Biology	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Living	Pupils will use a range	ELG:		NC:		NC: Recognise	NC: Describe the	NC: Describe how
Things	of scientific	Explore the natural		Explore and compare		that living things	differences in the	living things are
and their	equipment such as	world around them,		the differences		can be grouped in	life cycles of a	classified into broad
Habitats	magnifying glasses	making observations		between things that		a variety of ways	mammal, an	groups according to
	and human insect	and drawing		are living, dead, and			amphibian, an	common observable
	catchers to search	pictures of animals		things that have never		Explore and use	insect and a bird	characteristics, and
	for minibeasts in the	and plants (ELG)		been alive		classification keys	Describe the life	based on similarities
	outdoor environment.					to help group,	process of	and differences,
		Pupils will explore		Identify that most		identify and name	reproduction in	including
		the British wildlife		living things live in		a variety of living	some plants and	microorganisms,
		and begin to sort		habitats to which they		things in their	animals	plants and animals
		and classify animals		are suited and describe		local and wider		
		by their habitats		how habitats provide		environment		Give reasons for
		(trip to North Dean		for the basic needs of				classifying plants
		Woods and the small		animals and plants, and		Recognise that		and animals based on
		world area).		how they depend on		environments can		specific
				each other		change and that		characteristics
		Pupils will explore a				this can		
		farm yard and the		Identify and name a		sometimes pose		
		different types of		variety of plants and		dangers to living		
		animals that live		animals in their		things		
		there. They will		habitats (including				
		continue to explore		microhabitats)				
		the natural world						
		around them making		Describe how animals obtain their food from				
		observations and		plants and other				
		drawing pictures of		animals using a simple				
		animas.		food chain, and identify				
		Pupils will name,		and name different				
		observe, explore		sources of food				
		and describe a		Sources of Toou				
		range of minibeasts						
		which can be found						
		in the garden and go						
		on their own						
		minibeast hunt.						
		minibeust nunt.						
		They will record						
		their findings using						
		a pictogram. Pupils						

				ubject progress			
		will sort and classify.					
Plants	Pupils will investigate plants and growth through making and growing Grass Heads. They will learn what seeds need to help them grow.	ELG: Understand some important processes and changes in the natural world around them Pupils will explore the life cycle of a plant. Pupils will plant their own bean plant and investigate what plants need to grow and stay healthy. Pupils will predict and then test what will happen to a plant that does not have any light or water. Pupils will record their findings. Pupils will care for the plants in the reception garden. Developing an understanding of	NC: Identify and name a variety of common wild and garden plants, including deciduous/evergreen trees Describe the basic structure of common flowering plants, including trees - seed, root, stem, branch, leaf flower	NC: Observe and describe how seeds and bulbs grow into mature plants Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy Pupils to complete a comparative test to see how plants grow (variables of water, light and temperature)	NC: Identify and describe functions of parts of flowering plants Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, room to grow) and how they vary between plants (revision of year 2 but in depth focus on room to grow and a range of plants. Investigate how water is transported within plants Explore the life cycle of flowering plants, including pollination, seed formation and seed dispersal		

			<u>Science</u> S	ubject progress				
		growth, decay and changes over time Identify similarities and differences in relation to living things ELG: Explore the natural world around them, making observations and drawing pictures of animals and plants Pupils will make observations of the natural world and draw pictures of plants observed. Pupils will visit Butterfly World at Manor Heath Park and observe and explore the plants that they find. They will comment and ask questions about what they saw and make observation and drawings of plants.						
Animals including Humans	Pupils will explore farm animals and learn their names. Pupils will be encouraged to talk about what they can see and describe them (what sounds they make too).	Pupils will begin to make sense of their own life-story. They will look at pictures of themselves as babies and talk about how they have changed since they were babies.	NC: 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	NC: Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Notice that animals, including humans, have	NC: 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	NC: Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and functions	NC: (taught as part of Living Things and Their Habitats Year 5 above) Describe the changes as humans develop to old age	NC: Identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood

Pupils will explore	They will sequence	carnivores, herbivores	offspring which grow	Identify that		Recognise the
animals from the key	stages of the human	and omnivores	into adults	humans and some	Construct and	impact of diet,
texts 'Walking	life cycle including			other animals have	interpret a	exercise, drugs and
Through the Jungle'	baby, children, adult	Describe and compare	<mark>Chick hatching</mark>	skeletons and	variety of food	lifestyle on the way
and the 'Monkey	and elderly.	the structure of a	<mark>experience</mark>	muscles for support,	chains, identifying	bodies function
Puzzle' They will		variety of common		protection and	producers,	
describe the animals	ELG:	animals (fish,	Describe the	movement	predators and	Describe the ways
and categorise them.	Know some	amphibians, reptiles,	importance for humans		prey	that
	similarities and	birds and mammals,	of exercise, eating the			nutrients/water are
Pupils will learn about	differences	including pets)	right amounts of			transported within
the butterfly life	between the natural		different types of			humans (revision of
cycle through the	world around them	Identify, name, draw	food, and hygiene			year 4)
story 'The Very	and contrasting	and label the basic				
Hungry Caterpillar'.	environments,	parts of the human				Evolution and
	drawing on their	body and say which				Inheritance (NC)
Pupils will observe	experiences and	part of the body is				
the <mark>life cycle of a</mark>	what has been read	associated with each				Recognise that living
butterfly in real life.	in class	sense				things have changed
						over time and that
Pupils to explore	ZooLab will come					fossils provide info
using their senses	into school and bring					about living things
-	in a collection of					that inhabited Earth
	small wild animals.					millions of years ago
	They will compare					, ,
	and contrast wild					Recognise that living
	animals to domestic					things produce
	pets. They will learn					offspring of the
	how to take care for					same kind but they
	animals, specifically					vary and aren't
	pets.					identical to parents
	•					
	They will go on a					Identify how animals
	trip to the farm					and plants are
	(Swithens Farm)					adapted to suit
	where they will					their environment in
	, learn how to take					different ways and
	care of different					that this leads to
	animals such as					evolution
	lambs (bottle					
	feeding).					
	They will continue to					
	get an					
	understanding of					
	the need to respect					

			<u>Science</u> S	ubject progress				
		and care for the						
		natural environment						
		and living things.						
		Children will look at						
		where food comes						
		from (eggs from						
		chickens, milk from						
		cows, meat from						
		animals) and where						
		materials comes						
		from (wool etc.)						
		They will recap the						
		names of farm						
		animals and begin to						
		name their young						
		(cow, calf, sheep						
		and lamb).						
		,						
Chemistry	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Matter	Pupils will go to the	Pupils will go to the	NC:	NC:	Rocks (NC)	States of Matter	Properties and	
	Forest School and	Forest School and	Distinguish between	Identify and compare	Compare and group	(NC)	Changes of	
	collect natural	collect natural	an object and the	the suitability of a	together different	Compare and	Materials (NC)	
	materials to	materials to	material from which it	variety of everyday	kinds of rocks on the	group materials		
	investigate and	investigate and	is made	materials, including	basis of their	together	Compare and group	
	discuss.	discuss. They will		wood, metal, plastic,	appearance and	according to	together everyday	
		begin to classify		glass, brick, rock, paper	simple physical	whether they are	materials on the	
	Use scientific	their findings.	Identify and name a	and cardboard for	properties	solids, liquids or	basis of their	
	equipment such as	-	variety of everyday	particular uses.		gases	properties	
	magnifying glasses.	Use scientific	materials, including		Describe in simple	5		
		equipment such as	wood, plastic, glass,	Compare how things	terms how fossils	Observe that	Know that some	
	Using the story	magnifying glasses	metal, water, and	move on different	are formed when	some materials	materials will	
	'Three Little Pigs'		rock.	surfaces.	things that have	change state when	dissolve in liquid to	
	children will explore	Children will explore			lived are trapped	heated or cooled,	form a solution, and	
	natural materials	natural materials	Describe the simple	Find out how the	within rock	and measure or	describe how to	
	such as straw, stones	such as wood,	physical properties of	shapes of solid objects		research the	recover a	
	and sticks.	branches, twigs and	a variety of everyday	made from some	Recognise that soils	temperature at	substance from a	
		rocks.	materials	materials can be	are made from rocks	which this	solution	
	Pupils will explore			changed by squashing,	and organic matte	happens in		
	what would happen to	ELG:	Compare and group	bending, twisting and		degrees Celsius	Use knowledge of	
	the Gingerbread Man	Understand some	together a variety of	stretching			solids, liguids and	
	The Gingerbread Man	onder stund some		Sherening				
	if he tried to swim	important processes and changes in the	everyday materials on the basis of their	Sherening		Identify the part played by	gases to decide	

cross the river (changes in state) changing stutes of hubing stut			<u>Science</u> S				
 season and damping strates of matter, for the particular uses of chapting strates of matter, for the particular uses of everyona strate, for any internals (acid, jelly, coding and particular) increases to another by combining different incredies what would happen the table what would happen to the forgerbread frame and labout what happens to generate to a science every internals (coding any strates to generative). Pupils will codered in the particular uses of strate and classify found to the particular uses of a strate and classify found to pape to the forgerbread frame and the paper internals (coding any strates of the particular). Pupils will codered in the particular uses of a strate and classify found to pape to the forgerbread frame and the paper internals (coding any strates of the particular). Pupils will codered in the paper internals (coding any strates of the particular). Pupils will codered in the particular uses of a strate and classify found to paper to the forgerbread frame and the paper internals (coding any strates of the particular). Pupils will codered in the paper internals (coding any strates of the particular). Pupils will codered in the particular uses of a strate and internals (coding any strates of the particular). Pupils will codered in the particular uses of a strate and internals (coding any strates of the particular). Pupils will codered in the particular uses of a strate and the particular uses of a strate and a science experiment to see what happens to gummy bears when they are added to water for days. Pupils will coder the differences. Pupils will coder the differences in gummy bears when they are added to water for days. Pupils will coder the differences in water for days. Pupils will coder the water base water for days.	across the river	natural world around	simple physical		evaporation and	how mixtures might	
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Physics	Nursery	Magnets Sort objects out if they are magnetic or not magnetic Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ritysics	Nulsery	Reception	/eur I	/eur L	/eur J	Jeur 4	real 5	/eur o
Light		Pupils will explore shadows, learning how a shadow is made. They will talk about how a shadow can be formed and make their own shadow puppets.			NC: Recognise that we need light in order to see things and that dark is the absence of light Notice that light is reflected from surfaces Recognise that sun rays can be dangerous and that there are ways to protect eyes Recognise that shadows are formed when the light from a light source is blocked by an opaque object Find patterns in the way that the size of shadows change			NC: Recognise that light appears to travel in straight lines (revision) Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then eyes Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Sound						NC: Identify how sounds are made, associating some of them with something vibrating Recognise that		

Force Apple will explore floting and sinking using excryption resting excryption how the movement of a wheel movement of a whe				ubject progress				
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		and investigate	wheel makes an					
mechanical object move. Use of		mechanical	object move. Use of					
mechanical object move. Use of								

			ubject progress				
	equipment such as	a range of vehicles		Group everyday		Recognise that	
	wind-up toys, pulleys,	and different		materials on the		some mechanisms,	
	set of cogs with pegs	surfaces/textures		basis of whether		including levers,	
	and boards. They will			they are attracted		pulleys, gears, allow	
	spend time exploring	Pupils will explore		to a magnet, and		a smaller force to	
	how things work.	and investigate		identify magnetic		have a greater	
	-	mechanical		materials (revision)		effect	
		equipment such as					
		wind-up toys,		Describe magnets as			
		pulleys, set of cogs		having two poles			
		with pegs and					
		boards. They will		Predict whether two			
		spend time exploring		magnets will attract			
		how things work.		or repel each other,			
		They will discuss		depending on which			
		their findings and		poles are facing			
		record them		, ,			
		accordingly.					
Electricity		Children will make a			NC:		NC:
, i		basic circuit of bulb,			Identify common		Associate the
		battery and wire.			appliances that		brightness of a lamp
		,			run on electricity		or volume of a
		Children will build			Make simple		buzzer with the
		their own robot			series circuit -		number and voltage
		model. Their robot			cells, wires, bulbs,		of cells used in the
		must have a specific			switches and		circuit
		purpose. They will			buzzers		
		make it out of junk					Compare/give
		model and add a			Identify if a lamp		reasons for
		bulb.			will light in a		variations in how
					simple circuit,		components
					based on being		function, including
					part of a complete		brightness of bulbs,
					loop with a		loudness of buzzers
					battery		and on/off position
							of switches (open
					Recognise that a		and closed circuits)
					switch		
					opens/closes a		Use recognised
					circuit and		symbols when
					associate this		representing a
					with whether or		simple circuit in a
					not a lamp lights		diagram
					in a series circuit		
			1				1

					Recognise conductors & insulators		
Space						NC: Describe 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 as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	
Seasons and weather	Pupils will learn about the weather throughout the year and begin to learn the names of the four seasons and begin to sort and classify items.	Pupils will explore the seasonal feature associated with autumn; changes associated with autumn to winter; winter to spring and spring to summer. Pupils will sort and classify items associated with different seasons.	NC: Observe changes across the four seasons Observe and describe weather associated with the seasons and how day length varies.				

By the end of Reception pupils will be able to:

- Explore the natural world around them, making observations and drawing pictures of animals and plants
- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
- Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.