Dore Primary School
Y4 Learning Journey 4
Y4 Go Wild

Purpose of Learning Journey (Endpoints):	**Science:** **Working Scientifically:** ▪ asking relevant questions and using different types of scientific enquiries to answer them *(helicopters, straw planes, flying cars / parachutes)* ▪ setting up simple practical enquiries, comparative and fair tests *(helicopters, straw planes, flying cars / parachutes)* ▪ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment *(timers) (helicopters, straw planes, flying cars / parachutes)* ▪ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions *(helicopters, straw planes, flying cars / parachutes)* ▪ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables *(helicopters, straw planes, flying cars / parachutes)* ▪ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions *(helicopters, straw planes, flying cars / parachutes)* ▪ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions *(helicopters, straw planes, flying cars / parachutes)* ▪ identifying differences, similarities or changes related to simple scientific ideas and processes *(helicopters, straw planes, flying cars / parachutes)* ▪ using straightforward scientific evidence to answer questions or to support their findings *(helicopters, straw planes, flying cars / parachutes)* **Electricity:** ▪ identify common appliances that run on electricity *(pre-teaching for flying cars)* ▪ construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers *(pre-teaching for flying cars, flying cars)* ▪ 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 *(pre-teaching for flying cars, flying cars)* ▪ recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit *(pre-teaching for flying cars, flying cars)* ▪ recognise some common conductors and insulators, and associate metals with being good conductors *(pre-teaching for flying cars)* **Y5 forces:** ▪ explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object *(helicopters, straw planes, flying cars)* ▪ identify the effects of air resistance, water resistance and friction, that act between moving surfaces *(helicopters, straw planes, flying cars - parachutes)* **Design and Technology:** **Design** ▪ generate, develop, model and communicate their ideas through discussion, prototypes *(flying cars)* **Evaluate** ▪ investigate and analyse a range of existing products *(flying cars)* ▪ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work *(flying cars)* **Technical knowledge** ▪ understand and use electrical systems in their products [for example, circuits incorporating switches, bulbs, buzzers and motors] *(flying cars)*
Links to Prior Knowledge:	Science – conducting scientific experiments
Links for Relevance and Currency:	Climate change in Antarctic, opportunities for children to explore and have adventures
Immersion Event / Activity:	Videos of Preet Chandi and Bear Grylls in action. English lessons on Nellie Bly and Mario Rigby.
Celebration of Learning:	River trip to test rafts, assault course video, parachute testing
English Links:	Non-fiction report writing - linked with solo Antarctic journey of Preet Chandi
Maths Links:	Data handling, measuring

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Subject	Lesson	Key Knowledge or Skill (Taken from Chris Quigley Milestone or scheme of work)	Substantive and Disciplinary knowledge and Skills embedded through:	Outcomes	Links to Curriculum Drivers				
					Values	Outdoor Learning	P4C	Global / Rights	TASC
Science	1	Identify the effect of drag forces, such as air resistance, that act between moving surfaces. Set up simple, practical enquiries and comparative and fair tests. Make accurate measurements using standard units, using a range of equipment	Labelling diagrams to show key forces. Carrying out a scientific enquiry to study air resistance. Using a fair test and identifying variables. Measuring and recording results accurately.	Children know and understand how air resistance affects the flight of a glider.					✓
	2	Set up simple, practical enquiries and comparative and fair tests. Make accurate measurements using standard units, using a range of equipment	Carrying out a scientific enquiry to study the helicopter flight. Using a fair test with consideration of variables. Measuring and recording results accurately.	Children understand the effect that changing variables has on the helicopter.					✓
	3	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.	Learning the symbols for drawing electrical circuits. Practising constructing simple electrical circuits.	Children draw and make a simple electrical circuit.					
	4	Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. Set up simple, practical enquiries and comparative and fair tests. Make accurate measurements using standard units, using a range of equipment	Building a model of a car and adding a simple electrical circuit. Carrying out a scientific enquiry to study the effect of different fans. Using a fair test with consideration of variables. Measuring and recording results accurately.	Children construct a car and carry out a fair test using different fans.					✓
	5	Set up simple, practical enquiries and comparative and fair tests. Make accurate measurements using standard units, using a range of equipment	Carrying out a scientific enquiry using a fair test with consideration of variables. Measuring and recording accurately.	Children add a parachute to their model and test.					✓
Outdoor learning	6	Shelter building skills	Using a range of materials to construct their outdoor shelters	Children construct their own shelter in groups.	✓	✓			
	7	Lashing skills	Using lashing techniques to create a sturdy raft	Children create rafts using lashing.		✓			
	8	Lashing skills	Evaluating the successfulness of their lashing through testing rafts in the river	Children test their rafts in the river.		✓			
	9 & 10	Lashing and cutting skills	Using lashing and cutting skills to construct an assault course	Children build an assault course using lashing and cutting techniques	✓	✓			
Design & Technology	4	Create series and parallel circuits Choose suitable techniques to construct products or to repair items.	Building a model of a car and adding a simple electrical circuit.	Children construct a car model					✓
	5	Choose suitable techniques to construct products or to repair items. Select appropriate joining techniques.	Using appropriate joining techniques to construct a parachute	Children construct a parachute and add to their model					✓