Allanson Street Primary School – Science Knowledge Progression Document



⊾ Area	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Area	*Use all	*Draw	*Identify and	*Observe and	*Identify and	*Recognise that	*Describe the	*Describe how
Plants	their senses	information from	name a variety of	describe how	describe the	living things can	life process of	living things are
	in hands-on	a simple map.	common wild and	seeds and bulbs	functions of	be grouped in a	reproduction in	classified into
	exploration	(Reception –	garden plants,	grow into	different parts of	variety of ways.	some plants	broad groups
	of natural	Living things	including	mature plants.	flowering plants:	(Y4 - Living	and animals.	according to
	materials.	and their	deciduous and		roots, stem/trunk,	things and their	(Y5 - Living	common
		habitats)	evergreen trees.	*Find out and	leaves and	habitats)	things and	observable
	*Explore			describe how	flowers.		their habitats)	characteristics
	collections	*Explore the	*Identify and	plants need		*Explore and		and based on
	of materials	natural world	describe the	water, light and	*Explore the	use		similarities and
	with similar	around them.	basic structure of	a suitable	requirements of	classification		differences,
	and/or	(Reception –	a variety of	temperature to	plants for life and	keys to help		including micro-
	different	Living things	common	grow and stay	growth (air, light,	group, identify		organisms,
	properties.	and their	flowering plants,	healthy.	water, nutrients	and name a		plants and
	Plant seeds	habitats)	including trees.	41.1 (2)	from soil, and	variety of living		animals. (Y6 -
	and care for	*D 'le le - (*Identify and	room to grow)	things in their		Living things
	growing	*Describe what		name a variety	and how they	local and wider		and their
	plants.	they see, hear and feel whilst		of plants and animals in their	vary from plant to	environment.		habitats)
	*Understand	outside.		habitats,	plant.	(Y4 - Living things and their		*Give reasons
	the key	(Reception –		including	*Investigate the	habitats)		for classifying
	features of	Living things		microhabitats.	way in which	Habitats)		plants and
	the life cycle	and their		(Y2 - Living	water is	*Recognise that		animals based
	of a plant	habitats)		things and their	transported within	environments		on specific
	and an	riabitato)		habitats)	plants.	can change and		characteristics.
	animal.	*Recognise		nabitato)	pianto.	that this can		(Y6 - Living
		some			*Explore the part	sometimes pose		things and their
	*Begin to	environments			that flowers play	dangers to living		habitats)
	understand	that are different			in the life cycle of	things. (Y4 -		,
	the need to	to the one in			flowering plants,	Living things		
	respect and	which they live.			including	and their		
	care for the	(Reception –			pollination, seed	habitats)		
	natural	Living things			formation and	,		
	environment	and their			seed dispersal.			
	and all living	habitats)						
	things.							

		*Understand the effect of changing seasons on the natural world around them. (Reception – Seasonal changes)						
Living things and their habitats	*Use all their senses in hands-on exploration of natural materials. *Explore collections of materials with similar and/or different properties. *Begin to understand the need to respect and care for the natural environment and all living things.	*Draw information from a simple map. *Explore the natural world around them. Describe what they see, hear and feel whilst outside. *Recognise some environments that are different to the one in which they live.	*Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants) *Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants) *Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans) *Identify and name a variety of common animals including humans)	*Explore and compare the differences between things that are living, dead, and things that have never been alive. *Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. *Identify and name a variety of plants and animals in their	*Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants)	*Recognise that living things can be grouped in a variety of ways. *Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. *Recognise that environments can change and that this can sometimes pose dangers to living things. *Construct and interpret a variety of food chains, identifying producers, predators and	*Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. *Describe the life process of reproduction in some plants and animals.	*Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals. *Give reasons for classifying plants and animals based on specific characteristics. *Recognise that living things produce offspring of the same kind, but normally offspring vary and are not

			common animals that are carnivores, herbivores and omnivores. (Y1 - Animals including humans) *Describe and compare the structure of a variety of common animals	habitats, including microhabitats. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different		prey. (Y4 - Animals, including humans)		identical to their parents. (Y6 - Evolution and inheritance) *Identify how animals and plants are adapted to suit their environment in different ways and that
			(fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans) *Observe changes across the four seasons. (Y1 - Seasonal change)	sources of food. *Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals including humans)				adaptation may lead to evolution. (Y6 - Evolution and inheritance)
Animals, including humans	*Use all their senses in hands-on exploration of natural materials. *Begin to make sense of their own life-story and family's history.	*Talk about members of their immediate family and community. *Name and describe people who are familiar to them. *Recognise some	*Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. *Identify and name a variety of common animals that are carnivores,	*Notice that animals, including humans, have offspring which grow into adults. *Find out about and describe the basic needs of animals, including humans, for	*Identify 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.	*Describe the simple functions of the basic parts of the digestive system in humans. *Identify the different types of teeth in humans and	*Describe the changes as humans develop to old age. *Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 -	*Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.

Understand	environments	herbivores and	survival (water,	* Identify that	their simple	Living things	*Recognise the
the key	that are different	omnivores.	food and air).	humans and	functions.	and their	impact of diet,
features of	to the one in		Describe the	some other		habitats)	exercise, drugs
the life cycle	which they live.	*Describe and	importance for	animals have	*Construct and	,	and lifestyle on
of a plant		compare the	humans of	skeletons and	interpret a	*Describe the	the way their
and an		structure of a	exercise, eating	muscles for	variety of food	life process of	bodies function.
animal.		variety of	the right	support,	chains,	reproduction in	bodies fariction.
ailliliai.		common animals	amounts of	protection and	identifying	some plants	*Describe the
*Bogin to				movement.	, ,	and animals.	
*Begin to		(fish,	different types	movement.	producers,		ways in which
understand		amphibians,	of food, and		predators and	(Y5 - Living	nutrients and
the need to		reptiles, birds	hygiene.		prey.	things and	water are
respect and		and mammals,				their habitats)	transported
care for the		including pets).	*Describe how				within animals,
natural			animals obtain				including
environment		*Identify, name,	their food from				humans.
and all living		draw and label	plants and other				
things.		the basic parts of	animals, using				*Describe how
		the human body	the idea of a				living things are
		and say which	simple food				classified into
		part of the body	chain, and				broad groups
		is associated	identify and				according to
		with each sense.	name different				common
			sources of food.				observable
			(Y2 - Living				characteristics
			things and their				and based on
			habitats)				similarities and
			riabitato)				differences,
							including micro-
							organisms,
							plants and
							animals. (Y6 -
							Living things
							and their
							habitats)
							*Give reasons
							for classifying
							plants and
							animals based
							on specific
							characteristics.

							(Y6 - Living things and their habitats)
Evolution and Inheritance	*Begin to understand the need to respect and care for the natural environment and all living things. (Nursery – Living things and their habitats)	*Recognise some environments that are different to the one in which they live. (Reception – Living things and their habitats)	*Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. (Y2 - Living things and their habitats) *Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals, including humans)	*Describe in simple terms how fossils are formed when things that have lived are trapped within rock. (Y3 - Rocks) *Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants)	*Recognise that environments can change and that this can sometimes pose dangers to living things. (Y4 - Living things and their habitats)	*Describe the life process of reproduction in some plants and animals. (Living things and their habitats - Y5)	*Recognise that living things have changed over time 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.
Seasonal Changes	*Understand the key features of the life cycle of a plant and an animal. (Nursery – Plants & Animals, excluding humans)	*Explore the natural world around them. Describe what they see, hear and feel whilst outside. *Understand the effect of changing seasons on the natural world around them.	*Observe changes across the four seasons. *Observe and describe weather associated with the seasons and how day length varies.	*Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Y3 - Light)	*Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. (Y5 - Earth and space)	

Materials	*Use all	*Explore the	*Distinguish	*Identify and	*Compare and	*Compare and	*Compare and
Materials	their senses	natural world	between an	compare the	group together	group materials	group together
	in hands-on	around them.	object and the	suitability of a	different kinds of	together,	everyday
	exploration	Describe what	material from	variety of	rocks on the	according to	materials on
	of natural	they see, hear	which it is made.	everyday	basis of their	whether they	the basis of
	materials.	and feel whilst	Willom It io made.	materials,	appearance and	are solids,	their
	materials.	outside.	*Identify and	including wood,	simple physical	liquids or gases.	properties,
	*Explore	outside.	name a variety of	metal, plastic,	properties. (Y3 -	ilquius or gases.	including their
	collections		everyday	glass, brick,	Rocks)	*Observe that	hardness,
	of materials		materials,	rock, paper and	rtoono)	some materials	solubility,
	with similar		including wood,	cardboard for	*Describe in	change state	transparency,
	and/or		plastic, glass,	particular uses.	simple terms how	when they are	conductivity
	different		metal, water, and	partioular door	fossils are formed	heated or	(electrical and
	properties.		rock.	*Find out how	when things that	cooled, and	thermal), and
	1			the shapes of	have lived are	measure or	response to
	*Talk about		*Describe the	solid objects	trapped within	research the	magnets.
	the		simple physical	made from	rock. (Y3 -	temperature at	3 3 4 4
	differences		properties of a	some materials	Rocks)	which this	*Know that
	between		variety of	can be changed	,	happens in	some
	materials		everyday	by squashing,	*Compare and	degrees Celsius	materials will
	and		materials.	bending,	group together a	(°C).	dissolve in
	changes			twisting and	variety of	,	liquid to form a
	they notice.		*Compare and	stretching.	everyday	*Identify the part	solution, and
			group together a		materials on the	played by	describe how
			variety of		basis of whether	evaporation and	to recover a
			everyday		they are attracted	condensation in	substance
			materials on the		to a magnet, and	the water cycle	from a
			basis of their		identify some	and associate	solution.
			simple physical		magnetic	the rate of	
			properties.		materials. (Y3 -	evaporation with	*Use
					Forces and	temperature.	knowledge of
					magnets)		solids, liquids
						*Recognise	and gases to
						some common	decide how
						conductors and	mixtures might
						insulators, and	be separated,
						associate	including
						metals with	through
						being good	filtering,
						conductors. (Y4	sieving and
						- Electricity)	evaporating.

	*Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood
	*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, including changes associated with burning and the action
	of acid on bicarbonate of soda.

Rocks	*Use all their senses in hands-on exploration of natural materials. (Nursery – Living things and their habitats) *Explore collections of materials with similar and/or different properties. (Nursery – Living things and their habitats)	*Explore the natural world around them. (Reception – Living things and their habitats) *Describe what they see, hear and feel whilst outside. (Reception – Living things and their habitats)	*Distinguish between an object and the material from which it is made. (Y1 - Everyday materials) *Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials) *Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials) *Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials)	*Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)	*Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. *Describe in simple terms how fossils are formed when things that have lived are trapped within rock. *Recognise that soils are made from rocks and organic matter			*Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. (Y6 - Evolution and inheritance)
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Light	*Explore	*Describe what	*Identify, name,	*Recognise that	*Compare and	Recognise that
	how things	they see, hear	draw and label	they need light in	group together	light appears to
	work.	and feel whilst	the basic parts of	order to see	everyday	travel in straight
	Talk about	outside.	the human body	things and that	materials on	lines.
	the		and say which	dark is the	the basis of	Use the idea
	differences		part of the body	absence of light.	their	that light travels
	in materials		is associated		properties,	in straight lines
	and		with each sense.	*Notice that light	including their	to explain that
	changes		(Y1 - Animals,	is reflected from	hardness,	objects are seen
	they notice.		including	surfaces.	solubility,	because they
			humans)		transparency,	give out or
				*Recognise that	conductivity	reflect light into
			*Describe the	light from the sun	(electrical and	the eye.
			simple physical	can be	thermal), and	Explain that we
			properties of a	dangerous and	response to	see things
			variety of	that there are	magnets. (Y5 -	because light
			everyday	ways to protect	Properties and	travels from light
			materials. (Y1 -	their eyes.	changes of	sources to our
			Materials)		materials)	eyes or from
				*Recognise that		light sources to
				shadows are		objects and then
				formed when the		to our eyes.
				light from a light		Use the idea
				source is blocked		that light travels
				by an opaque		in straight lines
				object.		to explain why
				*Find patterns in		shadows have
				the way that the		the same shape
				size of shadows		as the objects
				change.		that cast them.

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Forces	*Explore	*Describe what	*Find out how	*Compare how		*Explain that	
	how things	they see, hear	the shapes of	things move on		unsupported	
	work.	and feel whilst	solid objects	different		objects fall	
		outside.	made from	surfaces.	1	towards the	
	*Explore the		some materials			Earth because	
	natural		can be changed	*Notice that some		of the force of	
	world		by squashing,	forces need		gravity acting	
	around		bending,	contact between		between the	
	them.		twisting and	two objects, but		Earth and the	
			stretching. (Y2 -	magnetic forces	1	falling object.	
			Uses of	can act at a			
			everyday	distance.	,	*Identify the	
			materials)			effects of air	
			·	*Observe how		resistance,	
				magnets attract		water	
				or repel each		resistance and	
				other and attract	1	friction, that	
				some materials		act between	
				and not others.		moving	
						surfaces.	
				*Compare and			
				group together a	,	*Recognise	
				variety of	1	that some	
				everyday		mechanisms,	
				materials on the	i	including	
				basis of whether		levers, pulleys	
				they are attracted		and gears,	
				to a magnet, and		allow a smaller	
				identify some	1	force to have a	
				magnetic		greater effect.	
				materials.			
				*Describe			
				magnets as			
				having two poles.			
				Predict whether			
				two magnets will			
				attract or repel			
				each other,			
				depending on			

				which poles are facing.		
Sound	*Explore how things work.	*Describe what they see, hear and feel whilst outside.	*Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans)		*Identify how sounds are made, associating some of them with something 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.	
Electricity	*Explore how things		*Identify common	*Associate the brightness of a
	work.		appliances that	lamp or the
			run on	volume of a
			electricity.	buzzer with the
				number and
			*Construct a	voltage of cells
			simple series	used in the
			electrical circuit,	circuit.
			identifying and	
			naming its basic	*Compare and
			parts, including	give reasons for
			cells, wires,	variations in
			bulbs, switches	how
			and buzzers.	components
				function,
			*Identify	including the
			whether or not a	
			lamp will light in	bulbs, the
			a simple series	loudness of
			circuit, based on	buzzers and the
			whether or not	

the lamp is part	on/off position of
of a complete	switches.
loop with a	
battery.	*Use recognised symbols when
*Recognise that	representing a
a switch opens	simple circuit in
and closes a	a diagram.
circuit and	
associate this	
with whether or	
not a lamp lights	
in a simple	
series circuit.	
*Recognise	
some common	
conductors and	
insulators, and	
associate	
metals with	
being good	
conductors.	

Earth and	*Explore the	*Observe	*Describe the
Space	natural world	changes across	movement of
-	around them.	the four seasons.	the Earth, and
		(Y1 – Seasonal	other planets,
	*Describe what	changes)	relative to the
	they see, hear		Sun in the
	and feel whilst	*Observe and	solar system.
	outside.	describe weather	
		associated with	*Describe the
		the seasons and	movement of
		how day length	the Moon
		varies. (Y1 –	relative to the
		Seasonal	Earth.
		changes)	
			*Describe the
			Sun, Earth and
			Moon as
			approximately
			spherical bodies.
			bodies.
			*Use the idea
			of the Earth's
			rotation to
			explain day
			and night and
			the apparent
			movement of
			the sun across
			the sky.

Curriculum statements in red are from other linked topics.