



## St Gregory's Science Knowledge & Skills Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
WORKING SCIENTIFICALL Y	DEVELOPMENT MATTERS: CHARACTERISTICS OF EFFECTIVE TEACHING & LEARNING Having their own ideas & thinking of ideas & Finding ways to solve problems & Finding new ways to do things Making links & Making links and noticing patterns in their experience & Making predictions & Testing their ideas & Developing ideas of grouping, sequences, cause and effect Choosing ways to do things & Planning, making decisions about how to approach a task, solve a problem and reach a goal & Checking how well their activities are going & Changing strategy as needed & Reviewing how well the approach worked	NATIONAL CURRICULUM: pupils should be taught to practical scientific method through the teaching of the content: * asking simple that they can be answered observing closely, using si	During years 1 and 2, use the following ds, processes and skills ne programme of study questions and recognising d in different ways & mple equipment & identifying and classifying s and ideas to suggest athering and recording	NATIONAL CURRICULUM: D should be taught to use the scientific methods, process	e following practical les and skills through the e of study content: * asking ing different types of eer them * setting up comparative and fair tests areful observations and, accurate measurements a range of equipment, ad data loggers * gathering, eresenting data in a variety ing questions * recording tific language, drawings, ir charts, and tables * enquiries, including oral displays or presentations of using results to draw simple ons for new values, suggest rther questions \$ illarities or changes related and processes § using vidence to answer	NATIONAL CURRICULUM: should be taught to use the scientific methods, process teaching of the programm planning different types of answer questions, including controlling variables when measurements, using a rawith increasing accuracy areadings when appropriate results of increasing comparative and labels, class scatter graphs, bar and limited to make prediction comparative and fair tests presenting findings from a conclusions, causal relationand degree of trust in results forms such as displays and	sses and skills through the me of study content: *  of scientific enquiries to ong recognising and or necessary * taking ong of scientific equipment, and precision, taking repeat the * recording data and olexity using scientific diffication keys, tables, the graphs * using test on set up further of the state of the set of the se
	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
PLANTS	DEVELOPMENT MATTERS: UNDERSTANDING THE WORLD To explore the natural world around them. (observation)To describe what they see,	NATIONAL CURRICULUM: Pupils should be taught to: * identify and name a variety of common wild and garden plants, including deciduous and	NATIONAL CURRICULUM: Pupils should be taught to: * observe and describe how seeds and bulbs grow into mature plants * find out and describe	NATIONAL CURRICULUM: Pupils should be taught to: A identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and			

	I	T	I	T =	I	I	
	hear and feel whilst	evergreen trees &	how plants need water,	flowers & explore the			
	outside. The Natural	identify and describe	light and a suitable	requirements of plants			
	World ELG To explore	the basic structure of a	temperature to grow	for life and growth (air,			
	the natural world around	variety of common	and stay healthy.	light, water, nutrients			
	them, making	flowering plants,	, ,	from soil, and room to			
	observations and	including trees		grow) and how they vary			
	drawing pictures of	melading trees					
				from plant to plant &			
	animals and plants; To			investigate the way in			
	understand some			which water is			
	important processes and			transported within plants			
	changes in the natural			explore the part that			
	world around them,			flowers play in the life			
	including the seasons			cycle of flowering plants,			
	and changing states of			including pollination, seed			
	matter.			formation and seed			
				dispersal.			
Tought	To ovalore what it takes	To know the difference	To know how a seed or	To understand that plants			
Taught	To explore what it takes						
Knowledge	for the plants to grow	between a leaf, a plant	bulb grows into a mature	are made up of different			
	(investigation) To choose	and a flower	plant	parts and that each part			
	equipment to answer a	To know what grows in	To know how represent	has a specific function			
	question.	the school environment	a life cycle	To recognise that			
		To observe, sort and	To know how a seed or	different areas outside			
		classify leaves, plants	bulb is produced	have different plants			
		and flowers	To know that a plant	growing and begin to link			
		To know what is meant	needs water and light to	this to consider the			
		by deciduous and	grow and stay healthy	reasons why this may be			
		evergreen	To know why a plant	(observation)			
		_					
		To observe, classify and	needs water and light to	To recognise that there			
		name a selection of	grow and stay healthy	are different stages of a			
		leaves and trees	(investigation)	plant life cycle and that			
		To name the parts of a		seed dispersal is vital to			
		plant		the cycle			
		To understand that the		To recognise and observe			
		2 main parts of a plant		that seeds come in			
		are the root and		different shapes and sizes			
		stem/trunk		To understand that seeds			
		To understand that		are designed to ensure			
		different parts of a		they are dispersed away			
		plant perform different		from the mother plant to			
		functions		enable them to have			
		To explain what		space to grow			
		happens when a seed		To state the different			
		germinates		methods of seed dispersal			
		To explore the link		(explanation)			
		between the size of a		To understand that			
		seed to the size of a		germination is the			
		plant (investigation)		development of a plant			
	1	p.ane (mrestigation)	<u>l</u>	acreiopinient of a plant	<u>l</u>	<u>l</u>	

	T				I
			from a seed or spore after		
			a period of dormancy		
			To know and understand		
			the requirements of		
			plants for germination		
			and growth (air, light,		
			water, nutrients from soil		
			· ·		
			and room to grow)		
			(investigation)		
			To understand how water		
			is		
Working	SC1: To ask simple	SC1: To ask questions	SC1: To ask relevant		
Scientifically	questions and recog	nise and record findings in	questions and use		
	that they can be	different ways.	different types of		
	answered in differen		scientific enquiries to		
	ways.	scientific equipment.	answer them.		
	To observe closely u				
	-	- '	To set up simple practical		
	simple equipment,	To perform simple tests	enquiries, comparative		
	including magnifying		and fair tests.		
	glasses. (observation		(investigation)		
	To identify and class	fy (investigation)	To make systematic and		
	trees in the school	To use observations and	careful observations and,		
	grounds	ideas to suggest answers	where appropriate, take		
	To use observations	to questions.	accurate measurements		
	and ideas to suggest	•	using standard units,		
	answers to question		using a range of		
	(explanation)	data, drawing simple	equipment, including		
	To gather and recor		thermometers and data		
	_				
	data (investigation)	Being a scientist: To	loggers (observation)		
	Being a scientist: To	experience and observe	To gather, record, classify		
	experience and obse		and present data to help		
	phenomena looking	more closely at the	in answering questions		
	more closely at the	natural and humanly	To record findings using		
	natural and humanly	constructed world	scientific language in		
	constructed world	around them	drawings, labelled		
	around them.	To be curious and ask	diagrams and tables		
	To be curious and as		To report on findings		
	questions about wha		from enquiries, including		
	they notice.	To use simple scientific	oral and written		
		-			
	To begin to use simp		explanations, displays or		
	scientific language to		presentations of results		
	talk about what they		and conclusions To use		
	found out communic	_	results to draw simple		
	their ideas to a rang	e of in a variety of different	conclusions, make		
	audiences in a variet	y of ways.	predictions for new		
	different ways		values, suggest		
	'	i	improvements and raise		l

further questions
(explanation)
To identify differences,
similarities or changes
related to simple
scientific ideas and
processes Being a
scientist
To raise questions about
the world around them.
To begin to make
decisions about the most
appropriate type of
scientific enquiry they
might use to answer
questions;
To recognise when a
simple fair test is
necessary and help to
decide how to set it up;
talk about criteria for
grouping, sorting and
classifying; and use
simple keys.
To make decisions about
what observations to
make, how long to make
them for and the type of
simple equipment that
might be used.
To collect data from
observations and
measurements, using
notes, simple tables and
standard units, and help
to make decisions about
how to record and
analyse this data.
To begin to look for
changes, patterns,
similarities and
differences in their data
in order to draw simple
conclusions and answer
questions.
To begin to identify new
questions arising from the

Vocabulary		leaf, plant, flower, observe, sort, classify, identification, identify, local area, environment, magnifying glass, botanists, trees, leaves, deciduous, evergreen, observe, label, match, name, seed, root, stem, trunk, branches, flower, fruit, function, nutrients, water, sun, earth, food, energy, vitamins, pollen, germinate, time lapse	CONSOLIDATE YEAR 1 seed, bulb, plant, mature plants, germination, growth, survival, life cycle, cyclical, root, stem, light, leaves, flower, fruit, disperse, pollinate, flowering, water, light	data, making predictions for new values within or beyond the data they have collected and finding ways of improving what they have already done  CONSOLIDATE YEAR 1  AND 2 VOCABULARY fertilisation, reproduction, dispersal			
LINGING	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
LIVING THINGS AND THEIR HABITATS	DEVELOPMENT MATTERS: UNDERSTANDING THE WORLD To explore the natural world around them. The Natural World ELG To explore the natural world around them, making observations and drawing pictures of animals and plants	NATIONAL CURRICULUM: Pupils should be taught to: * 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 habitats, including microhabitats * describe how animals		NATIONAL CURRICULUM: Pupils should be taught to: * 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.	NATIONAL CURRICULUM: Pupils should be taught to: * 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.		NATIONAL CURRICULUM: Pupils should be taught to: A 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 A give reasons for classifying plants and animals based on specific characteristics

	obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food				
Taught Knowledge  To discover creatures found in the school pond — list some that we already know, add to the list as we discover more (discuss their features) (observation) To learn about the three areas of the pond, the surface, the bottom, the shallows and what happens in each area To discover creatures found in other, larger ponds To learn about the lifecycle of a frog (explanation) To learn about a food chain on pond creatures To learn about the effects of plastic on the environment and discuss ways we can help (investigation) To know what a coral reef is To know what is a fish's habitat is		To name and discuss common animals from pictures. (observation) To recognise similarities and differences in animals. To know that animals need food, shelter from weather and predators, water, and a place to raise young. To know how a habitat provides for the basic needs of an animal (explanation) To identify and name animals that live in the Florida swamps To know that animals live in habitats to which they are suited, including micro habitats To know that animals depend on their physical features to help them obtain food, keep safe, build homes, withstand weather, and attract mates, adapting to their environment. To know that carnivores are animals that eat only meat. To know that omnivores eat both plants and meat. To name animals that are carnivores, omnivores or herbivores To know the difference between living things,	To recognise that living things can be grouped in a variety of ways (MRS GREN) To classify animals into vertebrates and invertebrates To know and name the 5 different vertebrae groups: mammals, birds, fish, reptiles and amphibians To know the names of the 3 groups of invertebrates To know that animals adapt to live in different habitats (investigation) To use classification keys to answer questions when classifying unknown animals (observation) To be aware of different habitats To explain the effects of harming habitats (explanation) To recognise how damaging our environment can affect living things (through plastic pollution and deforestation)	To understand the differences in the life cycles of a mammal, an amphibian, an insect and a bird (observation/explanation)  To understand why plants and animals reproduce To understand how plants and animals reproduce (investigation)	understand how to ask questions to divide groups of living things To understand the 6 different animal classes (invertebrates, mammals, birds, amphibians, reptiles and fish) and their characteristics (observation/explanation) To understand that living things can be grouped based on their characteristics (investigation)

					T	
			s that are dead and			
			s that have never			
		been	alive			
		To kn	now that animals get			
		their	energy from the			
			they eat To know			
			plants and animals			
			he main source of			
		l l	for all the			
			nisms on earth			
			now that a food			
			shows how energy			
			ssed between plants			
			animals			
			now that a producer			
		l l	mething that makes			
			wn food like green			
			s as they use			
			osynthesis.			
			now that the living			
			s that eat producers			
			other animals are			
			d consumers.			
		l l	now that a predator			
			animal that eats			
			r animals.			
			now that animals			
			are eaten are called			
		prey.				
			scuss different ways			
			als could be sorted			
			2 groups according			
			e needs, habitats or			
			(investigation)			
Working	To identify similarities		To ask simple	To use straightforward		identify patterns that
Scientifically	and differences in		tions and recognise	scientific evidence to		might be found in the
	relation to places,		they can be answe	answer questions or to		natural environment.
	objects, materials and		n different ways	support findings.		To decide how to record
	living things		entify and classify	Being a scientist: To raise		data from a choice of
	To talk about the		se observations and	questions about the		familiar approaches;
	features of the		to suggest answers	world around them.		looking for different
	immediate environment		estions	To make decisions about		causal relationships in
	and how environments		ervation/explanatio	the most appropriate		their data and identify
	might vary from one	n)		type of scientific enquiry		evidence that refutes or
	another	· · · · · · · · · · · · · · · · · · ·	g a scientist: To be	to answer questions;		supports their ideas.
	To describe shapes,	curio	us and ask	To recognise when a		To use relevant scientific
	spaces, and measures			simple fair test is		language and

ANIMALS	DEVELOPMENT	NATIONAL	NATIONAL	NATIONAL CURRICULUM:	NATIONAL	NATIONAL	NATIONAL
ANIMALS INCLUDING HUMANS	DEVELOPMENT MATTERS: UNDERSTANDING THE WORLD Explore the natural world around them. Describe what they see, hear and feel whilst outside. The Natural World ELG Explore the natural world around them, making observations and drawing pictures of animals and plants;	NATIONAL CURRICULUM: Pupils should be taught to: * 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, herbivores and omnivores Science – key stages 1 and 2 8 Statutory requirements * describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) * identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each	NATIONAL CURRICULUM: Pupils should be taught to: * notice that animals, including humans, have offspring which grow into adults * find out about and describe the basic needs of animals, including humans, for survival (water, food and air) * describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	NATIONAL CURRICULUM: Pupils should be taught to: * identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers * explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant * investigate the way in which water is transported within plants * explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	NATIONAL CURRICULUM: Pupils should be taught to: * describe the simple functions of the basic parts of the digestive system in humans * identify the different types of teeth in humans and their simple functions * construct and interpret a variety of food chains, identifying producers, predators and prey	NATIONAL CURRICULUM: Pupils should be taught to: * describe the changes as humans develop to old age	NATIONAL CURRICULUM: Pupils should be taught to: * identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood * recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function * describe the ways in which nutrients and water are transported within animals, including humans.
Taught knowledge	Key questions: What animals do we find on the farm? What do animals give us? What do animals do for us? What do plants from a farm give us? Explore different types of farm around the world – what are the similarities and difference? – link to Fairtrade (observation/explanatio n) Harvest – what does it mean? Learn about different types of farm machinery Key questions: What is a	sense  To name common animals from pictures. To recognise similarities and differences in animals. (observation) To discuss different ways animals could be sorted in to 2 groups To know what is meant by carnivore, herbivore and omnivore (explanation) To name animals that are carnivores, omnivores or herbivores	To know what is meant by the term offspring To describe a selection of lifecycles To understand that animals, including humans have offspring which grow into adults To know what the basic needs for survival are and why we need water, food and oxygen To know what would happen if 1 or more life essential was taken away (observation/explanatio n)	To know that animals, including humans, need the right types of nutrition (balanced diet) To identify that animals, including humans, need the right amounts of nutrition and a balanced diet To know that skeletons support the body of the human or animal To know that some skeletons are outside of the body To know that skeletons protect the organs inside the body	To identify the different types of teeth in humans To explain the basic functions of the different types of teeth (explanation) (communication) To understand the journey of food from the start, teeth, to the end, excretion (this should be remembered from MRS GREN). (observation/investigation) To construct and interpret a variety of food chains.	know that there are 6 stages in the human lifecycle To know that each stage of the lifecycle shows development To understand the different gestation periods of other mammals To understand that the length of time in the womb for humans and other mammals varies considerably To compare different gestation periods to humans and look for	To understand how to keep our heart healthy (pulse rate) (investigation) To understand the parts of the digestive system and to describe the ways in which nutrients and water are transported (observation/explanation)  To recognise how diet and exercise impact the human body To recognise the impact of drugs and alcohol on the body

nocti	urnal animal? Can	To sort animals into	To know where to find	To name parts of the	To understand a food	patterns in data	
you s	sort the nocturnal	groups based on their	the essentials in	human skeleton: skull,	chain and the larger food	(observation/investigatio	
anim	nals? Key questions:	diet	different environments	backbone, rib cage	web	n/ explanation)	
	it do bears have?	To name animal body	To know why exercise is	To understand the	To understand that the	, , ,	
	it can bears do?	parts	important to humans	function of the parts of	arrow in a food chain		
		•	•	•			
	it are bears? To	To recognise	(investigation)	the human skeleton	represents the flow of		
beco	ome aware of the 8	similarities and	To know about different	(explanation)	energy		
bear	s of the world, to	differences in animal	types of food and	To know that animals			
know	w about their	body parts	nutrition and how to	with skeletons have			
indiv	vidual characteristics	To discuss why an	balance a diet To know	muscles attached to the			
	the similarities	animal has a particular	how and why to stay	bones			
	veen them. To use			To now that a muscle has			
		body feature	healthy and hygienic				
	tional language to	(communication)		to contract (shorten) to			
	ribe relative position	To identify the basic		make a bone move			
linkir	ng to the repeated	parts of the human		(observation/investigatio			
refra	ains within The Bear	body including the		n)			
Hunt	t (investigation) To	head, neck, torso, arms		To know that muscles act			
	w what we need to	and legs explain which		in pairs			
	our bodies to keep	part of the body is		To know that when			
_	-	•					
	thy (food, water,	associated with each of		someone is exercising or			
	p, dental hygiene,	the 5 senses of sight,		moving fast, the muscles			
wash	hing hands etc.)	sound, smell, taste, and		work harder			
(expl	lanation) To know	touch (investigation/					
the i	mportance of	explanation)					
	cise, explore	,					
	rent types of						
	cise Explore						
	-						
	icine and the						
	gers that surround it						
	uss healthy food						
choic	ces and the						
impo	ortance of						
	leration becoming						
	re of the food						
	ips Senses To						
	erstand that some						
	nals lay eggs and						
	e animals give birth						
to liv	ve young						
(obse	ervation) Explore						
	5 types of animal						
	ch lay eggs (birds,						
	iles, amphibians,						
	cts and fish), listing						
	nples of each Key						
ques	stions: Are eggs						
alive	? Think about how						

	we can keep an egg safe? How can we safely transport an egg						
Working	To make observations of	SC1: To ask questions	SC1: To ask questions	SC1: To ask relevant	SC1: To use different	SC1: To record data and	Sc1: To identify and
Scientifically	animals and plants and	and recognise that they	and record answers in	questions and use	types of scientific	results of increasing	share scientific evidence
Scientifically	explain why some things	can be answered in	different ways	different types of	enquiries to answer	complexity using	that has been used to
	occur, and talk about	different ways	To observe closely, using	scientific enquiries to	questions	scientific diagrams and	support or refute ideas
	changes	To observe closely to	scientific equipment	answer them To set up	To gather, record,	labels	or arguments
	(observation/explanatio	identify and classify	To identify and classify	simple practical enquiries,	classify and present data	To identify scientific	(explanation)
	n) ) To use what they	(observation)	(observation)	comparative and fair tests	in a variety of ways to	evidence that has been	Being a scientist: To use
	have learnt about media	To use observations	To use observations and	To make systematic and	help in answering	used to support or refute	and develop strategies to
	and materials in original	and ideas to suggest	ideas to suggest answers	careful observations and,	questions	ideas or arguments	identify and describe
	ways, thinking about	answers to questions	to questions	where appropriate, taking	(observation/investigatio	(explanation)	living things
	uses and purposes	To gather and record	(explanation)	accurate measurements	n)	Being a scientist: To use	To use relevant scientific
	(investigation)	data to help in	Being a scientist	using a range of	To report on findings	relevant scientific	language and
	( estigation)	answering questions	humanly-constructed	equipment, including	from enquiries, including	language and	illustrations to discuss,
		(investigation/	world around them. To	thermometers and data	presenting results and	illustrations to discuss,	communicate and justify
		explanation)	be curious and ask	loggers	conclusions (explanation)	communicate and justify	their scientific ideas
		Being a scientist: To	questions about what	(observation/investigatio	To identify differences,	their scientific ideas	To discuss how scientific
		look closely at the	they notice.	n)	similarities or changes	To talk about how	ideas have developed
		natural and humanly	To develop	To gather, record, classify	related to simple	scientific ideas have	over time.
		constructed world	understanding of	and present data in a	scientific ideas and	developed over time.	
		around them.	scientific ideas by using	variety of ways to help in	processes	·	
		To be curious and ask	different types of	answering questions	To use straightforward		
		questions about what	scientific enquiry to	To record findings using	scientific evidence to		
		they notice.	answer their own	scientific language, keys,	answer questions or to		
		To develop	questions, including	bar charts, and tables	support their findings.		
		understanding of	observing changes over a	To report on findings	Being a scientist: To		
		scientific ideas by using	period of time, noticing	from enquiries, including	make decisions about		
		different types of	patterns, grouping and	oral and written	what observations to		
		scientific enquiry to	classifying,	explanations, results and	make, how long to make		
		answer questions,	To carry out simple	conclusions	them for and the type of		
		including observing	comparative tests	To use results to draw	equipment that might be		
		changes over a period	To finding things out	conclusions, make	used		
		of time, noticing	using secondary sources	predictions and raise	To know when and how		
		patterns and classifying	of information.	further questions	secondary sources might		
		To carry out simple	To use scientific	(explanation)	help them to answer		
		comparative tests To	language to talk about	To identify differences	questions that cannot be		
		use simple scientific	what they have found	and similarities related to	answered through		
		language to talk about	out and communicate	simple scientific ideas and	practical investigations.		
		what they have found	their ideas to a range of	processes	To use relevant scientific		
		out and communicate	audiences in a variety of	To use straightforward	language to discuss their		
		their ideas to a range of	ways.	scientific evidence to	ideas and communicate		
		audiences in a variety of		answer questions	their findings in ways		
		ways.		Being a scientist: To	that are appropriate for		
				make decisions about the	different audiences.		
				most appropriate type of			

Vocabulary  Nocabulary  Harvest, crop, farm, Fairtrade, animals, barn, hairbat, dief, fur, paw, dush, lief, fur, paw, dush, human, Heberar, she-bera, Heberar, she-bera, Heberar, haibat, dief, fur, paw, dush, humann, Heberar, haibat, dief, fur, paw, dush, humann, Heberar, haibat, dief, fur, paw, dush, humann, Heberar, she-bera, Heberar, haibat, dief, fur, paw, dush, humann, Heberar, haibat, dief, fur, paw, dush, humann, Heberar, she-bera, Heberar,		_		T		T	I	1
questions, and help to decide how to set it up 1 To make decisions about what observations to make, mot long to make them for and the type of simple questionents to make, mot long to make them for and the type of simple questionents and decide how to record and analyse this data. To look for similarities and differences in data in order to draw simple conclusions and answer questions. To identify new questions. To identify new questions. To identify new questions arising from the data, To fund ways of improving what they have already done. To use relevant scientific language to documentation. To use relevant scientific language to documentation their ideas and communicate their findings in ways that whe lafe, field; tractor, farmer, dairy Nocturnal He bear, she bear, of the bear, she bear, diet, fur, paw, claw, humane, mammal, cut, bitleration, omnivore, carmivore, festure, body parts, effective, festure, festure, festure, body parts, effective, festure, festure, body parts, festure, for the more of the processing bears, bea								
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He-bear, she-bear, habitat, diet, fur, paw, claw, humane, mammal, cub, hibernation, omnivore, carnivore, habitat, diet, fur, paw, claw, humane, mammal, cub, hibernation, omnivore, carnivore, herbivore, carnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, carnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, carnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, carnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, carnivore, omnivore, carnivore, omnivore, carnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore, omniv		•						·
habitat, diet, fur, paw, claw, humane, mammal, cub, hibernation, omnivore, omnivore, omnivore, feature, body parts, on the diet, sort, identify, food group, explanation, omnivore, carnivore, omnivore,		-			-	1 ' '	_	-
claw, humane, mammal, cub, hibernation, omnivore, carnivore, feature, body parts, ode claw, humane, mammal, cub, hibernation, omnivore, carnivore, carnivore, on the color of			differences, carnivore,		balanced, healthy,	ry consumer, producer,	periods, foetus, womb,	heart, pulse rate,
cub, hibernation, omnivore, carnivore, feature, body parts, hunt, gather, healthy, cage, organs, bones, ribs, omnivore, carnivore, c								
omnivore, carnivore, feature, body parts, hunt, gather, healthy, cage, organs, bones, ribs, intestine, bile, small juvenile, adulthood, old water, system, digestive,			-				1	
					• •			
howkings uninter hoos   eternature class hoof   diet evereice hugiane   hoort lives healthane   intenting again matrix   and matrix							1 7	
		herbivore, winter, bear	structure, claw, hoof,	diet, exercise, hygiene,	heart, lungs, backbone,	intestine, anus, rectum,	age, growth,	blood, blood vessels,
Healthy, moderation, paw, flipper, antler, prepare, nutrition, vertebrae, vertebrate, teeth, molars, pre development heart, lungs, stomach,		-		• •	vertebrae, vertebrate,	1	development	_
safety, medicine, well- horn, tusk, skin, fur, balanced diet molars, wisdom, canines, gall bladder, liver, small		safety, medicine, well-	horn, tusk, skin, fur,	balanced diet		molars, wisdom, canines,		gall bladder, liver, small

	being, nurse, nutrition, fat, sugar, protein, carbohydrates, minerals, vitamins Egg, hatch, mammal, oviparous (birds, reptiles, amphibians, insects, fish), shell, membrane, albumen (white), air cell, germinal disc, classification, fragile, delicate	feathers, scales, wings, beak, gills, fin, tentacles, bird,		skull, muscle, contract VOCABULARY	incisors, baby teeth, adult teeth		intestine, large intestine, pancreas, liver, rectum, anus, healthy, lifestyle, diet, exercise, food, water, body, human, organs, vitamins, minerals, protein, fats, carbohydrates, water, fibre, impact, evidence, smoking, drugs, legal, illegal, alcohol, kidneys, lungs, air sacs (alveoli), brain.
EVOLUTION AND INHERITANCE	EYFS	YEAR 1	YEAR 2	YEAR 3  NATIONAL CURRICULUM: Pupils should be taught to: ♣ 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.	YEAR 4	YEAR 5	YEAR 6  NATIONAL CURRICULUM: Pupils should be taught to: ♣ 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.
Taught knowledge	To learn when the dinosaurs lived. Key questions: What happened to the dinosaurs? Why are there no dinosaurs living now? To learn where the dinosaurs lived. Key questions: What was their habitat?			To know that soils are made up of different organic materials. To know that soils can be different. To know that fossils are formed from living things. (explanation) To understand that living things are buried to form a fossil.			CONSOLIDATE YEAR 3 ROCKS AND YEAR 5 ANIMALS, INCLUDING HUMANS To describe in simple terms how fossils are formed when things that have lived are trapped within rock (observation/explanation ) To know that fossils are evidence for evolution

	T = T	T = 1 C.1	I	
	To understand that	To observe some of the		To understand that
	there are many types of	similarities and		living things produce
	dinosaur and list the	differences between		offspring of the same
	dinosaurs we already	rocks. (observation)		kind T
	know about – Key	To compare and group		o understand that
	questions: Which are	different types of rocks.		offspring are not
	herbivores? Which are	(investigation)		identical to parents
	carnivores? Which are			(investigation)
	omnivores?			To understand that DNA
	To learn about fossils –			carries genetic material
	Key questions: What are			from parent to offspring
	they? How are they			To understand that
	formed? Where can we			successful adaptation
	find them?			can lead to evolution
				To know and compare
				the research of Charles
				Darwin, Mary Anning and
				Alfred Wallace in
				evolution
				To understand that the
				work of scientists helps
				us to understand where
				we have come from.
Working	To make observations of	SC1: To ask relevant		SC1 To report and
Scientifically	animals and plants	questions and use		present findings from
	(observation)	different types of		enquiries, including
	To explain why some	scientific enquiries to		conclusions, causal
	things occur, and talk	answer them		relationships and
	about changes	To set up simple practical		explanation, in oral and
	(explanation)	enquiries, comparative		written forms
		and fair tests		(observation/investigatio
		To make systematic and		n/ explanation)
		careful observations		To Identify scientific
		(observation)		evidence that has been
		To identify differences,		used to support or refute
		similarities or changes		ideas or arguments Being
		related to simple		a scientist
		scientific ideas and		To use science
		processes		experiences to explore
		To use straightforward		ideas and raise different
		scientific evidence to		kinds of questions
		answer questions		To use relevant scientific
		Being a scientist: To raise		language and
		questions about the		illustrations to discuss,
		world around them.		communicate and justify
		To choose the most		scientific ideas
1		appropriate type of		

				scientific enquiry to use			To talk about how
				to answer questions;			scientific ideas have
				To discuss criteria for			developed over time
							developed over time
				grouping, sorting and			
				classifying; and use			
				simple keys.			
				To look for naturally			
				occurring patterns and			
				relationships			
				To make decisions about			
				what observations to			
				make, how long to make			
				them for and the type of			
				simple equipment that			
				might be used.			
				To look for changes,			
				patterns, similarities and			
				differences in order to			
				draw simple conclusions			
				and answer questions.			
				To recognise when and			
				how secondary sources			
				might help them to			
				answer questions that			
				cannot be answered			
				through practical			
				investigations.			
				To use scientific language			
				to discuss ideas			
Vocabulary	Extinct, omnivore,			CONSOLIDATE YEAR 1			CONSOLIDATE YEAR 3
,	herbivore, carnivore,			AND YEAR 2			ROCKS AND YEAR 5
	volcano, lava, habitat,			VOCABULARY			ANIMALS, INCLUDING
	museum, fossil, rock,			sedimentary rocks,			HUMANS VOCABULARY
	archaeologist,			metamorphic rocks,			DNA, parent, offspring,
	palaeontologist, diet,			igneous rocks, texture,			inheritance, genes,
	skeleton, bone, skull			heavy, rigid, fossil,			genetic material, cells,
	excavate, meteorite, frill,			geologist, layers, buried,			inherited characteristics,
	warm-blooded, club,			paleologist (someone			evolution, theories,
	horn, habitat			who studies rocks in the			scientists, Darwin,
	norn, nabitat			past), topsoil, humus,			Wallace, Anning,
				decomposing,			evolutionary theory,
				weathering, taxonomy of			adaptation, evolution,
				soils, plasticity, structure,			descendants, ancestors,
				grain size, percolation			fossil, record
				rates, clay, sandy soil, silt			103311, 10010
	EYFS	Voor 1	Voor 2		Voor 4	Year 5	Voor 6
	LIFS	Year 1	Year 2	Year 3	Year 4	Tedi 5	Year 6

SEASONAL	DEVELOPMENT	NATIONAL			
CHANGES	MATTERS:	CURRICULUM: Pupils			
CITATOLS	UNDERSTANDING THE	should be taught to: *			
	WORLD Explore the	observe changes across			
	natural world around	the four seasons &			
	them. Describe what				
	1	observe and describe			
	they see, hear and feel	weather associated			
	whilst outside. The Natural World ELG	with the seasons and			
		how day length varies.			
	Understand some important processes and				
	changes in the natural				
	world around them,				
	including the seasons				
	and changing states of				
<b>-</b> 1.	matter	T 1 11 C			
Taught	Start with an Autumn	To know the four			
Knowledge	walk. (observation) Key	seasons are spring,			
	questions: What do you	summer, autumn and			
	see? What do you hear?	winter.			
	What changes do you	To know that colder			
	notice? Can you describe	weather comes in			
	the temperature?	autumn and winter.			
	Discuss the changes	(observation)			
	between seasons.	To know that warmer			
		weather comes in			
		spring and summer.			
		To recognise the			
		weather that is			
		associated with the			
		seasons (explanation)			
		To describe the			
		weather that is			
		associated with the			
		seasons			
		To know that our days			
		of sunlight are longest			
		in the summer and			
		shortest in the winter			
		(investigation)			
Working	To make observations of	SC1 To ask simple			
Scientifically	animals and plants and	questions and recognise			
	explain why some things	that they can be			
	occur, and talk about	answered in different			
	changes	ways Being a scientist			
	(observation/explanatio	To look closely at the			
	n)				

Vocabulary	To use what they have learnt about media and materials in original ways, thinking about uses and purposes	natural world around them To develop understanding of scientific ideas by using different types of scientific enquiry to answer their own questions To observe changes over a period of time To use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways					
vocabulary	Autumn, change, yellow, brown, red, orange, leaves, pumpkin, autumn festivals, pine cone, nuts, harvest, conkers, chestnuts, season, weather, deciduous, evergreen, seasons, Spring, Summer, Autumn, Winter, warm, cool, hibernate, grow, change, weather, wind, rain, sun, fog, snow, suitability						
EVERYDAY	EYFS materials Uses of	Year 1 NATIONAL	Year 2 NATIONAL	Year 3	Year 4 NATIONAL	Year 5 NATIONAL	Year 6
MATERIALS Uses of	everyday materials States of matter	CURRICULUM: Pupils should be taught to: *	CURRICULUM: Pupils should be taught to: 4		CURRICULUM: Pupils should be taught to: •	CURRICULUM: Pupils should be taught to: *	
everyday	Properties and changes	distinguish between an	identify and compare the		compare and group	compare and group	
materials States of	of materials (non negotiables in bold)	object and the material from which it is made *	suitability of a variety of everyday materials,		materials together, according to whether	together everyday materials on the basis of	
matter	DEVELOPMENT	identify and name a	including wood, metal,		they are solids, liquids or	their properties,	
Properties and changes of	MATTERS: UNDERSTANDING THE	variety of everyday materials, including	plastic, glass, brick, rock, paper and cardboard for		gases & observe that some materials change	including their hardness, solubility, transparency,	
materials	WORLD To explore the	wood, plastic, glass,	particular uses & find		state when they are	conductivity (electrical	
	natural world around them.	metal, water, and rock  describe the simple	out how the shapes of solid objects made from		heated or cooled, and measure or research the	and thermal), and response to magnets *	
	To describe what they	physical properties of a	some materials can be		temperature at which	know that some	
	see, hear and feel whilst	variety of everyday	changed by squashing,		this happens in degrees	materials will dissolve in	

	outside. The Natural	materials • compare	bending, twisting and	Celsius (°C) ♣ identify	liquid to form a solution,	
	World ELG To	materials & compare			and describe how to	
		and group together a	stretching.	the part played by		
	understand some	variety of everyday		evaporation and	recover a substance from	
	important processes and	materials on the basis		condensation in the	a solution 4 use	
	changes in the natural	of their simple physical		water cycle and associate	knowledge of solids,	
	world around them,	properties.		the rate of evaporation	liquids and gases to	
	including the seasons			with temperature.	decide how mixtures	
	and changing states of				might be separated,	
	matter.				including through	
					filtering, sieving and	
					evaporating & 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 4	
					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.	
Taught		To name a range of	To name a wider range	To understand that gases	To revise what is meant	
		To name a range of	To name a wider range			
Knowledge		everyday materials.	of common materials	are formed when liquids	by the term materials To	
		To state the materials	To explain the uses of	evaporate and that when	know that materials can	
		that objects are made	different materials	a gas is cooled it	be grouped according to	
		from	To know why materials	condenses to form a	their properties	
		To sort objects based	are suitable for specific	liquid	To revise what is meant	
		on their materials	purposes (explanation)	To understand that gases	by the term properties	
		(observation)	To know how squashing,	move and flow more	To know that materials	
		To sort materials based	bending, twisting and	easily than liquids and in	can be grouped	
		on their properties.	stretching materials	all directions	according to their	
		To state why a material	changes the shape of an	To understand that gases	properties	
		is fit for a purpose	object	differ from solids and	To understand the	
		(investigation/	(observation/investigatio	liquids in that they do	meaning of the terms	
				1	=	
		explanation)	n)	not maintain their shape	opaque, brittle, thermal,	
				and volume but spread	transparent, flexible,	

out to fill the space they are in.  To observe and translucent, shiny, understand the 3 synthetic, absorbent,	
To observe and translucent, shiny, understand the 3 synthetic, absorbent,	
understand the 3 synthetic, absorbent,	
different states of water   rigid, natural, hard	
(observation/investigatio To know that materials	
n) can be grouped	
To understand that according to their	
water evaporates into properties	
the air: the sun heats up To know that materials	
water on land, and in can be grouped	
rivers, lakes and seas and according to their	
turns it into water properties	
vapour. The water To know that objects are	
vapour rises into the air. made from materials	
To understand that according to their	
water vapour condenses   suitability and specific	
into clouds: water properties (tested by	
vapour in the air cools scientists)	
down and changes back  To know how conductors	
into tiny drops of liquid let energy flow through	
water, forming clouds. them (for example,	
(explanation) electrical or thermal	
(communication) energy). (investigation)	
To recognise that water  To know that heat	
falls as precipitation: the energy travels through	
clouds get heavy and solids because of	
water falls back to the conduction.	
earth in the form of rain  To know that materials	
or snow. that do not conduct heat	
To understand that well are heat insulators.	
water returns to the sea:  To understand the	
rainwater runs over the difference between	
land and collects in lakes reversible and	
or rivers, which take it irreversible change using	
back to the sea. filtering, sieving and	
To explain that cooling evaporation	
means to reduce the (observation/explanation	
temperature whereas )	
freezing means to reduce  To understand the	
the temperature until a difference between	
substance turns from a soluble and insoluble	
liquid to a solid substances	
To know that heating To understand the	
means to increase the difference between	
temperature whereas filtration, evaporation	
boiling means to increase	

			the temperature of a	and sieving to separate	
			liquid until bubbles start	substances	
			to form	To know that the starting	
				materials in a chemical	
			To know that vapour is a		
			gas that is normally a	reaction are called the	
			liquid at room	reactants.	
			temperature That we	To know that reactants	
			measure temperature in	react with each other to	
			degrees Celsius (°C). That	form a completely new	
			0ºC is the temperature at	substance known as the	
			which water freezes and	product.	
			100°C is the temperature	To know that rust is the	
			at which water boils.	crumbly, brown material	
			That we are used to	which is caused by the	
			experiencing room	chemical reaction of	
			temperature, which is	iron, water and oxygen	
			about 21°C. That things		
			can be much hotter than		
			100°C or much colder		
			than 0ºC (when we start		
			using negative numbers).		
Working	SC1: To ask simple	SC1: To ask simple	SC1: To ask relevant	SC1: To plan different	
Scientifically	questions and recognise	questions and recognise	questions and use	types of scientific	
,	that they can be	that they can be	different types of	enquiries to answer	
	answered in different	answered in different	scientific enquiries to	questions, including	
	ways	ways	answer them	recognising and	
	To perform simple tests	To observe closely, using	To set up simple	controlling variables	
	(investigation)	scientific equipment	practical enquiries,	where necessary	
	To use observations and	(observation)	comparative and fair	(investigation)	
	ideas to suggest	To perform tests to	tests	To take measurements,	
	answers to questions	identify and classify	To make systematic and	using a range of scientific	
	(observation/explanatio	(investigation)	careful observations and,	equipment, with	
	n)	To use observations and	where appropriate, take	increasing accuracy and	
	To gather and record	ideas to suggest answers	accurate measurements	precision, taking repeat	
	data to help in	to questions	using standard units,	readings when	
	answering questions	(explanation)	using a range of	appropriate	
		To gather and record			
	Being a scientist: To be	_	equipment, including thermometers and data	(observation)	
	curious and ask	data to help in		To record data and	
	questions about what	answering questions	loggers	results of increasing	
	they notice.	Being a scientist: To look	(observation/investigatio	complexity using	
	To develop	closely at the natural and	n)	scientific diagrams and	
	understanding of	humanly-constructed	To gather, record,	labels, classification keys,	
	scientific ideas by using	world around them.	classify and present data	tables, scatter graphs,	
	different types of	To be curious and ask	in a variety of ways to	bar and line graphs	
	scientific enquiry to	questions about what	help in answering	To use test results to	
	answer questions,	they notice.	questions	make predictions to set	
	including noticing			up further comparative	

To record findings using and fair tests report and patterns, grouping and To develop understanding of present findings from classifying, simple scientific scientific ideas by using language, drawings or enquiries, including To carry out simple comparative tests different types of labelled diagrams, conclusions, causal To use simple scientific scientific enquiry to To report on findings relationships and language to talk about answer their own from enquiries, including explanations of and what they have found questions, including oral and written degree of trust in results out noticing patterns, explanations, displays or (explanation) To communicate their grouping and classifying presentations of results To identify scientific ideas to a range of To carry out simple and conclusions evidence that has been used to support or refute audiences in a variety of comparative tests, and To use results to draw ways finding things out using simple conclusions and ideas or arguments secondary sources of raise further questions Being a scientist: To information. To identify differences, explore ideas and raise To use scientific similarities or changes different kinds of language to talk about related to simple questions; To select and what they have found scientific ideas and plan the most processes (explanation) appropriate type of To communicate their To use straightforward scientific enquiry to use ideas to a range of scientific evidence to to answer scientific audiences in a variety of answer questions or to auestions: ways. support their findings. To recognise when and Being a scientist: To raise how to set up questions about the comparative and fair world around them. tests and explain which To make decisions about variables need to be the most appropriate controlled and why. type of scientific enquiry To make decisions about they might use to answer what observations to questions; make, what To recognise when a measurements to use simple fair test is and how long to make necessary and help to them for decide how to set it up; To decide how to record To look for naturally data from a choice of occurring patterns and familiar approaches; relationships and decide To look for different what data to collect to causal relationships in identify them their data and identify To make decisions about evidence that refutes or what observations to supports their ideas. make, how long to make To use test results to them for and the type of identify when further simple equipment that tests and observations might be used. To use might be needed: To new equipment, such as recognise which data loggers, secondary sources will

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				appropriately to collect	be most useful to
				data To make	research their ideas and
				observations and	begin to separate
				measurements, use	opinion from fact.
				notes, simple tables and	To use relevant scientific
				standard units To look	language and
				for changes, similarities	illustrations to discuss,
				and differences in data in	communicate and justify
				order to draw simple	scientific ideas To talk
				conclusions and answer	about how scientific
				questions.	ideas have developed
				To identify new	over time
				questions arising from	
				the data, making	
				predictions for new	
				values within or beyond	
				the data they have	
				collected and finding	
				ways of improving what	
				they have already done.	
				To recognise when and	
				how secondary sources	
				might help them to	
				answer questions that	
				cannot be answered	
				through practical	
				investigations	
				. To use relevant	
				scientific language to	
				discuss ideas and	
				communicate findings in	
				ways that are	
				appropriate for different	
				audiences.	
Manahulaw.	Cuitable senstruet	CONSOLIDATE VEAD 1			CONCOLIDATE VEAD 4
Vocabulary	Suitable, construct,	CONSOLIDATE YEAR 1		CONSOLIDATE YEAR 1,	CONSOLIDATE YEAR 1,
	transparent, properties,	VOCABULARY identify,		YEAR 2, YEAR 3	YEAR 2, YEAR 3, YEAR 4
	hard, soft, strong, weak,	compare, material,		VOCABULARY state,	VOCABULARY opaque,
	glass, brick, break,	suitability, uses,		matter, solid, liquid, gas,	brittle, thermal,
	investigation, Fair test	properties, wood, metal,		evaporate, condense,	transparent, flexible,
		plastic, glass, brick, rock,		flow, volume, classify,	insulator, soluble,
		paper, cardboard, shape,		criteria, water cycle,	waterproof, conductor,
		solid, change, alter,		H2O, evaporated,	translucent, shiny,
		squashing, bending,		precipitation, vapour,	synthetic, absorbent,
		twisting, stretching		states of matter, heating,	rigid, natural, hard,
				boiling, cooling, freezing,	conductor, energy,
				gas, vapour,	electrical, thermal, solid,
				temperature, rate,	liquid, gas, soluble,

					predict, plan, variables, measure, record, conclude	insoluble, reversible, irreversible, heating, cooling, substance, solution, separation, filtration, sieving, evaporating, dissolving, mixing, states of matter, chemical reaction, reactant, product, physical change, gas, heat, react	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
LIGHT	UNDERSTANDING THE WORLD To explore the natural world around them. To describe what they see, hear and feel whilst outside. The Natural World ELG To explore the natural world around them, making observations and drawing pictures of animals and plants;			NATIONAL CURRICULUM: Pupils should be taught to: * recognise that they need light in order to see things and that dark is the absence of light * notice that light is reflected from surfaces * recognise that light from the sun can be dangerous and that there are ways to protect their 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			NATIONAL CURRICULUM: Pupils should be taught to: * recognise that light appears to travel in straight lines * 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 to our eyes * use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Taught Knowledge	Key question: What is a light source? To sort objects into light sources and non-light sources (observation/investigation) To learn what a shadow is. Key questions: How does our shadow change as the sun moves? How do we see the moon?			To investigate how shadows alter (investigation/observation/explanation) (communication) To understand that we need light to see. To understand that light can be created by manmade or natural sources.			To know that light travelling from a light source will always travel in a straight line.  To know that light reflecting off an object reflects off it at the same angle it shines onto it.  To know that reflecting means light bouncing off something

or or ea To ar lea th To gr W co th th	o learn about the sun ribiting and reflecting in the moon and the arth turning on its axis. o understand that there is different planets, earning the names of mem and their features. o understand what ravity is Key questions: What is a star? What is a constellation? When did me first person walk on me moon? What was meir name? How many eople have been to the moon?			To understand that objects can reflect light as well as create it. To understand that light reflects from different surfaces To describe how shining a light on a surface enables us to see. To understand that we see different colours/surfaces differently.		To know that we see when light is reflected off a surface and it enters our eyes To know that objects can be seen because they reflect light into the eye To understand how shadows are formed To describe what happens to the shape of a shadow as distance from a light source changes (observation/investigatio n/ explanation)
Scientifically so ex	To make observations of purces of light and explain why some things occur observation/explanatio	To make observations of shadows and explain why some things occur (observation/explanation)	SC1: To ask relevant questions and use different types of scientific enquiries to answer them To set up simple practical enquiries, comparative and fair tests (investigation) To make systematic and careful observations and, where appropriate, taking accurate measurements using standard units (observation) To gather, record, classify and present data in a variety of ways to help in answering questions To record findings using bar charts, and tables To report on findings from enquiries, including presentations of results and conclusions To use results to draw simple conclusions, make predictions for			SC1: To take measurements, using a range of scientific equipment, with increasing accuracy and precision (observation/investigatio n) To record results of increasing complexity using scientific diagrams and labels, bar and line graphs To use test results to make predictions to set up further comparative and fair tests To report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results (explanation) To identify scientific evidence that has been used to support or refute ideas or arguments Being a scientist Pupils in years 5 and 6 should use their

	T T	
new values, suggest		science experiences to:
improvements and raise		explore ideas and raise
further questions		different kinds of
(explanation) identify		questions; select and
differences, similarities		plan the most
or changes related to		appropriate type of
simple scientific ideas		scientific enquiry to use
and processes use		to answer scientific
straightforward scientific		questions; recognise
evidence to answer		when and how to set up
questions or to support		comparative and fair
their findings. Being a		tests and explain which
scientist		variables need to be
To raise questions about		controlled and why.
the world around them.		They should make their
To make decisions about		own decisions about
the most appropriate		what observations to
type of scientific enquiry		make, what
they might use to		measurements to use
answer questions;		and how long to make
To recognise when a		them for, and whether t
simple fair test is		repeat them; choose the
necessary and help to		most appropriate
decide how to set it up		equipment to make
To look for naturally		measurements and
occurring patterns and		explain how to use it
relationships, deciding		accurately.
what data to collect to		They should decide how
identify them		to record data from a
To learn how to use new		choice of familiar
equipment		approaches; look for
appropriately.		different causal
To collect data from		relationships in their
observations and		data and identify
measurements, using		evidence that refutes or
notes, simple tables and		supports their ideas.
standard units		They should use their
To make decisions about		results to identify when
how to record and		further tests and
analyse this data.		observations might be
To draw simple		needed; recognise which
conclusions and answer		secondary sources will
questions.		be most useful to
To recognise when and		research their ideas and
how secondary sources		begin to separate
might help them to		opinion from fact
answer questions that		opinion nom ract
 unswer questions that	1	

Vocabulary	Light, dark, moon, sun, shadow, candle, dim, light source, mirror, fire, lantern, candle		cannot be answered through practical investigations. To use relevant scientific language to discuss their ideas and communicate their findings in ways that are appropriate for different audiences CONSOLIDATE EYFS VOCABULARY source, reflection, opaque, translucent, transparent, shadow, safety, glasses, source of light, natural source, protection				. They should use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time.  CONSOLIDATE YEAR 3 VOCABULARY light, source, travel, reflect, angle, beam, mirror, shadow, test, predict, fair test, variables, control, record, graph, axis, conclusion
	EYFS	YEAR 1	Year 2	Year 3	Year 4	Year 5	Year 6
FORCES AND MAGNETS				NATIONAL CURRICULUM: Pupils should be taught to: * compare how things move on different surfaces * notice that some forces need contact between two objects, but magnetic forces can act at a distance * observe how magnets attract or repel each other and attract some materials and not others * compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and 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		NATIONAL CURRICULUM: Pupils should be taught to: sexplain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object set identify the effects of air resistance, water resistance and friction, that act between moving surfaces recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	
Taught				To know that a force is a		To understand there are	
Knowledge				push and pull requiring		different types of forces	

		contact between 2	including friction, gravity,
		objects To know that	up thrust, thrust,
		some forces work without	magnetism, air
		any contact or from a	resistance and buoyancy
		distance	To understand that
		To understand that when	forces can be balanced
		we push and pull an	and unbalanced.
		object it can move the	To understand that
		object, change the shape	more than one force can
		of the object or make the	be acting at a time.
		object change direction	To understand the
		(explanation)(consolidatio	difference between
		n)	weight and mass.
		To know that a compass	To understand gravity is
		is a tiny magnet and that	a force pulling objects
		the Earth is a giant	towards the centre of
			the Earth. To understand
		magnet To know that magnets	what air resistance is.
		have 2 poles, those that	To understand how to
		attract and those that	use a newton meter to
		repel	measure force.
		To know that a magnet is	(observation)
		any object that generates	To know that friction is a
		its own magnetic force,	force between two
		called a magnetic field	surfaces that are sliding,
		To know that one end of	or trying to slide, across
		a 'bar' magnet is called	each other.
		the north pole and the	To investigate how levers
		opposite is the south pole	work; exploring how the
		To know that magnets	position of fulcrum, load
		attract metals that	and effort impacts on
		contain iron and that	use (investigation)
		magnetic materials will be	To investigate how
		attracted to the magnet	pulleys work and how
		(stick)(observation/	the number of pulleys
		investigation)	used changes the effort
			required
			To draw diagrams that
			explain the forces, loads,
			weights and efforts for
			levers and pulleys
			(explanation)
Working		SC1: To ask relevant	Sc1: To plan different
Working			
Scientifically		questions and use	types of scientific
		different types of	enquiries to answer
		scientific enquiries to	questions, including
		answer them	recognising and

	1	To ook up simple prosetical	a antirollino veriables
		To set up simple practical	controlling variables
		enquiries, comparative	where necessary
		and fair tests (o	(observation/investigatio
		bservation/investigation)	n) 
		To record findings using	To take measurements,
		simple scientific language	using a range of scientific
		and drawings or labelled	equipment, with
		diagrams,	increasing accuracy and
		To report on findings	precision, taking repeat
		from enquiries, including	readings when
		oral and written	appropriate
		explanations	To record data and
		(explanation)	results of increasing
		To use results to draw	complexity using
		simple conclusions and	scientific diagrams and
		raise further questions	labels, bar and line
		To identify differences,	graphs
		similarities or changes	To report and present
		related to simple	findings from enquiries,
		scientific ideas and	including conclusions,
		processes	causal relationships and
		To use straightforward	explanations of and
		scientific evidence to	degree of trust in results,
		answer questions or to	in oral and written forms
		support their findings.	such as displays and
		Being a scientist:	other presentations
		To raise questions about	(explanation)
		the world around them.	(communication)
		To make decisions about	Being a scientist: To
		the most appropriate	explore ideas and raise
		type of scientific enquiry	different kinds of
		they might use to answer	questions;
		questions;	To select and plan the
		To look for naturally	most appropriate type of
		occurring patterns and	scientific enquiry to use
		relationships in order to	to answer scientific
		draw simple conclusions	questions;
		and answer questions.	To recognise when and
		To make decisions about	how to set up
		what observations to	comparative and fair
		make, how long to make	tests and explain which
		them for and the type of	variables need to be
		simple equipment that	controlled and why.
		might be used.	To decide what
		To recognise when and	observations to make,
		how secondary sources	what measurements to
		might help to answer	use and how long to
1		3	

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				questions that cannot be		make them for, and	
				answered through		whether to repeat them;	
				practical investigations.		To choose the most	
				To use relevant scientific		appropriate equipment	
				language to discuss their		to make measurements	
				ideas and communicate		and explain how to use it	
				their findings in ways that		accurately.	
				are appropriate for		To use results to identify	
				different audiences		when further tests and	
				direrent dudiences		observations might be	
						needed;	
						To recognise which	
						secondary sources will	
						be most useful to	
						research their ideas and	
						begin to separate	
						opinion from fact.	
						To use relevant scientific	
						language and	
						illustrations to discuss,	
						communicate and justify	
						their scientific ideas	
						To discuss how scientific	
						ideas have developed	
						over time	
Vocabulary				push, pull, force, surface,		CONSOLIDATE YEAR 3	
				vinyl, wood, ice, carpet,		VOCABULARY force,	
				friction, measure,		balanced, unbalanced,	
				compare, predict, explain,		push, pull, gravity,	
				conclude, magnetic, non		friction, air resistance,	
				magnetic, magnetism,		water resistance, gravity,	
				poles, attract, repel,		Newton, newton meter,	
				force, north pole, south		mass, weight, levers,	
				pole, iron, materials,		pulleys, fulcrum, load,	
				properties, sort, compare		effort, weights,	
						mechanisms, force, load	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
EARTH AND					<del></del>	NATIONAL	
SPACE						CURRICULUM: Pupils	
						should be taught to: 4	
						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	

	T.	T.	1		
				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.	
TAUGHT				To understand that it	
				takes a year for the Earth	
KNOWLEDG				to orbit the sun	
E				To know that the sun is a	
				star at the centre of our	
				solar system	
				To understand the other	
				planets in the solar	
				system take different	
				lengths of time to orbit	
				the sun	
				To recognise the position	
				of the planets in the	
				solar system	
				(observation)	
				To know that a moon is a	
				celestial body that orbits	
				a planet	
				To recognise that the	
				Earth, Sun and Moon are	
				spherical	
				To give examples of	
				evidence to prove that	
				the Earth, Sun and Moon	
				are spherical, explaining	
				why people have not	
				always believed that the	
				Earth was spherical	
				(explanation)	
WORKING				SC1 To report findings	
SCIENTIFICALL				from enquiries, including	
Υ				conclusions, causal	
				relationships and	
				explanations in oral and	
				written forms such as	
				displays and other	
				presentations	
				(observation)	
				(communication)	

Vocabulary	Light, dark, moon, sun, beam, orbit, axis, earth Astronaut, planet, constellation, star, moon, sun, earth, solar system, axis, orbit, atmosphere, galaxy,					To identify scientific evidence that has been used to support or refute ideas or arguments (explanation) Being a scientist To use science experiences to explore ideas and raise different kinds of questions To use relevant scientific language and illustrations to discuss, communicate and justify scientific ideas To discuss how scientific ideas have developed over time planet, orbit, sun, moon, Earth, solar system, moon, spherical bodies, rotates, axis, day, night, shadows, time zone	
	launch, gravity, rocket, satellite						
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
SOUND					NATIONAL CURRICULUM: Pupils should be taught to: * 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		

	accordens to facilitate and the
	sounds get fainter as the
	distance from the sound
	source increases
Taught	To understand how
Knowledge	sounds are made
	(observation/investigatio
	n)
	To use the term 'volume'
	to describe the level of
	sound.
	To recognise patterns
	between the volume of a
	sound and the strength
	of the vibrations that
	produce it (explanation)
	To know that pitch
	relates to how low or
	high a sound is
Working	SC1: To ask relevant
Scientifically	questions and use
,	different types of
	scientific enquiries to
	answer them
	To set up simple practical
	enquiries, comparative
	and fair tests
	(observation/investigatio
	n)
	To make systematic and
	careful observations
	To record findings using
	simple scientific
	language, drawings,
	labelled diagrams
	To report on findings
	from enquiries, including
	oral and written
	explanations
	To use results to draw
	simple conclusions and
	raise further questions
	(explanation)
	To use straightforward
	scientific evidence to
	answer questions or to
	support their findings.
	Being a scientist
	Defing a scientist

					To raise questions about		
					the world around them.		
					To look for naturally		
					occurring patterns and		
					relationships		
					To learn how to use new		
					equipment		
					appropriately.		
					To draw simple		
					conclusions and answer		
					questions.		
					To recognise when and		
					how secondary sources		
					might help them to		
					answer questions that		
					cannot be answered		
					through practical		
					investigations.		
					To use relevant scientific		
					language to discuss their		
					ideas and communicate		
					their findings in ways		
					that are appropriate for		
					different audiences.		
Manahadama							
Vocabulary					sound, travel, vibration,		
					source, pitch, volume,		
					decibels, sound wave,		
					ear		
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ELECTRICITY					NATIONAL		NATIONAL
					CURRICULUM: Pupils		CURRICULUM: Pupils
					should be taught to: *		should be taught to: *
					identify common		associate the brightness
					appliances that run on		of a lamp or the volume
					electricity & construct a		of a buzzer with the
					simple series electrical		number and voltage of
					circuit, identifying and		cells used in the circuit &
					naming its basic parts,		compare and give
					including cells, wires,		reasons for variations in
					bulbs, switches and		how components
					buzzers & identify		function, including the
					whether or not a lamp		brightness of bulbs, the
					will light in a simple		loudness of buzzers and
							the on/off position of
					series circuit, based on		
					whether or not the lamp		switches & use
					is part of a complete		recognised symbols
					loop with a battery 👫		when representing a

		1	rocognico that a switch		imple circuit in a
			recognise that a switch		
			opens and closes a circuit and associate this with	l u	liagram.
			whether or not a lamp		
			lights in a simple series		
			circuit & recognise some		
			common conductors and		
			insulators, and associate		
			metals with being good		
			conductors.		
Taught			To know that appliances	T	o know that electricity
Knowledge			run on electricity and	c	an flow through the
			that electricity is power	c	omponents in a
			To know that we use	c	omplete electric circuit.
			mains electricity or	т	o know that you can
			battery power to run		nake bulbs brighter by
			appliances and devices		dding more batteries to
			To understand which		he circuit but that
			components are required		dding more bulbs to a
			to build a simple circuit		imple circuit will reduce
			and to adapt or change		he electrical energy and
			the layout of		nake the bulbs dimmer.
			components		investigation/observation
			(observation/investigatio		ii)
			n)		o know that
			To know that a circuit		engthening wires in a
			must be complete to		imple circuit will reduce
			work		he electrical energy, as
					t has further to travel.
			To recognise that a		
			switch opens and closes		he extra distance will
			a circuit		nake the bulb dimmer.
			To understand how a		o know that you can
			switch turns a lamp on		nake buzzers louder by
			and off		dding more batteries to
			To explain what a switch		he circuit but that
			needs to be made from		dding more buzzers to a
			and why (explanation)		imple circuit will reduce
			(communication)		he electrical energy and
			To know that metals are	n	nake them quieter
			good conductors of		o know that electrical
			electricity, most other	c	ircuits can be
			materials are not and	r	epresented by circuit
			that metals are used for		liagrams.
			cables and wires, plastic		To know that the various
			is used to cover wires		lectrical components
			and as covers for plugs		re shown by using
			and switches		tandard symbols in

		circuit diagrams.
		(explanation)
Working	SC1 To ask relevant	SC1 To plan different
Scientifically	questions and use	types of scientific
,	different types of	enquiries to answer
	scientific enquiries to	questions, including
	answer them	recognising and
	(communication)	controlling variables
	To set up simple practical	where necessary
	enquiries	(investigation/observatio
	(investigation/observatio	n)
	n)	To record results of
	To record findings using	increasing complexity
	simple scientific	using scientific diagrams
	language, drawings,	and labels
	labelled diagrams or	To report and present
	presentations of	findings from enquiries,
	conclusions	including conclusions,
	To identify differences	causal relationships and
	(explanation)	explanations in oral and
	To recognize similarities	written forms
	or changes related to	(explanation)
	simple scientific ideas	Being a scientist
	and processes	To use science
	To use straightforward	experiences to explore
	scientific evidence to	ideas and raise different
	answer questions or to	kinds of questions;
	support their findings	To select and plan the
	Being a scientist	most appropriate type of
	To make decisions about	scientific enquiry to use
	what observations to	to answer scientific
	make, how long to make	questions;
	them for and the type of	To use relevant scientific
	simple equipment that	language and
	might be used.	illustrations to discuss,
	To learn how to use new	communicate and justify
		their scientific ideas
	equipment To recognise when and	To discuss about how
	how secondary sources	scientific ideas have
		developed over time
	that might help to answer questions that	developed over time
	cannot be answered	
	through practical	
	investigations.	
	To use relevant scientific	
	language to discuss ideas	
	and communicate	

			findings in ways that are	
			appropriate for different	
			audiences.	
Vocabulary			electricity, circuit, switch,	CONSOLIDATE YEAR 4
			battery, plug, mains,	VOCABULARY battery,
			appliance, device, wire,	circuit, wire, cell, voltage,
			crocodile clip, bulb,	components, symbols,
			buzzer, connection,	bulb, buzzer, cell, motor,
			power, cell, energy, flow,	series, parallel, crocodile
			current, conductor,	clips, circuit diagram,
			insulator	fuse wire, bright, dim,
				filament, conductor,
				insulator