groupings - matches flowers or fruits to plants or trees, <i>e.g. conker to horse chestnut, dandelion flower to dandelion plant, blackberry to bramble</i> - explains in simple terms what each part of the plant does - names other parts of a plant, <i>e.g. seeds, stones, stamens, petals, stigma</i> - knows that some plants bear fruit - names a variety of plants/fruits that we can eat, <i>e.g. celery, orange, carrot, cabbage</i> - researches where on a plant its edible part grows, <i>e.g. cabbages, apples, carrots, potatoes,</i>	<i>Please see primary science consultancy enrichment activities for additional resources in TEAMs, consider use of Activities - Explorify: Big Question, Mission Survive, problem Solvers, Mystery bag for challenging more able pupils.</i>
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• names(or labels a picture of) the following parts of a real plant: stem, flower, leaf, root • without a real plant or a picture of a plant in front of them, says what the stem (and flower, leaf, root) looks like and where this would be in relation to the rest of the plant • knows which part of the plant is usually in the soil	<i>strawberries, bananas, pineapples, coconuts</i>	
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