

PROGRESSION OF SKILLS AND VOCABULARY POLICY 2019



SCIENCE ESSENTIAL SKILLS Y1-Y6: PLANTS, LIVING THINGS & THEIR HABITATS					
KEY STAGE 1		LOWER KEY STAGE 2		UPPER KEY STAGE 2	
End of Y1 expectations	End of Y2 expectations	End of Y3 expectations	End of Y4 expectations	End of Y5 expectations	End of Y6 expectations
Identifying and naming:					
Identify and name common flowers and trees found growing in the locality.	Identify what eats plants as a food source and recognise simple food chains.	Identify and describe the functions of common plant parts. Explain how their structure is suited to their function (e.g. roots are long and branched to provide good anchorage).	Identify and name a variety of plants in the local and a contrasting environment from their physical appearance.	Identify the key structures involved in plant sexual reproduction.	Identify plants which have survived on Earth for millions of years and how we know this.
Classification:					
Sort trees into groups to show those that are evergreen and those that are deciduous.	Sort seeds and bulbs into groups according to physical features.	Sort and classify a range of seeds into broad dispersal methods, such as wind (dandelion), water (coconut) or animal (yew).	Use classification keys to classify plants into groups, such as flowering or non-flowering plants, or compound, palmate or single blade leaves.	Classify plant types according to how they reproduce.	Devise classification keys to identify plants in the immediate environment. Give reasons for classification and understand the significance of scientists' work, from study.
Plant parts and their functions:					
Identify the basic structural parts of common flowering plants and trees, including root, stem, stalk, leaves, flowers, bulb, fruit, seeds and trunk.	Describe the different plant parts and give examples of different foods that we eat which are derived from these plant parts, for example rhubarb (stem), carrot (root).	Draw a simple diagram to show how water is transported through a plant.	Identify uncommon, specialised plant parts such as tendrils and suckers and explain their functions.	Explain why plants have flowers and why it is important for them to attract insects and other pollinators.	Research and describe similarities and differences between petals, leaves, stamen and stigma on a variety of plants found in the locality and elsewhere.
Habitats and adaptation:					
Identify their locality as a habitat for living things.	Explain how plants are suited to their habitats and	Compare and describe how requirements for	Describe how a plant's habitat may naturally	Describe features of flowers, such as scent, colour,	Describe how plants have adapted and ultimately

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	give examples of plants growing in different habitats.	growth vary from plant to plant and how this relates to a plant's environment, such as with climbing and alpine plants.	change throughout the year and how plants adapt to these changes.	shape and size, and how they have evolved to ensure successful pollination.	evolved to suit their environments using specific examples.
Growth and survival:					
Care for a growing seedling, observing and describing its growth.	Describe how plants grow, identifying what a plant needs for healthy growth and survival.	Recognise that plants make their own food necessary for growth and survival, storing it in their leaves.	Explain how humans can impact on a plant's environment in both positive and negative ways, giving examples from their locality.	Describe the different ways in which new plants can be grown from the parent plant, including seeds, bulbs, tubers, cuttings and grafting.	Suggest why some plants have survived over time and some have not.
Life cycles:					
Identify the seeds, as a part of a plant that makes a whole new plant.	Recognise that plants produce seeds in order to reproduce and generate new plants.	Order pictures showing the stages in the life cycle of a plant.	Draw a labelled diagram to show the life cycle of a familiar plant, including germination, flower production, pollination, seed formation and seed dispersal.	Describe the process of plant reproduction using the correct scientific language. Observe/comment on/record plant life cycles.	Define the plant terms 'annual', 'biennial' and 'perennial', describing differences in life cycles and identifying plants of each type.
Seasonal changes:					
Describe how plants change over time, including seasonal change (leaves fall off, blossom, buds opening).	Describe how bulbs help plants to grow in winter.	Allocate different stages of a plant's life cycle to different seasons, suggesting reasons why the stages occur when they do.	Describe in detail the changes that occur in a familiar tree or plant over the seasons.	Grow a range of plants/vegetables from seeds, cuttings, tubers and bulbs across the different seasons and note the conditions needed for successful growth.	Identify relationships between the seasons and a typical plant life cycle using observations from the school environment.
Comparisons:					
Name, compare and contrast familiar plants according to their observable features.	Make comparisons between seeds or bulbs grown in different conditions (e.g. with and without light or water).	Compare and explain the effect of different factors on plant growth, including light and nutrition.	Compare plants growing in a local habitat to those in a contrasting one, such as a cacti in the desert, and notice how they are adapted.	Make comparisons between asexual and sexual reproduction in plants, suggesting reasons why plants may reproduce in different ways.	Compare native plants with non-native plants and determine whether non-native plants can be classified in the same way as native plants.

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KEY STAGE 1		LOWER KEY STAGE 2		UPPER KEY STAGE 2	
End of Y1 expectations	End of Y2 expectations	End of Y3 expectations	End of Y4 expectations	End of Y5 expectations	End of Y6 expectations
<p>common wild plants, garden plants, deciduous, evergreen</p> <p>plant leaf, root, leaves, bud, flowers, blossom, petals, root, stem</p> <p>tree deciduous, evergreen, trunk, branches, leaf, root</p> <p>fruit vegetables bulb seed</p>	<p>common wild plants, garden plants, deciduous, evergreen</p> <p>plant leaf, root, leaves, bud, flowers, blossom, petals, root, stem</p> <p>tree deciduous, evergreen, trunk, branches, leaf, root</p> <p>reproduction, germination water, light, suitable, temperature fruit vegetables bulb seed grow healthy</p>	<p>common wild plants, garden plants, deciduous, evergreen</p> <p>tree deciduous, evergreen, trunk, branches, leaf, root</p> <p>plant leaf, root, leaves, bud, flowers, blossom, petals, root, stem, fruit, vegetables, bulb, seed</p>	<p>Environment, flowering, non-flowering, plants, animals, vertebrate, environment, dangers!</p> <p>vertebrate fish, amphibians, reptiles, birds, mammals</p> <p>invertebrate snails, slugs, worms, spiders, insects</p> <p>plants flowering plants (including grasses), non-flowering (including mosses and ferns)</p> <p>human impact <i>positive</i> - nature reserves, ecologically planned parks, garden ponds <i>negative</i> - population, development, litter, deforestation</p>	<p>life cycles mammal, amphibian, insect, bird</p> <p>life process of reproduction plants, animals, vegetable garden, flower border</p> <p>animal naturalists David Attenborough</p> <p>animal behaviourist Jane Goodall</p> <p>reproduction plants: sexual, asexual animals: sexual</p> <p>lifecycles around the world rainforest, oceans, desert, prehistoric, similarities, differences</p>	<p>classify compare Linnaean Carl Linnaeus classification domain Kingdom phylum class order family genus species characteristics vertebrates invertebrates microorganisms organism flowering non-flowering</p>