



Belton C of E Primary School

Science Knowledge, Vocabulary and Skills Progression Document

Updated 2023

Biology Chemistry Physics

Term	Year I and 2	Year 3 and 4	Year 5 and 6
Autumn I	Health & Survival Animals incl Humans	Light	Studying Living Things Living things and their habitate
	realizates (IIII)		(5)
Autumn 2	Exploring everyday	Animals incl. Humans - YC	Light
	materials	3	
	Everyday materials	Skeletons & Food	
Spring 1	Exploring everyday	Plants	Evolution and Inheritance
	materials 2 - 3 Little		
	Pigs		
	Materials		
Spring 2	Plants - Yr I	Forces	Changes of materials
Summer 1	Life Cycles	Classifying Living Things	Forces
	Animals incl. humans	and Their Habitats - y 4	
Summer 2	Living Things and Their	Electricity	Blood + Transportation
	Habitats	· ·	Heart Health
			Animals, including humans
			Also puberty sessions for yr 5/
			separately

Cycle B

Term	Year I and 2	Year 3 and 4	Year 5 and 6	
Autumn I	About Me	States of Matter	Properties of materials	
	Animals incl. Humasn			
Autumn 2	Seasonal changes	Animals, including humans	Living Things and their habitats (6)	
		Digestion & Teeth		
		Xc 4		
Spring 1	About Animals	Conservation	Electricity	
	Animals, including	Living Things & Their		
	humans	Habitats		
Spring 2	Plants - year 2 Plants	Sound	Looking after the environment	
Summer 1	Uses of Everyday materials - Year 2	Scientific Enquiry	Space	
Summer 2	Habitats from around the	Rocke	Lifecycles	
	World		Living things and their habitats	
	Living Things and their			
	Habitats		Teach puberty	
	Seasonal changes			

	Substantive Knowledge							
		1401	Animals and		Luca			
EYFS	Year I	KSI Year 2	Year 3	_KS2 Year 4	UKS2 Year 5	Year 6		
PD & H & SC		· Notice that animals,		· Describe the simple	· Describe the			
	Identify and name a		Identify that	'		· Identify and name the		
· To eat a healthy	variety of common	including humans,	animals, including	functions of the basic	changes as humans	main parts of the human		
range of foodstuffs	animals including	have offspring which	humans, need the	parts of the digestive	develop to old age.	circulatory system, and		
and understand a	fish,	grow into adults	right types and	system in humans		describe the functions of the		
need for variety in	amphibians, reptiles,	· Find out about and	amount of nutrition,	· Identify the different		heart, blood vessels		
food	birds and mammals	describe the basic	and that they	types of teeth in		and blood		
· To show some	\cdot Identify and	needs of animals,	cannot make their	humans and their		\cdot Recognise the impact		
understanding that	name a variety of	including humans, for	own food; they get	simple functions		of diet, exercise, drugs		
good practices with	common animals	survival (water, food	nutrition from what	· Construct and		and lifestyle on the way		
regard to exercise,	that are carnivores,	and air)	they eat · Identify	interpret a variety of		their bodies function		
eating, sleeping	herbivores and	· Describe the	that humans and	food chains,		· Describe the ways in		
and hygiene can	omnivores	importance for	some other animals	identifying producers,		which nutrients and		
contribute to good	· Describe and	humans of exercise,	have skeletons and	predators and prey.		water are transported		
health.	compare the	eating the right	muscles for support,			within animals, including		
· To know the	structure of a	amounts of different	protection and			humans.		
importance for	variety of common	types of food, and	movement.					
good health of	animals (fish,	hygiene.						
physical	amphibians,							
exercise, and a	reptiles, birds and							
healthy diet, and	mammals, including							
talk about ways to	pets)							
keep healthy and	· Identify, name,							
safe	draw and label the							
, v	basic parts of the							
	human body and							

	say which part of the body is associated with each sense					
Vocabulary:	head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hooves	offspring, reproduction, growth, child, young/old stages e.g., chick/hen, baby/child/adult, caterpillar/butterfly exercise, heartbeat, breathing, hygiene, germs, disease, food types eg meat, fish, bread,	nutrition, nutrients, carbohydrates, sugars, protein, witamins, minerals, fibre, fat, water, skeleton, bones, muscles, support,	Digestive system, digestion, oesophagus, stomach, small intestines, nutrients, large intestine, rectum, anus, mouth, teeth, saliva, incisor, canine, molar, premolar, herbivore, carnivore, omnivore, producer, predator,	Puberty - the vocabulary to describe the sexual characteristics	Puberty - the vocabulary to describe the sexual characteristics heart, pulse rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system,
		vegetables, rice etc		prey, food chain		
		ı	Liwin	g Things I		I
UTW · To know about similarities		Explore and compare the		Recognise that living things can be	Describe the differences in the life	Describe how living things are classified into
and differences in relation to places, objects, materials		differences between things that are living, dead,		grouped in a variety of ways · Explore and use	cycles of a mammal, an amphibian, an insect and a bird	broad groups according to common observable characteristics and
and living things. They talk about		and things that have never been		classification keys to help group, identify	· Describe the life process of	based on similarities and differences, including
the features of their own immediate		alive • Identify that most living things live in		and name a variety of living things in their local and wider	reproduction in some plants and animals	micro-organisms, plants and animals • Give reasons for
environment and how environments		habitats to which they are suited and		environment · Recognise that		classifying plants and animals based on

. 14 0	describe how	environments can		.0. 1 ± . ±.
might vary from				specific characteristics.
one another.	different habitats	change and that this		
	provide for the	can sometimes pose		
	basic needs of	dangers to living		
	different kinds of	things.		
	animals and plants,			
	and how they			
	depend on each			
	other			
	· Identify and name			
	a variety of plants			
	and animals in their			
	habitats, including			
	micro-habitats			
	· Describe how			
	animals obtain their			
	food from plants			
	and other animals,			
	using the idea of a			
	simple food chain,			
	and identify and			
	name different			
	sources of food			
Vocabulary:	living, dead, never	classification,	life cycle, reproduce,	vertebrates, fish,
	been alive, suited	classification keys,	sexual, sperm,	amphibians, reptiles,
	suitable, basic	environment, habitat,	fertilisers, egg, live	birds, mammals,
	needs, food, food	hunan impact,	young,	invertebrates, insects,
	chain, shelter,	positive, negative,	metamorphosis,	spiders, snails, worms,
	move, feed, names	migrate, hibernate	asexual, plantlets,	flowering, non-flowering
	of local habitats,		runners, bulbs,	, , , , ,

		names of micro habitats eg, under logs, in bushes etc			cuttings	
	T		F	Plants		
UTW To know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another.	· Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. · Identify and describe the basic structure of a variety of common flowering plants, including trees. · Observe changes across the four seasons · Observe and describe weather associated with the seasons and how day length varies.	· 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.	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		· Reproduction of plants.	
			pollination, seed			

Vocabulary:	Plants, leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud	Plants, leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, light, shade, warm, cool, water, grow, healthy	formation and seed dispersal. Photosynthesis, pollen, insect/wind pollination, seed formation, seed dispersal, wind dispersal, water dispersal, animal dispersal, stamen, stigma, carpel, fertilisation, dispersal, pollen, nectar, owule, ovary, anther,		reproduction, asexual, sexual	
			filament			
	_		Evolution	& Inheritance		
		Linked to Year 2 - Animals and Liwing things - offspring, habitats)	(Linked to Year 3 - rocks - fossils)		(Linked to year 5 - Living things - reproduction)	Recognise that living things have changed over time and that fossile 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

	1	1		1	1
					their parents
					· Identify how animals
					and plants are adapted
					to suit their environment
					in different ways and
					that adaptation may
					lead to evolution
Vocabulary:					Offspring, sexual
					reproduction, vary,
					characteristics, suited,
					adapted, environment,
					inherited, species, fossils,
		Ele	ctricity .		
			· Identify common		Associate the
			appliances that run		brightness of a lamp or
			on electricity		the volume of a buzzer
			· Construct a simple		with the number and
			series electrical circuit,		voltage of cells used in
			identifying and		the circuit
			naming its basic parts,		·Compare and give
			including cells, wires,		reasons for variations in how
			bulbs, switches and		components
			buzzers		function, including the
			· Identify whether or		brightness of bulbs, the
			not a lamp will light in		loudness of buzzers and the
			a simple series circuit,		on/off position of switches
			based on whether or		· Use recognised
			not the lamp is part of		symbols when
			a complete loop with		representing a simple
			a battery		circuit in a diagram.

		symbol	
		metal, non-metal,	
		conductor, insulator,	
		buzzer, motor,	
		clip, bulb, switch,	
		short circuit, crocodile	
		loose connection,	
		connect/connections,	
		negative,	
		cell, battery, positive,	
		circuit, components,	
		circuit, complete	motor, switch, voltage
		mains, plug, electrical	symbol, battery, bulb, buzzer,
		appliance/device,	circuit diagram, circuit
Vocabulary:		electricity, electrical	Circuit, complete circuit,
		conductors.	
		being good	
		associate metals with	
		and insulators, and	
		common conductors	
		some	
		circuit · Recognise	
		lights in a simple series	
		whether or not a lamp	
		associate this with	
		switch opens and closes a circuit and	
		· Recognise that a	

EAD	Distinguish	· Identify and	· Compare and	· Compare and group together	
· To begin to be	between an object	compare the	group materials	everyday materials on the basis of	
interested in and	and the material	suitability of a	together, according	their properties, including	
describe the	from which it is	variety of everyday	to whether they are	their hardness, solubility,	
texture	made	materials, including	solids, liquids or gases	transparency, conductivity	
	· Identify and name	wood, metal,	· Observe that some	(electrical and thermal), and	
of things. UTW	0.0			,	
	a variety of	plastic, glass, brick,	materials change	response to magnets	
· To know about	everyday materials,	rock, paper and	state when they are	· Some materials will dissolve in	
similarities and	including wood,	cardboard for	heated or cooled,	liquid to form a solution, and	
differences in	plastic, glass, metal,	particular uses	and measure or	describe how to recover a	
relation to places,	water, and rock	· Find out how the	research the	substance from a solution	
objects, materials	· Describe the	shapes of solid	temperature at which	· Use knowledge of solids, liquids	
and living things.	simple physical	objects made from	this happens in	and gases to decide how	
They talk about the	properties of a	some materials can	degrees Celaius (°C)	mixtures might be separated,	
features of their	variety of everyday	be changed by	\cdot Identify the part	including through filtering,	
own immediate	materials	squashing, bending,	played by	sieving and evaporating	
environment and	· Compare and	twisting and	evaporation and	· Give reasons,	
how environments	group together a	stretching.	condensation in the	based on evidence from	
might vary from	variety of everyday		water cycle and	comparative and fair tests, for the	
one another.	materials on the		associate the rate of	particular uses of everyday	
	basis of their simple		evaporation with	materials, including metals,	
	physical properties.		temperature.	wood and plastic	
			'	· Demonstrate that dissolving,	
				mixing and changes of	
				state are reversible	
				changes	
				· Explain that some changes result	
				in the formation of new	
				materials, and that this kind of	
				change is not usually reversible,	

Vocabulary:	Object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof,	As YI plus: opaque, transparent, translucent, reflective, nonreflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting, squash/squashing,		Solid, liquid, gas, state, change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle, condensation	including changes associated with burning and the action of acid on bicarbonate of soda. Thermal, electrical insulator, conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/nonreversible/irreversible, change, burning, rusting, new material	
	absorbent, breaks/tears, rough,	bend/bending, stretch/stretching				
	smooth, shiny, dull, see-through	0				
			I	 _ight		
	(Link to seasonal		· Recognise that			Use the idea that light
	changes – sun		they need light in			travels in straight lines to
	safety – Introduce		order to see things			explain that objects are seen
	shadows and the		and that dark is the			because they give out or
	sun being a source		absence of light			reflect light into
	of light)		 Notice that light is 			the eye
			reflected from			· Explain that we see things
			surfaces			because light travels from
			•Recognise that			light sources to our eyes or
			light from the sun			from light
			can be dangerous			sources to objects and then
			and that there are			to our eyes

Vocabulary:			ways to protect their eyes . Recognise that shadows are formed when the light from a light source is blocked by a solid object . Find patterns in the way that the size of shadows change Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect,		· Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. As Y3 plus: straight lines, light rays, reflect, refract, spectrum, shadows
			· ·		
			dangerous		
			S	Sound	
	(Link to music -pitch/long and	(Link to music -pitch/long and short		· Identify how sounds are made, associating	
	short	sounds/dynamics		some of them with	
	sounds/dynamics	and tempo)		something	
	and tempo)			vibrating	
				· Recognise that	
				vibrations from	
				sounds	

				travel through a		
				medium to the ear ·		
				Find patterns		
				between the pitch of		
				a sound and features		
				of the object that		
				produced it		
				· Find patterns		
				between the volume		
				of a sound and the		
				strength of the		
				vibrations that		
				produced it ·		
				Recognise that		
				sounds get fainter as		
				the distance from the		
				sound source		
				increases.		
Vocabulary:				Sound, source,		
				vibrate, vibration,		
				travel, pitch		
				(high/low), volume,		
			faint, loud, insulation			
			Earth	, & Space		
	Link to KSI – Geograp	ohy	(Link to LKS2 - Geography - Climate zone		· Describe the movement of the	
	Seas/Oceans		topographical feature	s)	Earth, and other planets, relative to	
	UK		_		the Sun in the solar system	
	Continents		Geography		· Describe the movement of the	
	North/South Poles		- Earth		Moon relative to the Earth	
			-			

			Climate zones/ topographical features)		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.	
					Earth, sun, moon, planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune) spherical, solar system, rotate, star, orbit,	
			Season	al Changes		
KUW Understand some important processes and changes in the natural world around them, including the seasons Vocabulary:	Observe changes across the 4 seasons observe Describe weather associated with the seasons know how day length varies. Season, spring, summer, autumn,					
	winter, hibernate, temperature, weather					
	arperaure, wearter		Materials/ Properties	L and Changing Materials		
EAD • To begin to be interested in and	Distinguish between an object and the material	 Identify and compare the suitability of a 	Maior was 1 Toportes	Compare and group materials together, according	 Compare and group together everyday materials on the basis of their properties, including 	
	from which it is	variety of everyday		to whether they are	their hardness, solubility,	

testure of things UTW To know about including wood, similarities and differences in water labels of the change of the condensate of the condensation in the condensation with the conden					T	
of things. UTW everyday materials. To knaw about including wood, aradboard for similarities and plasks, glass, metal, was a plasks, glass, metal, and the same of solid, and measure or describe how to recover a substance or research the proma a solution. Find out how the shapes of solid, because of describe how to recover a substance or research the traperdure at which this happens in degrees Celause (**C). They talk about the variety of everyday materials. **Compare and group together a substance or describe how the separated, including through filtering, played by seeing and evaporating under cycle and associate the rate of evaporation until tomperature. **They talk about the variety of everyday materials on the basis of their simple physical properties. **They talk about the variety of everyday materials on the basis of their simple physical properties. **They talk about the variety of everyday materials on the basis of their simple physical properties. **They talk about the variety of everyday materials on the basis of their simple physical properties. **They talk about the part of their part of the particular uses of everyday associate the rate of evaporation until tomperature. **They talk about the part of their part of the particular uses of everyday materials including metals, wood and plastic variety of everyday and second and plastic variety of everyday associate the rate of evaporation until tomperature. **They talk about the particular uses of everyday associate the rate of evaporation until tomperature. **They talk about the particular uses of everyday associate the rate of evaporation of the particular uses of evaporation of the particular uses of evaporation of the particular uses of ev	describe the	made	materials, including	solids, liquids or gases	transparency, conductivity	
UTW - To know about including wood, particular uses including wood, particular uses of their simple physical properties of their simple physical properties - Compare and condenses of their simple physical propertie	texture	· Identify and name	wood, metal,	· Observe that some	(electrical and thermal), and	
To know about including wood, similarities and plastic, glass metal, water and rock objects materials and living things. They talk about the feature of their environment and how environment and not enables. They fall way from one another bease of their simple physical properties. To know about including wood, plastic, glass, metal, water also water and rock objects materials and this happens in degrees Celsius (**C). I dentify the part played by aquashing, bending, water also environment and how environment and how environments and how environments one another. To know about the particular uses of solids and measure or research the temperature at which this happens in degrees Celsius (**C). I dentify the part played by aquashing, bending, waterials on the water cycle and associate the rote of water cycle and associate the rote of everyday materials on the basis of their simple physical properties. They talk about the properties of a warety of everyday materials on the basis of their simple physical properties. They talk about the properties of a warety of everyday in the particular and every and everyorating water and fair tests, for the particular uses of everyday materials on the basis of their simple physical properties. They talk about the properties of a warety of everyday in the particular and everyoration with the particular and associate the rote of everyday materials and that this kind of changes of state are reversible changes. Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicorbonate of soda. To be the particular and describe how to recover a substance from and describe how to recover a substance from and gases to decide how middle describe how to recover a substance in the temperature at which the particular and gases to decide how including the exportation and evaporation and evaporation and evaporation with the particular and everyoration with the		a variety of	plastic, glass, brick,	materials change	response to magnets	
similanties and differences in relation to places, objects materials on the simple physical properties of a simple physical convironment and how renovements and how another one another o	UTW	everyday materials,	rock, paper and	state when they are	· Some materials will dissolve in	
differences in relation to places. objects materials simple physical properties of a some materials can be compared by evaporation with the particular vary from one another one another one another one described by their simple physical properties of their simple physical properties	· To know about	including wood,	cardboard for	heated or cooled,	liquid to form a solution, and	
relation to places, objects, materials objects materials and lung things. They talk about the peature of talk about the peature of the particular objects materials on the personnent and how environments one another. Page 1 of their one another one of their one another one of their one of	similarities and	plastic, glass, metal,	particular uses	and measure or	describe how to recover a substance	
objects, materials and living things. They talk about the features of their own immediate on invarience of their own immediate own retrials can be changed by squashing, bending, twisting, and stretching. They talk about the features of their own immediate own immediate own roment and how environments one another. They talk about the features of their own immediate own immediate own retrials on the basis of their simple physical properties. They talk about the features of their own raterials on the basis of their simple physical properties. They talk about the perticular use of everyday materials on the basis of their simple physical properties. They talk about the perticular use of everyday is seving and evaporating. They talk about the degrees Celsius (°C) mixtures might be separated, including through filtering, seving and evaporating. They talk about the playside by seving and evaporating. They talk about the playside by seving and evaporating. They talk about the features of their own right be separated, including through filtering, seving and evaporating. They talk about the features might be separated, including through filtering, seving and evaporating. They talk about the features of everyday materials and flat tests for the particular uses of everyday materials, including metals, including end changes of state are reversible changes. Explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. They talk about the features might be separated, including through filtering, sevengand evaporating. They talk about the features might be separated, including through filtering, sevengand evaporating. They talk about the features might be separated. T	differences in	water, and rock	· Find out how the	research the	from a solution	
and living things. They talk about the features of their own immediate - Compare and group together a variety of everyday materials to the more another. - Compare and group together a variety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the ovariety of everyday materials on the one another. - Compare and group together a variety of everyday materials on the ovariety of everyday materials on the ovariety of everyday materials on the ovariety of everyday associate the rate of evaporation with temperature. - Demonstrate that dissolving, mixing and changes of state are reversible changes - Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. - Vocabulary: - Object, material. - Compare and degrees Cleius (°C) - Identify the part including through filtering, severators including through filtering, severators including through filtering. - Give reasons, based on evaporating through filtering, severators including through filtering, severators including through filtering. - Give reasons, based on evaporating through filtering. - Give reasons, beas done of the materials on the promotion of the pro	relation to places,	· Describe the	shapes of solid	temperature at which	· Use knowledge of solids, liquids	
They talk about the reacy of everyday materials our immediate environment and how environments and one another. They talk about the reacy of everyday materials or the basis of their simple physical properties of their simple physical properties. They talk about the reacy of everyday materials or the basis of their simple physical properties. They talk about the reacy of everyday materials or the basis of their simple physical properties. They talk about the reacy including through filtering, sieving and evaporating of the evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. They talk about the reacy sieving and evaporating of the particular uses of everyday materials, including metals, wood and plastic or the perticular uses of everyday materials, including metals, wood and plastic or temperature. They talk about the particular uses of everyday materials, including metals, wood and plastic or the particular uses of everyday materials, including in mixing and changes of state are reversible changes. Explain that some changes result in the formation of new materials, and that this tend of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. The water of their simple provides and evaporating in evaporation and condensation in the water of everyday materials, including the particular uses of everyday materials, inclu	objects, materials	simple physical	objects made from	this happens in	and gases to decide how	
Peatures of their own immediate own immediate environment and how environments and materials on the one another one another one another of their simple physical properties of their simple one another one another one another one one of their simple physical properties of their simple one another one one of their simple physical properties of their simple one one of their simple physical properties of their simple one one of their simple physical properties of their simple one one of their simple physical properties of their simple one one of their simple physical properties of their simple one one of their simple one one of their simple one of their simple one of their simple one one of their simple one of the particular uses of everyday of the particular uses of everyday one one one one one one one one of the particular uses of everyday one one one one one one one one of the particular uses of everyday one	and living things.	properties of a	some materials can	degrees Celsius (°C)	mixtures might be separated,	
own immediate environment and from comparative and fair tests, for water cycle and associate the rate of evaporation with temperature. Object, materials Liusting and stretching. Liusting and stretching. Liusting and stretching. Evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Object, materials Liusting and stretching. Liusting and stretching. Liusting and sevaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Object, materials Liusting and stretching. Liusting and stretching. Liusting and sevaporation and condensation in the water cycle and associate the rate of evaporation with temperature. Object, materials Liusting and stretching. Liusting and stretching. Coiwe reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabularys Object, material, As YI pluss opaque, Solid, liquid, gas, Thermal, electrical	They talk about the	variety of everyday	be changed by	· Identify the part	including through filtering,	
environment and how environments wariety of everyday materials on the basis of their simple physical properties physical properties Total and that this kind of change is not usually reversible, including changes associated with burning and the action of soda. Tocabulary: Object, material. As YI plus opaque, Condensation in the water cycle and associate the rate of water cycle and associate the rate of everyday materials, including metals, wood and plastic Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of soda.	features of their	materials	squashing, bending,	played by	sieving and evaporating	
how environments might vary from one another. Note another one another of their simple physical properties of their simple physical physical properties of their simple physical properties of their simple physical physical properties of their simple physical physi	oun immediate	· Compare and	twisting and	evaporation and	· Give reasons, based on evidence	
might vary from one another. materials on the basis of their simple physical properties materials on the basis of their simple physical properties materials on the basis of their simple physical properties materials on the basis of their simple physical properties materials on the basis of their simple physical properties Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus opaque, Solid, liquid, gas, Themal, electrical	environment and	group together a	stretching.	condensation in the	from comparative and fair tests, for	
one another. basis of their simple physical properties evaporation with temperature. Demonstrate that dissolving, mixing and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus opaque, Solid, liquid, gas, Thermal, electrical	how environments	variety of everyday		water cycle and	the particular uses of everyday	
physical properties temperature. Demonstrate that dissolving, mixing, and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical	might vary from	materials on the		associate the rate of	materials, including metals,	
and changes of state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical	one another.	basis of their simple		evaporation with	wood and plastic	
state are reversible changes Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical		physical properties		temperature.	· Demonstrate that dissolving, mixing	
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. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical					and changes of	
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. Vocabulary: Object, material, As YI plus opaque, Solid, liquid, gas, Thermal, electrical					state are reversible changes	
that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical					· Explain that some changes result in	
not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus opaque, Solid, liquid, gas, Thermal, electrical					the formation of new materials, and	
changes associated with burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical					that this kind of change is	
burning and the action of acid on bicarbonate of soda. Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical					not usually reversible, including	
Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical					changes associated with	
Vocabulary: Object, material, As YI plus: opaque, Solid, liquid, gas, Thermal, electrical					burning and the action of acid on	
					bicarbonate of soda.	
	Vocabulary:	Object, material,	As YI plus: opaque,	Solid, liquid, gas,	Thermal, electrical	
1, 7, 7, 7, 1, 1, 1, 1,		wood, plastic, glass,	transparent,	state, change,	insulator, conductor,	
metal, water, rock, translucent, melting, freezing, change of state,		metal, water, rock,	translucent,	melting, freezing,	change of state,	

	brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy,	reflective, nonreflective, flexible, rigid, shape, push/pushing, pull/pulling, twist/twisting,		melting point, boiling point, evaporation, temperature, water cycle, condensation	mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/nonreversible/irreversible, change, burning, rusting, new material	
	waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through	squash/squashing, bend/bending, stretch/stretching				
	, and the second		F	Rocks		
			·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			
Vocabulary:			Rock, stone, pebble, boulder,			

	grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, peat, sandy/chalk/clay,		
	sandy/chalk/clay, permeable, impermeable, sedimentary, metamorphic, igneous		

	K	SI	LK	(S2	U	KS2
EYFS	Year I	Year 2	Year 3	Year 4	Year 5	Year 6
			Planning			
Having their own	Ask simple questions	Ask simple questions	Ask relevant	Ask relevant	With prompting,	Plan different types
deas-thinking of	when prompted		questions when	questions	plan different types	of scientific enquiries
deas; finding ways		Recognise that	prompted		of scientific enquiries	to answer questions
io solve problems;	Suggest ways of	questions can be		Set up simple and	to answer questions	
linding new ways to	answering a question	answered in	With support, set up	practical enquiries,		Recognise and
lo things		different ways	simple and practical	comparative and	With prompting,	control variables
			enquiries, comparative	fair tests.	recognise and	where necessary
Making predictions			and fair tests		control variables	
					where necessary	
Planning making			Set up comparative			

decisions about how			tests							
to solve a problem										
and reach a goal										
J	Conducting Experiments									
Testing their ideas.	Make relevant	Observe closely,	Make systematic	Make systematic	Select, with	Take measurements				
Children use	observations	using simple	observations, using	and careful	prompting, and use	using a range of				
everyday language		equipment	simple equipment	observations using a	appropriate	scientific equipment				
as they explore to	Conduct simple			range of equipment,	equipment to take					
talk about size,	tests, with support	Perform simple tests	Use standard units	including technology	readings (including	Take measurements				
weight, capacity.			when taking	e.g. thermometers and	repeat readings)	with increasing				
			measurements	data loggers		accuracy and				
They explore					Take precise	precision				
characteristics of				Take accurate	measurements using					
everyday objects				measurements using	standard units	Take repeat				
and shapes				standard units,		readings when				
				where appropriate		appropriate				
Children safely use										
and explore a										
variety of materials,										
tools and										
techniques,										
experimenting with										
colour, design,										
texture, form and										
function.										
Recording Evidence										
Developing ideas of	With prompting,	Gather and record	Record findings in	Record findings	Begin to record	Record data and				
grouping,	gather and record	data to help answer	various ways using	using simple	data and results of	results of increasing				
sequencing, cause	data to help answer	questions	scientific language	scientific language,	increasing	complexity using				
and effect	questions		Begin to record	drawings and	complexity using	scientific diagrams				

Children represent		Begin to use simple	findings using keys,	labelled diagrams	scientific diagrams	and labels e.g.
their own ideas		scientific language	bar charts, and tables		and labels e.g.	classification keys,
thoughts and				Record findings using	classification keys,	tables, scatter
feelings through			Begin to gather,	keys, bar	tables, scatter	graphs, bar and line
design and			classify and present	charts, and tables	graphs, bar and line	graphs.
technology, art,			data in a variety of		graphs.	
music, dance, role			ways to help to	Gather, record,		
play and stories.			answer questions	classify and present		
				data in a variety of		
				ways to help to		
				answer questions		
			Reporting Findings			
Making links and	Begin to identify and	Identify and classify	With support, report	Report on findings	Begin to report and	Report and present
noticing patterns	classify		on findings from	from enquiries,	present findings	findings from
			enquiries, including	including oral and	from enquiries,	enquiries, including
Speaking: Uses talk			oral and written	written explanations,	including	conclusions and
to organise,			explanations, of	of results and	conclusions and	causal relationships
sequence and			results and	conclusions	causal relationships	
clarify thinking and			conclusions			Report and presents
ideas				Report on findings	Begin to report and	findings from
			With support, report	from enquiries using	presents findings	enquiries in oral and
Gives meaning to			on findings from	displays or	from enquiries in oral	written forms such as
marks they make as			enquiries using	presentations	and written forms	displays and other
the draw, write and			displays or		such as displays and	presentation
paint			presentations		other presentation	
						Report and present
Children can make					Begin to report and	findings from
observations about					present findings	enquiries, including
plants and animals					from enquiries,	explanations of, and
and explain why					including	degree of, trust in

some things occur					explanations of, and	results			
and talk about					degree of, trust in				
changes.					results				
Predictions and Conclusions									
Checking how well	Begin to use	Use their	Begin to identify	Identify differences,	Begin to identify	Identify scientific			
their activities are	observations to	observations and	differences,	similarities or	scientific evidence	evidence that has			
going	suggest answers to	ideas to suggest	similarities or	changes related to	that has been used	been used to			
I	questions	answers to questions	changes related to	simple scientific	to support or refute	support or refute			
Changing strategy			simple scientific	ideas and processes	ideas or arguments	ideas or arguments			
as needed			ideas and processes		Begin to use test	Use test results to			
Reviewing how well				Use results to draw	results to make	make predictions to			
the approach			Begin to use results	simple conclusions,	predictions to set up	set up further			
worked			to draw simple	make predictions for	further comparative	comparative and			
			conclusions, make	new values, suggest	and fair tests	fair tests			
Understanding:			predictions for new	improvements, and					
Listens and responds			values, suggest	raise further					
to ideas expressed			improvements, and	questions					
by others			raise further						
			questions	Use straightforward					
Children can discuss				scientific evidence					
similarities and			Use straightforward	to answer questions or					
differences between			scientific evidence	to support their					
living things, objects,			to answer questions	findings					
and materials.			or to support their						
			findings						