Science Skills Progression Map

PRIMA	By the end of	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
PRIMAPL SCHOOL	Early Years:	Humans	The Environment	Rocks	Living Things and	Earth ad Space	Electricity
¥a ∷uu ii ¢f		Seasonal Changes	Everyday Materials	Light	Their Habitats	Properties and	Living Things and
and the second s		Everyday Materials	Living Things and Their	Forces & Magnets	Electricity	Changes of	Their Habitats
***		Plants	Habitats	Animals incl.	States of Matter	Materials	Animals Inc. Humans
		Animals	Animals inc. Humans	Humans	Animals inc. Humans	Forces	Evolution and
			Plants	Plants	Sound	Living Things and	Inheritance
			Super Scientists &	Super Scientists &	Super Scientists &	Their Habitats	Super Scientists &
			Innovative Inventors	Innovative Inventors	Innovative Inventors	Super Scientists &	Innovative
			innovative inventors			Innovative Inventors	Light
						Animals inc. Humans	0
	5 1 11	Dogin to ack simple	Ack simple questions and	Ask some relevant	Ask relevant questions		Plan different types of
Working	Explore the	Begin to ask simple questions and	Ask simple questions and recognise that they can be	questions	Ask relevant questions	Begin to plan different types of scientific	scientific enquiries to
Scientifically –	natural world	recognise that they can	answered in different	questions		enquiries to answer	answer questions,
	around them	be answered in	ways	Begin to use different	Use different types of	questions, including	including recognising
By the end of each		different ways	- / -	types of scientific	scientific enquiries to	recognising and	and controlling
phase, pupils will be	Describe what			enquiries to answer	answer questions	controlling variables	variables where
taught to use the	they see, hear and	Begin to use simple	Use simple equipment	questions		where necessary	necessary
following practical	feel whilst outside	equipment and	and measurement to				
. .	ieer winist outside	measurement to	observe closely	Begin to set-up simple	Set-up simple practical	Begin to take	
scientific methods,		observe closely		practical enquiries,	enquiries, comparative	measurements, using a	Take measurements,
processes and skills:	Hands on		Deufeure simula testa	comparative and fair	and fair tests making	range of scientific	using a range of
	exploration	Begin to perform simple tests	Perform simple tests	tests making systematic and careful	systematic and careful observations and,	equipment, with increasing accuracy	scientific equipment, with increasing
		lesis		observations and,	where appropriate,	and precision, taking	accuracy and precision,
		Begin to identify and	Identify and classify	where appropriate,	taking accurate	repeat readings when	taking repeat readings
		classify		taking accurate	measurements using	appropriate	when appropriate
		,		measurements using	standard units, using a		
		Begin to use	Use observations and	standard units, using a	range of equipment,	Begin to record data	
		observations and ideas	ideas to suggest answers	range of equipment,	including	and results of	Record data and
		to suggest answers to	to questions	including	thermometers and	increasing complexity	results of increasing
		questions		thermometers and	data loggers	using scientific	complexity using
		Dogin to gother and	Gather and record data to	data loggers		diagrams and labels,	scientific diagrams and
		Begin to gather and record data to help in	help in answering	Begin to gather,	Gather, record, classify	classification keys, tables, scatter graphs,	labels, classification keys, tables, scatter
		answering questions	questions	record, classify and	and present data in a	bar and line graphs	graphs, bar and line
			4	present data in a	variety of ways to help		graphs
		Begin to explore	Explore surrounding world	variety of ways to help	in answer questions	Begin to use test	
		surrounding world	-	in answer questions		results to make	
						predictions to set up	Use test results to
		Begin to raise own	Raise own questions	Begin to record	Record findings using	further comparative	make predictions to set
		questions		findings using simple	simple scientific	and fair tests	up further comparative
		Denin to motion anti-	Nation anthema and	scientific language,	language, drawings,		and fair tests
		Begin to notice patterns and relationships	Notice patterns and relationships	drawings, labelled diagrams, keys, bar	labelled diagrams, keys, bar charts, and	Begin to report and	Report and present
		and relationships	relationships	charts, and tables	tables	present findings from	findings from
		Begin to use secondary	Use secondary sources to	כוומו נג, מווע נמטובא	tubies	enquiries, including	enquiries, including
		sources to find answers	find answers	Begin to report on	Report on findings	conclusions, causal	conclusions, causal
				findings from	from enquiries,	relationships and	relationships and

Begin to use scientific language and read and	Use scientific language and read and spell age-	enquiries, including oral and written	including oral and written explanations,	explanations of and a degree of trust in	explanations of and a degree of trust in
spell age-appropriate	appropriate scientific	explanations, displays	displays or	results, in oral and	results, in oral and
scientific vocabulary	vocabulary	or presentations of	presentations of	written forms such as	written forms such as
		results and conclusions	results and conclusions	displays and other presentations	displays and other presentations
		Begin to use results to	Use results to draw		
		draw simple	simple conclusions,	Begin to identify	Identify scientific
		conclusions, make	make predictions for	scientific evidence that	evidence that has been
		predictions for new	new values, suggest improvements and	has been used to support or refute ideas	used to support or refute ideas or
		values, suggest improvements and	raise further questions	or arguments	arguments
		raise further questions		or arguments	arguments
				Begin to recognise that	Recognise that
		Begin to identify	Identify differences,	scientific ideas change	scientific ideas change
		differences, similarities	similarities or changes	and develop over time	and develop over time
		or changes related to	related to simple		
		simple scientific ideas	scientific ideas and	Begin to separate	Begin to separate
		and processes	processes	opinion from fact	opinion from fact
		Begin to use	Use straightforward	Decide how to record	Decide how to record
		straightforward	scientific evidence to	data from a choice of	data from a choice of
		scientific evidence to	answer questions or to	familiar approaches	familiar approaches
		answer questions or to	support their findings		
		support their findings		Begin to look for	Look for different
		Design to look for		different causal	causal relationships
		Begin to look for naturally occurring	Look for naturally	relationships	
		patterns and	occurring patterns and	Begin to use results to	Use results to identify
		relationships	relationships	identify when further	when further tests and
				tests and observations	observations might be
		Identify some new	Identify new questions	might be needed	needed
		questions arising from	arising from data		
		data		Begin to use relevant	Use relevant scientific
		Begin to use relevant	use relevant scientific	scientific language and illustrations to discuss,	language and illustrations to discuss,
		scientific language to	language to discuss	communicate and	communicate and
		discuss their ideas	their ideas	justify scientific ideas	justify scientific ideas
		Destate and the		Development t	Decide and the state
		Begin to communicate	Communicate findings	Read, spell and	Read, spell and
		findings in ways that are appropriate for	in ways that are appropriate for	pronounce scientific vocabulary correctly.	pronounce scientific vocabulary correctly.
		different audiences	different audiences	vocubulary correctly.	vocubului y correctiy.
			,,		
		Begin to recognise	Recognise when and		
		when and how	how secondary sources		
		secondary sources	might help to answer		
		might help to answer	questions that cannot be answered through		
		questions that cannot be answered through	practical investigations		
		practical investigations	p. actical mycoligations		

Plants	The Natural	Identify and name	Observe and	Identify and		
(Years, 1, 2 & 3)	World:	a variety of	describe how seeds	describe functions		
		common, wild and	and bulbs grow into	of different parts		
	Explore the	garden plants in	mature plants	of flowering		
	natural world	local area (inc.		plants inc. roots,		
	around them,	Deciduous and	Learn and describe	stem, trunk,		
	making	evergreen trees)	how plants need	leaves and flowers		
	observations and		water, light and a			
	drawing pictures		suitable temperature	Explore the		
	of animals and		to grow and stay	requirements of		
	plants;	Identify and	healthy	plants for life and		
		describe the basic		growth (inc. Air,		
	Know some	structure of a		light, water,		
	similarities and	variety of		nutrients from soil		
	differences	common,		and room to		
	between the	flowering plants,		grow) and know		
	natural world	including trees		how they vary		
	around them and			from plant to		
	contrasting			plant.		
	environments,			Investigate the		
	drawing on their			Investigate the way in which		
	experiences and			way in which water is		
	what has been			transported		
	read in class			within plants		
				within plants		
	Plant seeds and			Explore the part		
	care for growing			that flowers play		
	plants			in the life cycle of		
	Understand key			flowering plants,		
	features of life			inc. Pollination,		
	cycle of a plant			seed formation		
	cycle of a plant			and seed dispersal		

Living Things and	Explore the	Explore and compare	Recognise that	Describe the	Describe how
Their Habitats	natural world	the differences	living things can	differences in the	living things are
	around them,	between things that	be grouped in a	life cycles of a	classified into
(Years 2, 4, 5 & 6)	making	are living, dead and	variety of ways	mammal, an	broad groups
	observations and	things that have		amphibian, an	according to
	drawing pictures	never been alive	Explore and use	insect and a bird	common
	of animals and		classification keys		observable
	plants;		to help group,	Describe the life	characteristics and
			identify and name	process of	based on
	Know some	Identify that most	a variety of living	reproduction in	similarities and
	similarities and	living things live in	things in their	some plants and	differences, inc.
	differences	habitats to which	local and wider	animals	microorganisms,
	between the	they are suited	environment		plants and animals
	natural world				
	around them and		Recognise that		
	contrasting		environments can		
	environments,	Describe how	chance and that		Give reasons for
	drawing on their	different habitats	this can		classifying plants
	experiences and		sometimes pose		and animals,
	what has been	provide for the basic	dangers to living		based on specific
	read in class	needs of different	things		characteristics
		kinds of animals and	-		
	Know about	plants and how they			
	similarities and	depend on each			
	differences	other			
	between different				
	living things				
		Identify and name a			
		variety of plants and			
		animals in their			
		habitats, inc.			
		Microhabitats			
		Wieronabitats			
		Describe how			
		animals obtain food			
		from plants and			
		other animals, using			
		the idea of a simple			
		food chain and			
		identify and name			
		different sources of			
		food			

Animals including	Explore the	Identify and name	Know that animals,	Identify animals	Describe the	Describe the	Identify and name
Humans	natural world	a variety of	inc. Humans, have	inc. humans, need	simple functions	changes as	the main parts of
	around them,	common animals,	offspring which grow	the right types	of the basic parts	humans develop	the human
(Years, 1, 2, 3, 4, 5 &	making	inc. fish,	into adults	and amounts of	of the digestive	to old age	circulatory system
6)	observations and	amphibians,		nutrition	system in humans		
-,	drawing pictures	reptiles, birds and	Learn and describe				Describe the
	of animals and	mammals.	the basic needs of	Know that animals	Identify the		functions of the
	plants;		animals inc. Humans	inc. humans	different types of		heart, blood
		Identify and name	for survival inc.	cannot make their	teeth in humans		vessels and blood
		a variety of	water, food and air	own food and get	and their simple		
		common animals		the nutrition from	functions		Recognise the
	Understand some	that are	Describe the	what they eat			impact of diet,
	important	carnivores,	importance for		Construct and		exercise, drugs
	processes and	herbivores and	humans of exercise,	Identify that	interpret a variety		and lifestyle on
	changes in the natural world	omnivores.	eating the right amounts of different	human and some animals have	of food chains,		the way a body
	around them	I can describe and		skeletons and	identifying		functions
	around them	compare the	types of food and hygiene	muscles for	producers, predators and		Describe the way
	Understand key	structure of a	nygiene	support,			in which nutrients
	features of a life	variety of common		protection and	prey		and water are
	cycle of an animal	animals inc. Fish,		movement			transported within
		amphibians,		movement			animals, inc.
		reptiles, birds,					humans
		mammals inc. Pets.					
		Identify, name,					
		draw and label					
		parts of the human					
		body					
		Associate parts of					
		the body with each					
		sense					
		Use senses to					
		compare different					
		textures, sounds					
		and smells					

Understand some	Observe changes					
important	across the autumn					
processes and	& winter seasons /					
changes in the	spring & summer					
natural world	seasons					
around them,						
including the	Observe and					
seasons and	describe weather					
changing states of	associated with					
matter.	the seasons and					
	how day length					
Understand the	varies					
effect of						
around them						
	important processes and changes in the natural world around them, including the seasons and changing states of matter.	importantacross the autumnprocesses and& winter seasons /changes in thespring & summernatural worldseasonsaround them,	importantacross the autumnprocesses and& winter seasons /changes in thespring & summernatural worldseasonsaround them,including theObserve andseasons anddescribe weatherchanging states ofassociated withmatter.the seasons andhow day lengthvariesUnderstand thevarieseffect ofchangingseasons on thenatural world	importantacross the autumnprocesses and& winter seasons /changes in thespring & summernatural worldseasonsaround them,	important processes and changes in the natural worldacross the autumn & winter seasons / changes in the seasons around them, including the Observe and describe weather changing states of matter.Observe and describe weather associated with how day lengthUnderstand the effect of changing seasons on the natural worldvariesincluding the seasons and how day length	importantacross the autumnprocesses and& winter seasons /changes in thespring & summernatural worldseasonsaround them,

Evolution and Inheritance				Recognise that living things have changed over time
(Year 6)				and that fossils provide information about living things that inhabited the Earth millions of years ago
				Recognise that living things produce offspring of the same kind but normally offspring vary and are not identical to their parents
				Identify how animals and plants are adapted to suit their environment in

						different ways and that adaptation may lead to evolution
Materials (Years 1, 2 & 5)	Know about similarities and differences between different materials Explore collections of materials with similar/different properties Notice changes of materials	Distinguish between and object and the material from which it is made Identify and name a variety of everyday materials inc. Wood, plastic, glass, metal, water & rock Describe physical properties of a variety of everyday materials Compare and group together a variety of everyday materials, based on physical properties	Identify and compare the suitability of a variety of everyday materials, inc. Wood, metal, plastic, glass, brick, rock, paper and cardboard, for particular uses Find out how the shapes of solid objects made from some materials can change by squashing, bending, twisting and stretching		Compare and group together everyday materials on the basis of their properties, inc. their hardness, solubility, transparency, conductivity (Electrical and thermal) and response to magnets Know that some materials will dissolve in liquid to form a solution Describe how to recover a substance from a solution Use knowledge of solids, liquids and gases to decide how mixtures might be separated inc.	

			through filtering,	
			sieving and	
			evaporating	
			01000100000	
			Circum	
			Give reasons,	
			based on evidence	
			from comparative	
			and fair tests, for	
			the particular uses	
			of everyday	
			materials,	
			including metals,	
			wood and plastic	
			Demonstrate that	
			dissolving, mixing	
			and changes of	
			state are	
			reversible changes	
			Explain that some	
			changes result in	
			the formation of	
			new materials and	
			that this kind of	
			change is not	
			usually reversible,	
			inc. changes	
			associated with	
			burning and the	
			action of acid on	
			bicarbonate of	
			soda	
			Juu	

States of Matter	Understand some		Compare and	
(Year 4)	important		group materials	
	processes and		together,	
	changes in the		according to	
	natural world		whether they are	
	around them,		solids, liquids or	
	including the		gases	
	seasons and			
	changing states of		Observe that	
	matter.		some materials	
			change state	
			when they are	
			heated or cooled	
			Explain what	
			happens materials	
			are heated or	
			cooled	
			Measure or	
			research the	
			temperature at	
			which materials	
			change state in	
			degrees Celsius (C)	
			Identify the part	
			played by	
			evaporation and	
			condensation in	
			the water cycle	
			Associate the rate	
			of evaporation	
			with temperature	

Rocks	Compare and		
(Year 3)	group together		
	different kinds o	f	
	rocks, based on		
	appearance and		
	simple physical		
	properties		
	Describe in simp		
	terms how fossi		
	are formed whe	n	
	things that have		
	lived are trappe	b b b b b b b b b b b b b b b b b b b	
	withing rock		
	Recognise that		
	soils are made		
	from rocks and		
	organic matter		

Light (Year 3 & Year 6)Recognise that light appears to light is needed in order to see thingsRecognise that light is needed in order to see thingsRecognise that light appears to travel in straight linesUse the idea the light is needed in order to see thingsUse the idea the light travels in straight lives to absence of lightImage: Comparison of the light travels in straight lives to explain that objects are see because they git
Image: Second
Image: Second
Image: Second
Image: Second
dark is the straight lives to absence of light explain that objects are seen objects are seen
absence of light explain that objects are seen
objects are see
Notice that light is because they g
out or reflect lig
surfaces into the eye
Recognise that Explain that we
light from the sun see things beca
can be dangerous light travels from
and that there are light sources to
ways to protect our eyes or from
light sources to
objects and the
Recognise that to our eyes
shadows are
formed when the Use the idea the
light from a light dight from a light
source is blocked straight lines to
by an opaque explain why
shadows have t
same shape as t
Find patterns in objects that cas
the way that the them
size of shadows
change

Forces and Magnets	Explore and talk	and the second secon	Compare how	Explain that
(Year 3 & 5)	about different		things move on	unsupported
	forces they can		different surfaces	objects fall
	feel			towards the earth
	leel		Notice that some	because of the
			forces need	force of gravity
			contact between 2	acting between
			objects but	the Earth and the
			magnetic forces	falling object
			can act as a	
			distance	Identify the
				effects of air
			Observe magnets	resistance, water
			attract or repel	resistance and
			each other	friction that act
				between moving
			Observe magnets	surfaces
			attract some	
			materials and not	Recognise that
			others	some
				mechanisms, inc.
			Compare and	Levers, pullets and
			group a variety of	gears, allow a
			everyday	smaller force to
			materials on basis	have a greater
			of whether they	effect
			are attracted to a	
			magnet	
			Identify some	
			magnetic	
			materials	
			Describe magnets	
			as having two	
			poles	
			Predict whether	
			two magnets will	
			attract or repel	
			each other,	
			depending on	
			which poles are	
			facing	

Ele stuisite :				
Electricity			Identify common	Associate the
(Year 4 & 6)			appliances that	brightness of a
			run on electricity	lamp or the
				volume of a
			Construct a simple	buzzer with the
			series circuit	number and
				voltage of cells
			Identify and name	used in the circuit
			basic parts of a	
			circuit inc. cells,	Compare and give
			wires, bulbs,	reasons for
			switches and	variations in how
			buzzers	components
				function, inc.
			Identify whether	Brightness of
			or not a lamp will	bulbs, the
			light in a simple	loudness of
			series circuit,	buzzers and the
			based on whether	on/off position of
			or not the lamp is	switches
			part of a complete	
			loop with a	Use recognised
			battery	symbols when
				representing a
			Recognise that a	simple circuit in a
			switch opens and	diagram
			closes a circuit	
			Associate switches	
			with whether or	
			not a lamp lights	
			in a simple series	
			circuit	
			Recognise some	
			common	
			conductors and	
			insulators	
			Associate metals	
			with being good	
			conductors	

Sound			Identify how	
(Year 4)			sounds are made	
			Associate some	
			sounds being	
			made by vibrating	
			Recognise that	
			vibrations from	
			sounds travel	
			through a medium	
			to the ear	
			Find patterns	
			between the pitch	
			of a sound and	
			features of the	
			object that	
			produced it	
			Find patterns	
			between the	
			volume of a sound	
			and the strength	
			of the vibrations	
			that produced it	
			Recognise that	
			sounds get fainter	
			as the distance	
			from the sound	
			source increases	

Earth and Space		Describe and	
(Year 5)		explain the	
		movement of the	
		Earth and other	
		planets, relative to	
		the Sun in the	
		solar system	
		Describe the	
		movement of the	
		Moon relative to	
		the Earth	
		Describe the Sun,	
		Earth and Moon	
		relative the Earth	
		Use the idea of	
		the Earth's	
		rotation to explain	
		day and night and	
		apparent	
		movement of the	
		Sun across the sky	