Durham Lane Primary School: Topic Planning

Topic: Robots **Term:** Year A Spring 2 **Class:** 3/4 **Teacher:** Miss Hugill/Miss Drew

Subjects	Objectives	Skills	Activities/ Tasks
Geography	2. Understand geographical similarities and differences through the study of human geography of a region of the United Kingdom or South America.	**Geographical Enquiry** • Use NF books, stories, atlases, pictures/photos and internet as sources of information • Ask and respond to questions and offer their own ideas • Extend to satellite images, aerial photographs • Collect and record evidence with some aid • Analyse evidence and draw conclusions e.g. make comparisons between locations using photos/pictures/ maps/temperatures	• Introduce children to different types of electricity (e.g. solar, wind, water power). • Talk about global warming etc. • Children research and compare how eco-friendly Eaglescliffe is to a region in South America (Curitiba)

Science	4.15 Identify common appliances that run on electricity
	4.16 Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
	4.17 Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
	4.18 Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
	4.19 Recognise some common conductors and insulators, and associate metals with being good conductors
		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.
		• 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.
			• KWL grid
			• Sort pictures of appliances based on whether they run on electricity or not (mains, battery or both)
			• Safety around electricity – make poster
			• Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
			  ○ Sweet circuits (page 136) – children choose sweets to represent electrical components and make circuits using them. Could photograph them and label them in their books.
			  ○ Working towards an electrical qualification challenge 1 and 2 (page 136/137)
			  ▪ Challenge 1 – look at different components of circuits and sort them. Give children a 'tool kit' and ask them to put a component next to relevant picture on tool kit.
			  ▪ Challenge 2 – children build simple circuits. Allow them to investigate different circuits by providing them with questions to work through.
			  ▪ Draw pictorial representation of circuit
			• Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
			  ○ Challenge 3 (page 138) – inspecting circuits – show children circuits which would be unsuccessful and children explain why they would be unsuccessful.
			• Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
			  ○ Challenges 4a and 4b – children connect switches in circuits and think about the effect of those. In 4b, children make their own switches from a range of materials – nice investigative lesson
			• Look at conductors and insulators
			  ○ Challenge 5 – test materials to see which conduct electricity.

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 sculpture 3) Learn about great sculptors in history	**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 • Record and explore ideas using a variety of ways including digital cameras and iPads • Question and make thoughtful observations about starting points and select ideas for use in their work • Begin to use artistic/visual vocabulary to discuss work • Experiment with a wider range of materials • Think critically about their art and design work • Plan, refine and alter their work as necessary • Plan, design, make and adapt models from observation or imagination	• Look at skills regarding joining materials • Plan robots • End piece: robot building day • Review end piece using reflective form Artist – Leo Sewell

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		Form • Use the equipment and media with increasing confidence • Shape, form, model and construct from observation and/ or imagination with increasing confidence • Have an understanding of different adhesives and methods of construction • Experiment with constructing and joining recycled, natural and manmade materials • Begin to have some thought towards size • Simple discussion about aesthetics • Plan and develop ideas in sketchbook and make informed choices about media • Work safely to organise working area and clear away • Discuss own work and work of other sculptors with comparisons made	
English	See skills progression sheet		Use Literacy Shed 'Powerless' as a focus • Descriptions (lots of opportunity for description in this so could just pick something to describe) • Narrative writing – retell the story (focus on building up tension to link to the music) • Write a dialogue between the two fairies and between the man and the robot. • Write instructions for building a robot. • Create own model robots to star in their own narratives and use to make own animations. • Compare and contrast with Pinocchio story? Children write another fairytale in futuristic style?