Durham Lane Primary School: Topic Planning

Topic: Plants **Term:** Year B Summer 2 **Class:** 3/4 **Teacher:** Miss Hugill/Miss Drew

Subjects	Objectives	Key Knowledge/Key Concepts/Key Elements	Key Vocabulary	Skills	Activities/ Tasks

Science	3.1 Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.
	3.2 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
	3.3 Investigate the way in which water is transported within plants
	3.4 Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal
		• To identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.
		• To 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
		• To investigate the way in which water is transported within plants
		• To explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal
			Plants
			Stem
			Trunk
			Flower
			Petal
			Roots
			Leaves
			Ovule
			Ovary
			Filament
			Stigma
			Style
			Anther
			Pollen
			Sepal
			Receptacle
			Pollenate
			Stamen
			Reproduction
			Seed dispersal
			Nutrients
			Growth
			Seed formation
			Life cycle
			Air
			Light
			Water
				Asking Questions & Planning Enquiries
				• Raise their own relevant questions about the world around them
				• Should be given a range of scientific experiences including different types of science enquiries to answer questions.
				• Start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions.
				Testing, Measuring & Recording
				• Set up simple practical enquiries, comparative and fair tests.
				• Recognise when a simple fair test is necessary and help to decide how to set it up.
				• Make systematic and careful observations.
				• Help to make decisions about what observations to make, how long to make them for and the type of simple equipment that might be used.
				• Take accurate measurements using standard units.
				• Collect and record data from their own observations and measurements in a variety of ways: notes, bar charts and tables, standard units, drawings, labelled diagrams, keys and help to make decisions about how to analyse this data.
				Concluding
				• Begin to look for naturally occurring patterns and relationships and decide what data to collect to identify them.
				• With help, pupils should look for changes, patterns, similarities and differences in their data in order to draw simple conclusions and answer questions.
				• Use relevant simple scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences, including oral and written explanations, displays or presentations of results and conclusions.
				Evaluating
				• With support, they should identify new questions arising from the data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done.
					• Identify and describe functions of different parts of flowering plants
					  ○ Create a diagram labelling parts of a plant (recapping teaching in Year 1 and extending to label male/female parts too)
					  ○ Discuss functions of different parts of the plant.
					  ▪ Investigate this by removing parts of some plants (e.g. leaves and roots) and observe what happens to them in comparison with plants who have had nothing removed)
					• Requirements for life and growth
					  ○ Children to come up with what plants need to grow (drawing on previous learning from KS1)
					  ○ Children to investigate how different variables affect plant growth. Children to plan investigation (testing, measuring & recording skills)
					  ▪ Possible variables: removing air; light; water – too much?; nutrients; room to grow
					  ▪ Could grow different types of seeds to compare between plants
					• Investigate the way water is transported within plants
					  ○ Food colouring investigation
					  ▪ White flowers in coloured water should turn the flowers and leaves a different colour – children can see the water has travelled up the stem. If no white flowers available, could show this with kitchen roll
					  ○ Plastic bag on tree
					  ▪ Seal a bag around a tree branch. After a week, children should see water in the bag. Explain the water flows through the trunk, along the branch to the leaves. Leaves use water, sunlight and carbon dioxide to make food and some of this water is returned to the air which is what can be seen in the bag.
					• Life cycle of flowering plants
					  ○ Examine inner workings of plants (e.g. daffodil/lily)
					  ○ Use wotsits as pollen to show how they run onto insects (rub onto fingers)
					  ○ Role play process of pollination (Nicky Waller page 15)

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Art	1) To create sketchbooks to record their observations and use them to review and revisit ideas. 2) To improve their mastery of art and design techniques, including drawing. 3) Learn about great artists in history	Exploring, evaluating and developing ideas • To be able to natural artwork in the world around us. • To be able to make decisions about what looks best. • To be able to review and evaluate art work. Drawing • To produce a still life drawing of a plant or flower • To understand different pencil tones and the effect this creates • To use observational skills to draw images of natural objects • To begin to understand the concept of scale • To be able to identify and draw the effect of light on objects. • To use a range of different media to achieve variations in line, texture, tone, colour, shape and pattern Artists • To understand who Monet is • To look at examples of his famous works		**Exploring/ Evaluating and developing ideas** • Create sketch books to record their observations and use them to review and revisit ideas • Select and record from observation, experience and imagination and explore ideas for different purposes • Question and make thoughtful observations about starting points and select ideas for use in their work • Begin to use artistic/visual vocabulary to discuss • Experiment with a wider range of materials • Think critically about their art and design • Plan, refine and alter their work as necessary **Drawing** • Experiment with a range of pencil tones and lines using graded pencils • Encourage close observation of objects in both the natural and man-made world • Identify and draw the effect of light (shadows) on a surface, on objects and people • Introduce the concepts of scale and proportion. • Use different media (e.g. charcoal, chalk, pastel, crayon, pens, etc.) to achieve variations in line, texture, tone, colour, shape and pattern	• Observational drawings of plants • Focus on Monet looking at recreating his artwork
DT	1a) use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups 2a) select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 2b) select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their	Design, make and evaluate • To research and plan healthy recipes using fresh ingredients • To evaluate the success of recipes and identify areas for improvement • To make a range of healthy recipes using fresh ingredients Food • To understand how and where a range of produce is grown (herbs, strawberries, tomatoes) • To understand how to cut, chop and peel produce • To know about some chefs who use fresh ingredients	Basil Mint Rosemary Tarragon Herbs Edible Growing Pesto Food groups Healthy Cutting Chopping Peeling Measure Blending Combining Ingredients Varieties Produce	**Design** • use research for design ideas • describe purpose of product • show design meets a range of requirements and is fit for purpose • have at least one idea about how to create product and suggest improvements for design • produce a plan which shows order, equipment and tools and explain it to others • make and explain design decisions considering availability of resources • make a prototype **Make** • select suitable tools and equipment, explain choices in relation to required techniques and use accurately • select appropriate materials, fit for purpose; explain choices • work through plan in order • realise if product is going to be good quality • measure, mark out, cut and shape materials/components with some accuracy • assemble, join and combine materials and components with some accuracy • apply a range of finishing techniques with some accuracy **Evaluate**	• Grow herbs • Make a strawberry and banana smoothie • Tomato tasting lesson • Make a tomato bruschetta • Cook a pesto pasta dish

	functional properties and aesthetic qualities 3a) evaluate a range of existing products 3b) evaluate their ideas and products against their own design criteria and consider the views of others to improve their work			• refer to design criteria while designing and making • use criteria to evaluate product • begin to explain how I could improve original design • evaluate existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose • discuss by whom, when and where products were designed • know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products **Technical Knowledge – Food and Nutrition** • carefully select ingredients • explain how to be safe/hygienic when preparing and cooking some dishes • think about presenting product in interesting/ attractive ways • understand ingredients can be fresh, pre-cooked or processed • begin to understand about food being grown, reared or caught in the UK or wider world • describe eat well plate and how a healthy diet=variety / balance of food and drinks • explain importance of food and drink for active, healthy bodies • prepare and cook some dishes safely and hygienically • use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	
English		See skills progression sheet			• Explanation of the life cycle of a plant • Instructions on how to care for a plant • Setting description of an enchanted garden