KEY KNOWLEDGE PROGRESSION DOCUMENT – Science (Biology)

Strand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
All living	SBN.1 know the	SBR.1 know and		SB2.1 know the	15	SB4.1 know that	SB5.1 know the	SB6.1 know that	SB7.1 know how to
things	name of some	describe		differences		living things can be	differences in the	living things are	construct food
and	living things that	similarities and	. 9	between things	3/	grouped in a	life cycles of a	classified into	chains and food
their	are within the	differences in	1	that are living,		variety of ways (S)	mammal,	broad groups	webs to investigate
habitats	immediate natural	relation to living	3 0	dead and things	77 TA	 SB4.2 know how to 	amphibian, insect	according to	feeding
nabitats	environment (S)	things (S)	M. 1	that have never		use classification	and bird (S)	common	relationships (D)
	 SBN.2 know how 	SBR2 know and	Service Service	been alive (S) by	PARTY AND	keys (P) in order to	SB5.2 know the life	observable	 SB7.2 know how to
	to observe plants,	describe the	2800	exploring and	1 1 1 1 1 1 1 1	group, identify and	process of	characteristics and	classify within
	animals, natural	habitat of familiar	1	comparing (D)	- A W/ Size	name a variety of	reproduction in	based on	vertebrate and
	and found objects	woodland animals		SB2.2 know that		living things in	some plants and	similarities and	invertebrate
	(P)	(S)		most living things	March 1 1 March	their local and	animals (S)	differences,	groups (D)
	 SBN.3 know how 	SBR.3 know and	Till - D	live in habitats to	(C (1) Sep-98/	wider	A 25	including micro-	 SB7.3 know how to
	to care for living	describe patterns	30000	which they are	The state of	environment (D)	1	organisms, plants	classify within the
	things and the	and changes in	THE PARCE	suited and describe	310 Les 10	SB4.3 know that	755	and animals (S)	five different
	environment (P)	nature (S)	TOTAL THACKS	how different	775/300	environments can		SB6.2 know how to	Kingdoms (D)
		SBR.4 know how	All I	habitats provide	111111111111111111111111111111111111111	change and that	PD.	classify plants and	
		human actions	J. 100	for the basic needs		this can sometimes	NO.	animals based on	
		impact on the	1000	of different kinds		pose dangers to	100	specific	
		environment (S)	111111111111111111111111111111111111111	of animals and		living things (S)	2 6	characteristics and	
		E17.6 F	100 Car	plants and how		00 M		give reasons for	
			The same of the sa	they depend on			- COA	this (D)	
		Gillian C	190 -	each other (S)	(Alle	Cor Phy II	9.		
		7207		SB2.3 know and	11/12/	Salar Marie A			
		17.00	7 7 10 7	name a var <mark>iety of</mark>		A CONTRACTOR OF THE PARTY OF TH			
		71.5		plants and animals		No. of the last			
				in their habitats,	No.	704. 18	100		
				including		SOL SOL	2.0		
		2000		microhabitats		476	3250		
		28.50		(both familiar and		The same of the sa	CONTR.		
				less familiar		A Property Comments	100		
		10		habitats (e.g.		T. Carrier			
				woodland/ocean)		the Comment	1.00		
				(S)					
				SB2.4 know how	154	10. 10	15		
		1.0		animals obtain	(Pr. 3.	8			
		1,794		their food from	(1)				
				plants and other		197			
				animals, using food		1 200			
				chains, and identify	1	1			
				and name different	100				
			11.1	sources of food (S)	- 70				

Strand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
Animals, includin g humans	SBN.4 know how to explore natural materials, using their senses (P) SBN.5 know how to meet own care needs, (e.g. brushing teeth, using the toilet, washing and drying their hands thoroughly) (P) SBN.6 know how to make healthy food and drink choices (P) SBN.7 know how to look after teeth (P) SBN.8 know how exercise makes us feel (S) SBN.9 know what an animal is and talk about the life cycle (S)	SBR.5 know and talk about the different factors that support overall health and wellbeing, (e.g. regular physical activity, healthy eating, having a good sleep routine) (S) SBR.6 know the importance of oral hygiene (S) SBR.7 know how to describe what they see, hear and feel (P) SBR.8 know (S), observe and discuss the changes that occur in the life cycle of an animal (D)	SB1.1 know and name a range of animals using fish, amphibians, reptiles, birds and mammals (S) SB1.2 know and name a variety of common animals using what they eat (carnivore, herbivore and omnivore) (S) SB1.3 know the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) by describing and comparing (D) SB1.4 know, name, draw and label basic parts of the human body which can be seen (S) SB1.5 know the five senses and which part of the body is associated with each one (S)	SB2.5 know that young animals, including humans, grow into adults (S) SB2.6 know the basic needs of animals, including humans, for survival (water, food, air) (S) SB2.7 know why exercise, a balanced diet and good hygiene are important for humans (S)	SB3.1 know that animals, including humans, need the right types and amount of nutrition and that they cannot make their own food; they get nutrition from what they eat (S) SB3.2 know humans and some other animals have skeletons and muscles for support, protection and movement (S)	SB4.4 know the simple functions of the basic parts of the digestive system in humans (s) SB4.5 know the different types of teeth in humans and their simple functions (s) SB4.6 know how to construct and interpret a variety of food chains, identifying producers, predators and prey (D)	SB5.3 know the changes as humans develop to old age (s)	SB6.3 know and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood (s) SB6.4 know the impact of diet, exercise, drugs and lifestyle on the way human bodies function (s) SB6.5 know the ways in which nutrients and water are transported in animals, including humans (s)	SB7.4 know the different parts of animal and plant cells (S) SB7.5 know the different kind of specialised cells, their functions and adaptations (S) SB7.6 know the differences between sexual and asexual reproduction (S) SB7.7 know how females get pregnant and the stages of embryo development (S)	

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Strand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Plants	SBN.10 know what	SBR.9 know how to	SB1.6 know and	SB2.8 know how	SB3.3 know and	P			SB7.8 know the
	a seed is and that it	care for a plant,	name a variety of	seeds and bulbs	describe the				equation for
	will turn into a	including water	common wild and	grow into plants by	function of		A.		photosynthesis (S)
	plant (S)	and light (P)	garden plants,	observing and	different parts of		(P)		and use it to
	SBN.11 know how		including	describing (D)	flowering plants:				identify factors
	to plant a seed (P)		deciduous and	 SB2.9 know what 	roots, stems,				needed for plant
			evergreen trees (S)	plants need in	trunk, leaves and	CO / Br / Jacks			growth (D)
		300	SB1.7 know the	order to grow and	flowers (S)	10/10/20			
			basic structure of a	stay healthy	SB3.4 know the				
		313%	variety of common	(water, light &	requirements of				
			flowering plants	suitable	plants for life and	17 Juli 1994	1 12		
		100	(petals/flowers/fru	temperature) (S)	growth (air, light, water, nutrients		6		
		1000	it, stem, leaves, root, bulb seed),	A12100 3	from soil, and		and the same		
		4753	including trees	104/2	room to grow) and	100 / 500	1.0		
			(trunk, branches,	11.6	how they vary	The same			
		1.75	leaves) and		from plant to plant		19.		
			describe them (S)		(S)				
		A. a	describe them (b)	1 1 1 1 1	SB3.5 know how		170 AM		
			TEN PORT		water is	200	. 10		
			104		transported within		42%		
		- 17	100	CO TO	plants through	- INC. 1	- CE		
			100 MET 1	A	investigation (D)		200		
			Y Yes		SB3.6 know the	The same of the sa			
			A 07 - 3	2/ //	part that flowers	No. of the last of			
				10 //	p <mark>lay i</mark> n the life	704. 18	100		
				U.S. (1)	c <mark>ycl</mark> e of flowering	SON AND AND AND AND AND AND AND AND AND AN			
			26 JUL -	2001	plants including	170	250		
			STATE OF THE PARTY	1000	pollination, seed	TO THE WEST	W. Carella		
		-71	F 700 W.	363, 450	formation and	The Park	- Apr. T.		
		100	1987	SM 1.00	seed dispersal (S)				



Strand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Evolutio	-		100	A Alle	I LET	(3)		SB6.6 know that	SB7.9 know the
n and			10-0	Da Br		7		living things have	roles that genes
Inherita			SI	ALL THE STATE OF T				changed over time	and environments
nce			2 200	CALL STATE	1 324 m		6.1	and fossils provide	have on
			1	William Marie		- 14 MI	W.	information about	characteristics (S)
			Marie Marie V	Children Comment	100 May 100	EF 40.74	200	living things that	
			- A V 6	DE VOICE	400	Lotte to Mine		inhabited the Earth	
		2.00	- 10 M	10 17 S M	1	10/40		millions of years ago (S)	
		- 180	N. Lewis	7,255	7 : 0/4	490-00		• SB6.7 know that	
				A SHEET BOOK IS		Carlos Lines		living things	
			W.O. T.	7382	THE	A 1000	17.27.261	produce offspring	
			Will - St.	V. Mar. W. W.	VICE BUSINESS	Total Williams	4.8	of the same kind,	
		1	300000	A POPULAR OF THE PARTY OF THE P	All the second	The same of	1	but normally	
		1/1/23	IN FAC	1001/4	0 3 4 Les 10	AND FREE LA	755	offspring vary and	
		77/00	ALC: THEM	10.0	11 175/30	17/1/2		are not identical to	
		0.000	111 11 111	- 20/10	W/11 /1		10	their parents (S)	
			ALC: ALC: ALC: ALC: ALC: ALC: ALC: ALC:	7 . 11.				SB6.8 know how	
		A.S.	1000	11/1/10		OR ARE ARE	PT - A0	animals and plants	
		1500.0	10150	All Indiana		E C	7 5	are adapted to suit	
		511	100				120	their environment	
			100			The same of the sa	06 4	in different ways and that	
		-3450	100 1000	A	1629	STATE OF U	- 50	adaptation may	
		600	V V			THE INTERNATION		lead to evolution	
		P	- 40			194 JUN		(S)	

Curriculum End Points

The KKPDs are the input to the curriculum. The curriculum end points are the output. Curriculum end points capture the knowledge, skills and understanding that children should have at the end of each year. They build progressively over time so that children leave Year 6 well-prepared for the next stage of education as competent and capable scientist.

For subject leaders, they provide a clear overview of the end of year expectations for each year group, which will support the planning and assessment of the curriculum.

For teachers, they provide further clarity around what children should be able to do at the end of each year, using the knowledge they have gained from being taught the KKPDs. They support teachers to plan activities that help to develop children as effective scientists. They should be used to check what children know and how well they can apply this knowledge across the curriculum.

For children, they ensure that they receive an equitable curriculum which gives them the substantive, procedural and disciplinary knowledge needed to be successful in their future studies.

End points are taken from the National Curriculum Teacher Assessment Framework for Key Stage 1 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1125249/2018-

19 teacher assessment frameworks at the end of key stage 1.pdf) and Key Stage 2 (https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1119094/2018-

19_teacher_assessment_frameworks_at_the_end_of_key_stage_2.pdf).

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Strand	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Curricul	Children should be	Children should be	Children should be	Children should be	Children should be	Children should be	Children should be	Children should be	Children should be
um end	able to	able to	able to	able to	able to	able to	able to	able to	able to
points				200	134 -1		1		
politis	Recall the knowledge	Recall the knowledge	Recall the knowledge	Recall the knowledge	Recall the knowledge	Recall the knowledge	Recall the knowledge	Recall the knowledge	Recall the knowledge
	specified within the	specified within the	specified within the	specified within the	specified within the	specified within the	specified within the	specified within the	specified within the
	KKPDs for Nursery	KKPDs for Reception	KKPDs for Year 1	KKPDs for Year 2	KKPDs for Year 3	KKPDs for Year 4	KKPDs for Year 5	KKPDs for Year 6	KKPDs for Year 7
	Idautif. au saist aut	Kanaa ad tallanhaat	Name and locate	Contain the	Name describe and	Name describe and	Describe and	Describe the effects	Canatanat fa ad abaina
	Identify or point out names of unfamiliar	Know and talk about the different factors	parts of the human	Explain the importance of	Name, describe and explain the functions	Name, describe and explain the functions	Describe and compare different	Describe the effects of diet, exercise,	Construct food chains and food webs to
	natural items or	that support their	body, including those	exercise, a balanced	of the main parts of	of the main parts of	reproductive	drugs and lifestyle on	investigate feeding
	animals	overall health and	related to the senses	diet and hygiene for	the musculoskeletal	the digestive system	processes and life	how the body	relationships
	ailillais	wellbeing, drawing on	related to the senses	humans	system	the digestive system	cycles in plants and	functions	relationships
		their own	Describe and	Trainians	System	Construct and	animals, including	Turiculoris	Classify animals
	Talk about the	experiences. E.g; food	compare the	Describe the best	December 11	interpret food chains	humans	No. and a section and	within the different
	natural world using	choices, hygiene, oral	observable features	Describe the basic	Describe the	interpret rood ending	Trainians	Name, describe and	animal kingdoms
	appropriate	health etc.	of animals from a	needs of animals for	requirements of	Group living things in	Describe and explain	explain the functions	
	vocabulary	******	range of groups	survival and the main	plants for life and	multiple ways using	changes as humans	of the main parts of	
	Understand and	Identif		changes as young	growth comparing	their own criteria	grow and age	the circulatory	
	discuss the features	Identify some similarities and	Group animals	animals, including humans, grow into	these amongst different species	90 AT AT		system	
	of a life cycle	differences between	according to their	adults	unierent species	Explain how	- 30	Utilise the observable	
	or a me cycle	the natural world	types (e.g. reptiles,	adults	Explain the life cycle	environmental	624	features of plants,	
	Understand that their	around them and	mammals,	St. The	of different	changes may have an	- A	animals and	
	behaviour can have	contrasting	amphibians etc)	Understand the basic	plants/trees	impact on living	2000	microorganisms to	
	an effect on the	environments	umpilibians etc)	needs of plants for	plants/ trees	things		group, classify and	
	natural world and	Citin Gilliants	Compare and	survival and the	Name, locate and	timings.		identify them into	
	that we need to care	Identify similarities	contrasts a range of	consequence of	explain the functions	704. 3	10	broad groups, using	
	for our planet (e.g.	and differences	living and non-living	changing these	of the main parts of		The second second	keys or other	
	recycling)	between living things	things	Identify whether	plants and the	476	2500	methods	
	, 5,		COLUMN TO THE PARTY OF THE PART	things are alive, dead	transporting water		CONT.		
	Explain how to care	Understand some	Describe and explain	or have never lived	and nutrients	A TOTAL CO.	The second second	Apply the basic ideas	
	for themselves, such	important processes	the structure of basic	of flave flever fived		T. Charles	2.7	of inheritance.	
	as brushing their	and changes in the	structure of		11/2	the Comme		variation and	
	teeth	natural world around	plants/trees	Discuss how animals		85 65		adaptation to	
		them, including the		get their food from	Plo	A 10 - 10		describe how living	
	Sort healthy and	seasons		other animals and/or	17 20	A		things have changed	
	unhealthy foods,		V-1	from plants, and use	No.	716 - 16		over time and	
	knowing the impact	Describe what plants		simple food chains to describe these	100	1977	7	evolved	
	and effects they have	need to survive	- 3.4			f	All Districts		
	on the body			relationships				Describe and explain	
	Tall about beauty	To take care and	(1.70) /Ga		and the same of			how fossils provide	
	Talk about how seeds	protect the natural		Compare and	(Care		4.00	evidence for	
	grow into plants	world e.g: watering	110	contrast different	2.0	1,000		evolution	
		the plants in the	3-	plants and animals	32-110	- III			
		garden daily etc.		and describe how	E 20 70 /	7.1			
		3 ,		they are suited to		200 / 61			
		1	70.00	different habitats		12	1	1	

