



Class 2

Madron Daniel Science Small Step Progression

Electricity – Year 4 Unit – Year B						
Retrieval vocab: N/A New Vocab Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol.			Previous learning Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the 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)		Links with Vision and Values. <i>Stimulate in every child a sense of curiosity and excitement about the world</i>	
	Working scientifically/ enquiry focus	Curriculum Strand/ Focus	Small step objective	Previous learning within the unit.	Lesson content	Outcome
1	Identify/Classify	Electricity	To be able to identify common appliances that run on electricity and sort them into a Venn diagram.	NA	Which appliances use electricity? Can we sort them using a Venn diagram?	The children can: Recognise and group which electrical appliances run off mains electric and which are battery powered. They will understand how mains electricity is transported from power stations and know why batteries run out of charge.
2	Identify/classify	Electricity	To be able to Construct a simple series electrical circuit, identifying and naming its basic parts.	<i>Recognise and group which electrical appliances run off mains electric and which are battery powered. They will understand how mains electricity is transported from power stations and know why batteries run out of charge.</i>	How can I make a simple circuit? Can I draw and label a simple circuit?	The children can: Construct a variety of simple circuits using different components. Draw and label a simple circuit. .



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3	Identify/classify	Electricity	To be able to identify if a bulb will light up in a circuit and recognise complete and incomplete circuits.	<i>As above</i> <i>Construct a variety of simple circuits using different components.</i> <i>Draw and label a simple circuit.</i>	Why don't some circuits work?	The children can: Predict which circuits will work and which won't. They will be able to provide an explanation as to why a circuit will or won't work and make suggestions how a circuit can be fixed.
4	Comparative /fair testing	Electricity	To be able to set up an investigation to test if a material is a conductor or an insulator.	<i>As above</i> Predict which circuits will work and which won't. They will be able to provide an explanation as to why a circuit will or won't work and make suggestions how a circuit can be fixed.	How can we test if a material is a conductor or an insulator?	The children can: Plan and conduct an experiment to answer the question - How can we test if a material is a conductor or an insulator?
5	Pattern seeking	Electricity	To be able to recognise some common conductors and insulators and associate metals with being good conductors by creating a circuit without using wires.	<i>As above</i> Plan and conduct an experiment to answer the question - How can we test if a material is a conductor or an insulator?	What do my results tell me about which materials are conductors or insulators? Can we create a circuit without using any wires?	The Children can: Interpret their results and explain which materials are conductors and insulators. Explain how insulators and conductors are used in everyday life.
6	Identify/classify	Electricity	To be able to recognise that a switch opens and closes a circuit.	<i>As above</i> Interpret their results and explain which materials are conductors and insulators. Explain how insulators and conductors are used in everyday life.	How do switches affect a circuit?	The children can: Explain how switches affect a circuit. They will use this knowledge to design and make a switch to control the flow of electricity in a series circuit and light a bulb.

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