

		SCIENCE		
		EYFS		
		Understanding the World		
Aut		Areas of Learning		nmer
	develops the Understanding the Wo	Spring	Sur	Inner
Direct Teaching	develops the onderstanding the wo			
Outdoor Learning				
Continuous provision & direct tea	ching			
Educational visit & continuous pro	-			
Outdoor learning & continuous pr				
Seasonal changes	Humans	Seasonal changes	Materials, including changing	Animals, excluding humans
Understand the effect of	Remembers and talks about	Understand the effect of changing seasons on the natural world	materials	African animals and habitats -
changing seasons on the natural	significant events in their own	around them - winter	Materials - Explore different	small world and non-fiction
world around them - <b>autumn.</b>	experience -	Planting seeds ready for summer observations	materials and their properties	texts
+Explore the natural world	Baby/Toddler/present day	+Explore the natural world around them.	+Explore the natural world	+Recognise some environmen
around them.	photo	+ Know how to describe what they see, hear and feel whilst	around them.	that are different to the one in
+ Know how to describe what	Growth and Change	outside.	+Describe what they see, hear	which they live.
they see, hear and feel whilst	+Talk about members of their	+Understand the effect of changing seasons on the natural world	and feel whilst outside.	
outside.	immediate family and	around them.		
+Understand the effect of	community.		Forces	
changing seasons on the natural	+Name and describe people	Understanding important processes and changes in the natural	Floating and sinking - What	
world around them by making	who are familiar to them.	world around us (ELG)	Floats in a Moat focus text and	
observations and drawing		Make observations of animals and plants and explain why some	activity	
pictures of plants.	Recognise some similarities and	things occur, and talk about changes - Grow fruits and vegetables	+Explore the natural world	
	differences between life in this	in our outdoor area. What do they need to grow?	around them.	Seasonal changes
	country and life in other		+Describe what they see, hear	Understand the effect of
	countries Polar regions/Arctic	Educational visit to 'Imagine That' & continuous provision	and feel whilst outside.	changing seasons on the nature world around them - <b>summer</b>
	- how do animals keep warm?		Living this second their hebitete	+Explore the natural world
	Blubber experiment	Seasonal changes	Living things and their habitats	around them.
	States of Matter	Understand the effect of changing seasons on the natural world	Explore the natural world around them, making	+ Know how to describe what
	Understand some important	around them - <b>spring</b>	observations and drawing	they see, hear and feel whilst
	processes and changes in the	+Explore the natural world around them.	pictures of animals and plants -	outside.
	natural world around them	+ Know how to describe what they see, hear and feel whilst outside.	Minibeast hunt, Minibeast	+Understand the effect of
	including seasons and states of	+Understand the effect of changing seasons on the natural world	habitats, observational	changing seasons on the natur
	matter	around them by making observations and drawing pictures of	drawings and small world	world around them.
		plants.	exploration. Observing	
		porto.	ducklings and chicks over time -	



			OLCHEIN
+Describe what they see, hear		working with Y2, contrasting	
and feel whilst outside - winter		features.	
walk.		Know some similarities and	
		differences between the natural	
Seasonal changes		world around them and	
Understand the effect of		contrasting environments, - Bug	
changing seasons on the natura		hotel; what do we need to	
world around them - winter		include for each minibeast?	
+Explore the natural world		+Draw information from a	
around them.		simple map.	
+ Know how to describe what		+Explore the natural world	
they see, hear and feel whilst		around them.	
outside.		+Describe what they see, hear	
+Understand the effect of		and feel whilst outside.	
changing seasons on the natura		+ Recognise some environments	
world around them by making		that are different to the one in	
observations plants, comparing		which they live.	
with last half-term - observing			
over time (WS).			
	Vocabulary		
Model and encourage children to	Model and encourage children to use vocabulary such as: ice, water, frozen,	Model and encourage children to	Model and encourage children to
use vocabulary such as: hair (black,		use vocabulary such as: float, sink,	use vocabulary such as: names of
brown, dark, light, blonde, ginger,	smaller, smallest, hard, soft, bendy, rigid, wood, plastic, paper, card, metal,	up, down, top, bottom, surface,	animals, live, on land, in water,
grey, white, long, short, straight,	strong, weak, hot, apply heat, waterproof, soggy, not waterproof, best,	move, roll, drop, fly, turn, spin, fall,	jungle, desert, North Pole, South
curly), eyes (blue, brown, green,	change, change back	fast, slow, faster, slower, fastest,	Pole, sea, hot, cold, wet, dry, snow,
grey), skin (black, brown, white),		slowest, further, furthest, wind, air,	ice
big/tall, small/short, bigger/smaller	,	water, blow, bounce Expose	Expose children to supplementary
baby, toddler, child, adult, old		children to supplementary	vocabulary such as: environment,
person, old, young, brother, sister,		vocabulary such as: force, rotate,	polar regions, ocean, camouflage
mother, father, aunt, uncle,		solid, liquid, gravity	
grandmother, grandfather, cousin, friend, family, boy, girl, man,		Model and encourage children to	
woman		use vocabulary such as: plant, tree,	
Expose children to supplementary		bush, flower, vegetable, herb, weed,	
vocabulary such as: bald, elderly,		animal, names of plants and animals	
wrinkles, male, female, freckles		they see, name of a contrasting	
		environment e.g. beach, forest	
Expose children to supplementary		Expose children to supplementary	
vocabulary such as: solid, liquid, gas		vocabulary such as: environment	
most suited			
most suited			



light, shadow, shady, clouds, torch,				
see-through, non-see through,				
source, light source				
Seasonal changes vocab: spring, summer, autumn, winter, seasons, sunny, clo		storm, thunder, lightning, hail, sleet, snov	w, icy, frost, puddles, windy, rainbow, ar	nimals, young, plants, flowers
Expose children to supplementary vocabulary such as:hibernate, migrate, sno				
	Opportunities f	or Links in Learning		
	Sc	ience		
	Ŷ	ear 1		
	Nationa	l Curriculum		
	Areas	of Learning		
Animals inc. Humans	Seasonal changes - Autumn/Winter	Everyday materials	Seasonal changes - Spring/Summer	Plants
Previous Learning:	Previous Learning:	Previous Learning:	Previous Learning:	Previous Learning:
Name and describe people who are familiar to them. (Reception - Humans)	Explore the natural world around	Exploring different materials and	Explore the natural world around	Explore the natural world around
	them. (Reception – Seasonal	their properties in Investigation	them. (Reception – Seasonal	them. (Reception – Living things and
Common misconceptions:	changes)	Area	changes)	their habitats)
Some children may think:	Describe what they see, hear and		Describe what they see, hear and	Recognise some environments that
•only four-legged mammals, such as pets, are animals	feel whilst outside. (Reception –	Common misconceptions:	feel whilst outside. (Reception –	are different to the one in which they
•humans are not animals	Seasonal changes)	Some children may think:	Seasonal changes)	live. (Reception – Living things and
•insects are not animals	Understand the effect of changing	<ul> <li>only fabrics are materials</li> </ul>	Understand the effect of changing	their habitats)
•all 'bugs' or 'creepy crawlies', such as spiders, are part of the insect group	seasons on the natural world	<ul> <li>only building materials are</li> </ul>	seasons on the natural world	,
•amphibians and reptiles are the same.	around them. (Reception – Seasonal	materials	around them. (Reception – Seasonal	Common misconceptions:
	changes)	<ul> <li>only writing materials are</li> </ul>	changes)	Some children may think:
		materials		•plants are flowering plants grown in
	Common misconceptions:	<ul> <li>the word 'rock' describes an</li> </ul>	Common misconceptions:	pots with coloured petals and leaves
	Some children may think:	object rather than a material	Some children may think:	and a stem
	<ul> <li>it always snows in winter</li> </ul>	<ul> <li>'solid' is another word for hard.</li> </ul>	<ul> <li>it always snows in winter</li> </ul>	<ul> <li>trees are not plants</li> </ul>
	<ul> <li>it is always sunny in the summer</li> </ul>		<ul> <li>it is always sunny in the summer</li> </ul>	•all leaves are green
	<ul> <li>there are only flowers in spring</li> </ul>		<ul> <li>there are only flowers in spring</li> </ul>	•all stems are green
	and summer		and summer	•a trunk is not a stem
	<ul> <li>it rains most in the winter.</li> </ul>		<ul> <li>it rains most in the winter.</li> </ul>	<ul> <li>blossom is not a flower.</li> </ul>
Autumn	S	pring	Su	mmer
	NB. Please see coverage document	t; Seasonal Changes only takes a short	NB. Please see coverage document	; Seasonal Changes only takes a short
		e early in the term.	amount of time	e early in the term.
Animals inc. Humans	Seasonal changes - Autumn/Winter	Everyday materials	Seasonal changes - Spring/Summer	Plants
Specific Knowledge-	Specific Knowledge-	Specific Knowledge-	Specific Knowledge-	Specific Knowledge-
• Identify and name a variety of common animals including fish, amphibians,	<ul> <li>Observe changes across the four</li> </ul>	<ul> <li>Distinguish between an object and</li> </ul>	<ul> <li>Observe changes across the four</li> </ul>	<ul> <li>Identify and name a variety of</li> </ul>
reptiles, birds and mammals.	seasons.	the material from which it is made.	seasons.	common wild and garden plants,
<ul> <li>Identify and name a variety of common animals that are carnivores,</li> </ul>	<ul> <li>Observe and describe weather</li> </ul>	<ul> <li>Identify and name a variety of</li> </ul>	<ul> <li>Observe and describe weather</li> </ul>	including deciduous and evergreen
herbivores and omnivores.	associated with the seasons and	everyday materials, including wood,	associated with the seasons and	trees.
• Describe and compare the structure of a variety of common animals (fish,	how day length varies.	plastic, glass, metal, water, and	how day length varies.	<ul> <li>Identify and describe the basic</li> </ul>
amphibians, reptiles,	Key learning	rock.	Key learning	structure of a variety of common
birds and mammals, including pets).				flowering plants, including trees



Key learning Animals vary in many ways having different structures e.g. wings, tails, ears tet. They also have different skin coverings e.g. scales, feathers, hair. These key features can be used to identify them. Animals eat certain things - some eat other animals, some eat plants, some eat plants and mimals. Humans have five senses - sight, touch, taste, hearing and smelling. These senses are linked to particular parts of the body.winter (about 8 hours) before getting longer again. The weather also changes with the seasons. In the UK, it is usually colder and rainier in winter, and hotter and dryer in the summer. The change in weather causes many other changes. Some examples are: numbers of minibeasts found outside; seed and plant growth; leaves on trees; and type of clothes worn by people.• Compare and group together a variety of everyday materials on the basis of their simple physical properties.winter (about 8 hours) before wariety of everyday materials on the basis of their simple physical properties.winter (about 8 hours) before wariety of everyday materials on the basis of their simple physical properties.winter (about 8 hours) before wariety of everyday materials on the basis of their simple physical properties.winter (about 8 hours) before wariety of everyday materials on the basis of the is sumple).winter (about 8 hours) before wariety of everyday materials on the basis of the is sumple).winter (about 8 hours) before wariety of everyday materials on the basis changes with the seasons. In the UK, it is usua					-cone -
Head, body, eyes, ears, mouth, teeth, leg, tail, wing, claw, fin, scales, feathers, fur, beak, paws, hoovesWeather (sunny, rainy, windy, snowy etc.), seasons (autumn, winter), sun, sunrise, sunset, day lengthObject, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, not see-throughWeather (sunny, rainy, windy, snowy etc.), seasons (spring, summer), sun, sunrise, sunset, day lengthLeaf, flower, blossom, petal, f berry, root, seed, trunk, brand stem, bark, stalk, bud, names trees in the local area, names garden and wild flowering plat the local areaNames of animals experienced first-hand from each vertebrate group Parts of the body including those linked to PSHE teaching Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue N.B. The children need to be able to name and identify a range of animals in each group e.g. name specific birds and fish. They do not need to use the terms mammal, reptiles etc. or know the key characteristics of each, although they will probably be able to identify birds and fish, based on their characteristics. The children also do not need to use the words carnivore, herbivore and omnivore. If they do, ensure that they understand that carnivores eat other animals, not just meat. Although we often use our fingers and hands to feel objects, the children should understand that weWeather (sunny, rainy, windy, snowy etc.), seasons (spring, glass, metal, water, rock, brick, paper, fabric, elastic, foil, uard/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, dull, see-through, not see-throughWeather (sunny, rainy, windy, snowy etc.), seasons (spring, snowy, thard,	which part of the body is associated with each sense <b>Key learning</b> Animals vary in many ways having different structures e.g. wings, tails, ears etc. They also have different skin coverings e.g. scales, feathers, hair. These key features can be used to identify them. Animals eat certain things - some eat other animals, some eat plants, some eat both plants and animals. Humans have key parts in common, but these vary from person to person. Humans (and other animals) find out about the world using their senses. Humans have five senses – sight, touch, taste, hearing and smelling. These	at mid-summer (about 16 hours) and gets shorter each day until mid- winter (about 8 hours) before getting longer again. The weather also changes with the seasons. In the UK, it is usually colder and rainier in winter, and hotter and dryer in the summer. The change in weather causes many other changes. Some examples are: numbers of minibeasts found outside; seed and plant growth; leaves on trees; and type of clothes	properties of a variety of everyday materials. • Compare and group together a variety of everyday materials on the basis of their simple physical properties. <b>Key learning</b> All objects are made of one or more materials. Some objects can be made from different materials e.g. plastic, metal or wooden spoons. Materials can be described by their properties e.g. shiny, stretchy, rough etc. Some materials e.g. plastic can be in different forms	at mid-summer (about 16 hours) and gets shorter each day until mid- winter (about 8 hours) before getting longer again. The weather also changes with the seasons. In the UK, it is usually colder and rainier in winter, and hotter and dryer in the summer. The change in weather causes many other changes. Some examples are: numbers of minibeasts found outside; seed and plant growth; leaves on trees; and type of clothes	Growing locally, there will be a vast array of plants which all have specific names. These can be identified by looking at the key characteristics of the plant. Plants have common parts, but they vary between the different types of plants. Some trees keep their leaves all year while other trees drop their leaves during autumn and grow
feathers, fur, beak, paws, hoovessnowy etc.), seasons (autumn, winter), sun, sunrise, sunset, day Parts of the body including those linked to PSHE teaching Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue N.B. The children need to be able to name and identify a range of animals in each group e.g. name specific birds and fish. They do not need to use the terms mammal, reptiles etc. or know the key characteristics of each, although they will probably be able to identify birds and fish, based on their characteristics. The children also do not need to use the words carnivore, herbivore and omnivore. If they do, ensure that they understand that carnivores eat other animals, not just meat. Although we often use our fingers and hands to feel objects, the children should understand that wesnowy etc.), seasons (autumn, winter), sun, sunrise, sunset, day lengthsnowy etc.), seasons (spring, summer), sun, sunrise, sunset, day lengthberry, root, seed, trunk, branc stem, bark, stalk, bud, names garden and wild flowering pla the local area, names garden and wild flowering pla the local area		Vocal	bulary		
	feathers, fur, beak, paws, hooves Names of animals experienced first-hand from each vertebrate group Parts of the body including those linked to PSHE teaching Senses – touch, see, smell, taste, hear, fingers (skin), eyes, nose, ear and tongue N.B. The children need to be able to name and identify a range of animals in each group e.g. name specific birds and fish. They do not need to use the terms mammal, reptiles etc. or know the key characteristics of each, although they will probably be able to identify birds and fish, based on their characteristics. The children also do not need to use the words carnivore, herbivore and omnivore. If they do, ensure that they understand that carnivores eat other animals, not just meat. Although we often use our fingers and hands to feel objects, the children should understand that we	snowy etc.), seasons (autumn, winter), sun, sunrise, sunset, day length	glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through	snowy etc.), seasons (spring, summer), sun, sunrise, sunset, day	Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, names of trees in the local area, names of garden and wild flowering plants in the local area
Opportunities for Links in Learning		Opportunities for	r Links in Learning		



Year 2						
National Curriculum						
	Areas of Learning					
Autumn	Spring	Summer 1	Summer 2			
Uses of everyday materials	Living Things and their Habitats	Plants	Animals including humans			
Previous Learning:	Previous Learning:	Previous Learning:	Previous Learning:			
Distinguish between an object and the material from which it is made. (Y1 -	Identify and name a variety of common wild and garden plants, including	Identify and name a variety of	Identify and name a variety of			
Everyday materials)	deciduous and evergreen trees. (Y1 - Plants)	common wild and garden plants,	common animals that are			
Identify and name a variety of everyday materials, including wood, plastic,	Identify and describe the basic structure of a variety of common flowering	including deciduous and evergreen	carnivores, herbivores and			
glass, metal, water, and rock. (Y1 - Everyday materials)	plants, including trees. (Y1 - Plants)	trees. (Y1 - Plants)	omnivores. (Y1 - Animals, including			
Describe the simple physical properties of a variety of everyday materials.	Identify and name a variety of common animals including fish, amphibians,	Identify and describe the basic	humans)			
(Y1 - Everyday materials)	reptiles, birds and mammals. (Y1 - Animals including humans)	structure of a variety of common	Identify, name, draw and label the			
Compare and group together a variety of everyday materials on the basis	Identify and name a variety of common animals that are carnivores,	flowering plants, including trees.	basic parts of the human body and			
of their simple physical properties. (Y1 - Everyday materials)	herbivores and omnivores. (Y1 - Animals including humans)	(Y1 - Plants)	say which part of the body is			
	Describe and compare the structure of a variety of common animals (fish,		associated with each sense. (Y1 -			
Common misconceptions:	amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals,	Common misconceptions:	Animals, including humans)			
Some children may think:	including humans)	Some children may think:	Common misconceptions:			
only fabrics are materials	Observe changes across the four seasons. (Y1 - Seasonal changes)	<ul> <li>plants are not alive as they</li> </ul>	Some children may think:			
<ul> <li>only building materials are materials</li> </ul>	Common misconceptions:	cannot be seen to move	<ul> <li>an animal's habitat is like its</li> </ul>			
only writing materials are materials	Some children may think:	<ul> <li>seeds are not alive</li> </ul>	'home'			
<ul> <li>the word rock describes an object rather than a material</li> </ul>	<ul> <li>an animal's habitat is like its 'home'</li> </ul>	<ul> <li>all plants start out as seeds</li> </ul>	• all animals that live in the sea are			
<ul> <li>solid is another word for hard.</li> </ul>	<ul> <li>plants and seeds are not alive as they cannot be seen to move</li> </ul>	<ul> <li>seeds and bulbs need sunlight to</li> </ul>	fish			
	• fire is living	germinate.	<ul> <li>respiration is breathing</li> </ul>			
	<ul> <li>arrows in a food chain mean 'eats'.</li> </ul>		<ul> <li>breathing is respiration.</li> </ul>			
Autumn	Spring	Summer 1	Summer 2			
Uses of everyday materials	Living Things and their Habitats	Plants	Animals including humans			
Specific Knowledge-	Specific Knowledge-	Specific Knowledge-	Specific Knowledge-			
<ul> <li>Identify and compare the suitability of a variety of everyday materials,</li> </ul>	• Explore and compare the differences between things that are living,	Observe and describe how seeds	<ul> <li>Notice that animals, including</li> </ul>			
including wood, metal, plastic, glass, brick, rock, paper and cardboard for	• Explore and compare the differences between things that are living, dead, and things that have never been alive	• Observe and describe how seeds and bulbs grow into mature plants.	• Notice that animals, including humans, have offspring which grow			
including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>Identify that most living things live in habitats to which they are suited</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants</li> </ul>	Notice that animals, including humans, have offspring which grow into adults.			
<ul><li>including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li><li>Find out how the shapes of solid objects made from some materials can</li></ul>	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable</li> </ul>	<ul> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the</li> </ul>			
including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay</li> </ul>	<ul> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including</li> </ul>			
<ul> <li>including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> <li>Identify and name a variety of plants and animals in their habitats,</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable</li> </ul>	<ul> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food</li> </ul>			
<ul> <li>including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> <li>Key learning</li> </ul>	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> <li>Identify and name a variety of plants and animals in their habitats, including micro-habitats</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> </ul>	<ul> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> </ul>			
<ul> <li>including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> <li>Key learning All objects are made of one or more materials that are chosen specifically</li></ul>	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> <li>Identify and name a variety of plants and animals in their habitats, including micro-habitats</li> <li>Describe how animals obtain their food from plants and other animals,</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> <li>Key learning</li> </ul>	<ul> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>Describe the importance for</li> </ul>			
<ul> <li>including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> <li>Key learning All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task. For example, a water</li></ul>	<ul> <li>Explore and compare the differences between things that are living, dead, and things that have never been alive</li> <li>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</li> <li>Identify and name a variety of plants and animals in their habitats, including micro-habitats</li> <li>Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different</li> </ul>	<ul> <li>Observe and describe how seeds and bulbs grow into mature plants.</li> <li>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> <li>Key learning Plants may grow from either seeds</li> </ul>	<ul> <li>Notice that animals, including humans, have offspring which grow into adults.</li> <li>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>Describe the importance for humans of exercise, eating the right</li> </ul>			
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pressing etc. This can be a property of the material or depend on how the material has been processed e.g. thickness.	dead. Objects made of rock, metal and plastic have never been alive (again ignoring that plastics are made of fossil fuels). Animals and plants live in a habitat to which they are suited, which means that animals have suitable features that help them move and find food and plants have suitable features that help them to grow well. The habitat provides the basic needs of the animals and plants – shelter, food and water. Within a habitat there are different micro-habitats e.g. in a woodland – in the leaf litter, on the bark of trees, on the leaves. These micro-habitats have different conditions e.g. light or dark, damp or dry. These conditions affect which plants and animals live there. The plants and animals in a habitat depend on each other for food and shelter etc. The way that animals obtain their food from plants and other animals can be shown in a food chain.	and they will germinate and grow at different rates. Some plants are better suited to growing in full sun and some grow better in partial or full shade. Plants also need different amounts of water and space to grow well and stay healthy.	babies or kittens, that grow into adults. In other animals, such as chickens or insects, there may be eggs laid that hatch to young or other stages which then grow to adults. The young of some animals do not look like their parents e.g. tadpoles. All animals, including humans, have the basic needs of feeding, drinking and breathing the must be satisfied in order to survive. To grow into healthy adults, they also need the right amounts and types of food and exercise. Good hygiene is also important in preventing infections and illnesses.
	Vocabulary	1	
Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard. Properties of materials – as for Year 1 plus opaque, transparent and translucent, reflective, nonreflective, flexible, rigid Shape, push/pushing, pull/pulling, twist/twisting, squash/squashing, bend/bending, stretch/stretching	Living, dead, never been alive, suited, suitable, basic needs, food, food chain, shelter, move, feed, names of local habitats e.g. pond, woodland etc, names of micro-habitats e.g. under logs, in bushes etc.	From Y1 - Leaf, flower, blossom, petal, fruit, berry, root, seed, trunk, branch, stem, bark, stalk, bud, names of trees in the local area, names of garden and wild flowering plants in the local area light, shade, sun, warm, cool, water, grow, healthy	Offspring, reproduction, growth, child, young/old stages (examples chick/hen, baby/child/adult, caterpillar/butterfly), exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)
	Opportunities for Links in Learning		



		Sci	ence		
		Ye	ar 3		
		National	Curriculum		
Areas of Learning					
Autumn 1	Autumn 1 Autumn 2 Spring 1 Spring 2			Summer	
Rocks	Y4 swap - Animals including	Light	Forces and magnets	Plants	
Previous Learning:	Humans	Previous Learning:	Previous Learning:	Previous Learning:	
Distinguish between an object and	Previous Learning:	Describe what they see, hear and	Explore the natural world around	Observe and describe how seeds	
the material from which it is made.	Identify and name a variety of	feel whilst outside. (Reception –	them. (Reception – Forces)	and bulbs grow into mature plants. (Y2 - Plants)	
(Y1 - Everyday materials)	common animals that are	Light)	Describe what they see, hear and	Find out and describe how plants need water, light and a suitable	
Identify and name a variety of	carnivores, herbivores and	Identify, name, draw and label the	feel whilst outside. (Reception -	temperature to grow and stay healthy. (Y2 - Plants)	
everyday materials, including wood,	omnivores. (Y1 - Animals, including	basic parts of the human body and	Forces)		
plastic, glass, metal, water, and	humans)	say which part of the body is	Find out how the shapes of solid	Common misconceptions:	
rock. (Y1 - Everyday materials)	Find out about and describe the	associated with each sense. (Y1 -	objects made from some materials	Some children may think:	
Describe the simple physical	basic needs of animals, including	Animals, including humans)	can be changed by squashing,	plants eat food	
properties of a variety of everyday	humans, for survival (water, food	Describe the simple physical	bending, twisting and stretching.	<ul> <li>food comes from the soil via the roots</li> </ul>	
materials. (Y1 - Everyday materials)	and air). (Y2 - Animals, including	properties of a variety of everyday	(Y2 - Uses of everyday materials)	• flowers are merely decorative rather than a vital part of the life cycle in	
Compare and group together a	humans)	materials. (Y1 - Materials)		reproduction	
variety of everyday materials on	Describe the importance for	Common misconceptions:	Common misconceptions:	<ul> <li>plants only need sunlight to keep them warm</li> </ul>	
the basis of their simple physical	humans of exercise, eating the right	Some children may think:	Some children may think:	• roots suck in water which is then sucked up the stem.	
properties. (Y1 - Everyday	amounts of different types of food,	• we can still see even where there	<ul> <li>the bigger the magnet the</li> </ul>		
materials) Identify and compare the	and hygiene. (Y2 - Animals,	is an absence of any light	stronger it is		
suitability of a variety of everyday	including humans)	• our eyes 'get used to' the dark	all metals are magnetic.		
materials, including wood, metal,		• the moon and reflective surfaces			
plastic, glass, brick, rock, paper and	Common misconceptions:	are light sources			
cardboard for particular uses. (Y2 -	Some children may think:	• a transparent object is a light			
Uses of everyday materials)	arrows in a food chains mean	source			
Common misconceptions:	'eats'	shadows contain details of the			
Some children may think:	• the death of one of the parts of a	object, such as facial features on			
<ul> <li>rocks are all hard in nature</li> </ul>	food chain or web has no, or	their own shadow			
<ul> <li>rock-like, man-made substances</li> </ul>	limited, consequences on the rest	<ul> <li>shadows result from objects</li> </ul>			
such as concrete or brick are rocks	of the chain	giving off darkness.			
materials which have been	• there is always plenty of food for	Sime on darkiess.			
polished or shaped for use, such as	wild animals				
a granite worktop, are not rocks as	• your stomach is where your belly				
they are no longer 'natural'	button is				
<ul> <li>certain found artefacts, like old</li> </ul>	<ul> <li>food is digested only in the</li> </ul>				
bits of pottery or coins, are fossils	stomach				
• a fossil is an actual piece of the					
•	when you have a meal, your food				
extinct animal or plant	goes down one tube and your drink down another				
• soil and compost are the same					
thing.	<ul> <li>the food you eat becomes "poo"</li> </ul>				
	and the drink becomes "wee".				



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Autumn 1	Autumn 2	Spring 1	Spring 2	Summer
Rocks	Y4 swap - Animals including	Light	Forces and magnets	Plants
Specific Knowledge -	Humans	Specific Knowledge -	Specific Knowledge -	Specific Knowledge -
Compare and group together	Specific Knowledge -	Recognise that they need light in	Compare how things move on	• Identify and describe the functions of different parts of flowering plants:
different kinds of rocks on the basis	Describe the simple functions of	order to see things, and that dark is	different surfaces.	roots; stem/trunk; leaves; and flowers.
of their appearance and simple	the basic parts of the digestive	the absence of light.	<ul> <li>Notice that some forces need</li> </ul>	• Explore the requirements of plants for life and growth (air, light, water,
physical properties.	system in humans.	• Notice that light is reflected from	contact between two objects, but	nutrients from soil, and room to grow) and how they vary from plant to
Describe in simple terms how	Identify the different types of	surfaces.	magnetic forces can act at a	plant.
fossils are formed when things that	teeth in humans and their simple	Recognise that light from the sun	distance.	• Investigate the way in which water is transported within plants.
have lived are trapped within rock.	functions.	can be dangerous and that there	Observe how magnets attract or	• Explore the part that flowers play in the life cycle of flowering plants,
Recognise that soils are made	Construct and interpret a variety	are ways to protect their eyes.	repel each other and attract some	including pollination, seed formation and seed dispersal.
from rocks and organic matter.	of food chains, identifying	Recognise that shadows are	materials and not others.	
	producers, predators and prey.	formed when the light from a light	Compare and group together a	Key learning
Key learning		source is blocked by an opaque	variety of everyday materials on	Many plants, but not all, have roots, stems/trunks, leaves and
Rock is a naturally occurring	Key learning	object.	the basis of whether they are	flowers/blossom. The roots absorb water and nutrients from the soil and
material. There are different types	Food enters the body through the	• Find patterns in the way that the	attracted to a magnet, and identify	anchor the plant in place. The stem transports water and
of rock e.g. sandstone, limestone,	mouth. Digestion starts when the	size of shadows change.	some magnetic materials.	nutrients/minerals around the plant and holds the leaves and flowers up in
slate etc. which have different	teeth start to break the food down.		Describe magnets as having two	the air to enhance photosynthesis, pollination and seed dispersal. The
properties. Rocks can be hard or	Saliva is added and the tongue rolls	Key learning	poles.	leaves use sunlight and water to produce the plant's food. Some plants
soft. They have different sizes of	the food into a ball. The food is	We see objects because our eyes	Predict whether two magnets will	produce flowers which enable the plant to reproduce. Pollen, which is
grain or crystal. They may absorb	swallowed and passes down the	can sense light. Dark is the absence	attract or repel each other,	produced by the male part of the flower, is transferred to the female part
water. Rocks can be different	oesophagus to the stomach. Here	of light. We cannot see anything in	depending on which poles are	of other flowers (pollination). This forms seeds, sometimes contained in
shapes and sizes (stones, pebbles,	the food is broken down further by	complete darkness. Some objects,	facing.	berries or fruits which are then dispersed in different ways. Different plant
boulders). Soils are made up of	being churned around and other	for example, the sun, light bulbs		require different conditions for germination and growth.
pieces of ground down rock which	chemicals are added. The food	and candles are sources of light.	Key learning	
may be mixed with plant and	passes into the small intestine.	Objects are easier to see if there is	A force is a push or a pull. When an	
animal material (organic matter).	Here nutrients are removed from	more light. Some surfaces reflect	object moves on a surface, the	
The type of rock, size of rock pieces	the food and leave the digestive	light. Objects are easier to see	texture of the surface and the	
and the amount of organic matter	system to be used elsewhere in the	when there is less light if they are	object affect how it moves. It may	
affect the property of the soil.	body. The rest of the food then	reflective. The light from the sun	help the object to move better or it	
Some rocks contain fossils. Fossils were formed millions of years ago.	passes into the large intestine. Here the water is removed for use	can damage our eyes and therefore we should not look directly at the	may hinder its movement e.g. ice skater compared to walking on ice	
When plants and animals died, they	elsewhere in the body. What is left	sun and can protect our eyes by	in normal shoes. A magnet attracts	
fell to the seabed. They became	is then stored in the rectum until it	wearing sunglasses or sunhats in	magnetic material. Iron and nickel	
covered and squashed by other	leaves the body through the anus	bright light. Shadows are formed on	and other materials containing	
material. Over time the dissolving	when you go to the toilet. Humans	a surface when an opaque or	these, e.g. stainless steel, are	
animal and plant matter is replaced	have four types of teeth: incisors	translucent object is between a	magnetic. The strongest parts of a	
by minerals from the water.	for cutting; canines for tearing; and	light source and the surface and	magnet are the poles. Magnets	
sy millerais nom the water.	molars and premolars for grinding	blocks some of the light. The size of	have two poles – a north pole and a	
	(chewing). Living things can be	the shadow depends on the	south pole. If two like poles, e.g.	
	classified as producers, predators	position of the source, object and	two north poles, are brought	
	and prey according to their place in	surface.	together they will push away from	
	the food chain.	Surface.	each other – repel. If two unlike	
			poles, e.g. a north and south, are	
			brought together they will pull	
		I	stought together they will pull	1



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			together – attract. For some forces to act, there must be contact e.g. a hand opening a door, the wind pushing the trees. Some forces can act at a distance e.g. magnetism. The magnet does not need to touch the object that it attracts.		
Vocabulary					
Rock, stone, pebble, boulder, grain, crystals, layers, hard, soft, texture, absorb water, soil, fossil, marble, chalk, granite, sandstone, slate, soil, peat, sandy/chalk/clay soil	Digestive system, digestion, mouth, teeth, saliva, oesophagus, stomach, small intestine, nutrients, large intestine, rectum, anus, teeth, incisor, canine, molar, premolars, herbivore, carnivore, omnivore, producer, predator, prey, food chain	Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous	Force, push, pull, twist, contact force, non-contact force, magnetic force, magnet, strength, bar magnet, ring magnet, button magnet, horseshoe magnet, attract, repel, magnetic material, metal, iron, steel, poles, north pole, south pole	Photosynthesis, pollen, insect/wind p dispersal (wind dispersal, animal disp	
		Opportunities for	Links in Learning		



Science						
	Year 4					
		National C				
			Learning			
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer		
States of matter	Sound	Electricity	Y3 swap - Animals Including	Living things & their habitats		
Previous Learning:	Previous Learning:	Previous Learning:	Humans-Skeletons and Muscles	Previous Learning:		
Distinguish between an object and	Describe what they see, hear and	N/A	Previous Learning:	Identify and name a variety of common wild and garden plants, including		
the material from which it is made.	feel whilst outside. (Reception –		Identify and name a variety of	deciduous and evergreen trees. (Y1 - Plants)		
(Y1 - Everyday materials)	Sound)	Common misconceptions:	common animals including fish,	Identify and describe the basic structure of a variety of common flowering		
Identify and name a variety of	Identify, name, draw and label the	Some children may think:	amphibians, reptiles, birds and	plants, including trees. (Y1 - Plants)		
everyday materials, including wood,	basic parts of the human body and	<ul> <li>electricity flows to bulbs, not</li> </ul>	mammals. (Y1 - Animals, including	Identify and name a variety of common animals including fish, amphibians,		
plastic, glass, metal, water, and	say which part of the body is	through them	humans)	reptiles, birds and mammals. (Y1 - Animals including humans)		
rock. (Y1 - Everyday materials)	associated with each sense. (Y1 -	<ul> <li>electricity flows out of both ends</li> </ul>	Identify and name a variety of	Describe and compare the structure of a variety of common animals (fish,		
Describe the simple physical	Animals, including humans)	of a battery	common animals that are	amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals,		
properties of a variety of everyday		<ul> <li>electricity works by simply coming</li> </ul>	carnivores, herbivores and	including humans) Identify and name a variety of plants and animals in		
materials. (Y1 - Everyday materials)	Common misconceptions:	out of one end of a battery into the	omnivores. (Y1 - Animals, including	their habitats, including microhabitats. (Y2 - Living things and their		
Compare and group together a	Pitch and volume are frequently	component.	humans)	habitats)		
variety of everyday materials on	confused, as both can be described		Describe and compare the structure	Common misconceptions:		
the basis of their simple physical	as high or low.		of a variety of common animals	Some children may think:		
properties. (Y1 - Everyday	Some children may think:		(fish, amphibians, reptiles, birds	<ul> <li>the death of one of the parts of a food chain or web has no or limited</li> </ul>		
materials) Identify and compare the suitability	<ul> <li>sound is only heard by the listener</li> </ul>		and mammals, including pets). (Y1 - Animals, including humans)	consequences on the rest of the chain • there is always plenty of food for wild animals		
of a variety of everyday materials,	<ul> <li>sound only travels in one</li> </ul>		Find out about and describe the	<ul> <li>animals are only land-living creatures</li> </ul>		
including wood, metal, plastic,	direction from the source		basic needs of animals, including	<ul> <li>animals and plants can adapt to their habitats, however they change</li> </ul>		
glass, brick, rock, paper and	<ul> <li>sound can't travel through solids</li> </ul>		humans, for survival (water, food	changes to habitats are negative.		
cardboard for particular uses. (Y2 -	and liquids		and air). (Y2 - Animals, including			
Uses of everyday materials)	<ul> <li>high sounds are load and low</li> </ul>		humans) Describe the importance			
Find out how the shapes of solid	sounds are quiet.		for humans of exercise, eating the			
objects made from some materials			right amounts of different types of			
can be changed by squashing,			food, and hygiene. (Y2 - Animals,			
bending, twisting and stretching.			including humans)			
(Y2 - Uses of everyday materials)			Common misconceptions:			
			Some children may think:			
Common misconceptions:			<ul> <li>certain whole food groups like</li> </ul>			
Some children may think:			fats are 'bad' for you			
<ul> <li>'solid' is another word for hard or</li> </ul>			• certain specific foods, like cheese			
opaque			are also 'bad' for you			
solids are hard and cannot break     are change share easily and are			<ul> <li>diet and fruit drinks are 'good' for</li> </ul>			
or change shape easily and are			you			
often in one piece <ul> <li>substances made of very small</li> </ul>			<ul> <li>snakes are similar to worms, so they must also be invertebrates</li> </ul>			
particles like sugar or sand cannot			<ul> <li>invertebrates have no form of</li> </ul>			
be solids			skeleton.			
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Sound Elect edge- Specific Knowledg	tricity Y3 swap - Anim	ring 2 Summer	
edge- Specific Knowledg		development of the second s	
<ul> <li>run on electricity.</li> <li>Construct a simple electrical circuit, ion aming its basic parcells, wires, bulbs, buzzers.</li> <li>Identify whether will light in a simple based on whether is part of a complet battery.</li> <li>Recognise that a and closes a circuit this with whether lights in a simple set.</li> <li>Recognise some conductors and in associate metals w conductors.</li> <li>Key learning</li> </ul>	So na appliances that in appliances that .Specific Knowledge • Identify that anim 	Specific Knowledge- 	ntify and name a ment. is can sometimes ays according to their d name living things. ment to which they change naturally e.g. ause the positive human way (i.e. negative also change with the
	<ul> <li>features of the duced it.</li> <li>between the ind and the strength is that produced it.</li> <li>t sounds get fainter from the sound s.</li> <li>res vibrations which a medium from the ars. Different as solids, liquids and sound, but sound inough a vacuum (an matter). The</li> <li>Identify whether will light in a simple is part of a complication will battery.</li> <li>Recognise that and closes a circuit this with whether lights in a simple is Recognise some conductors.</li> <li>Key learning Many household appliances run on appliances run on anter sound sound.</li> </ul>	features of the duced it. between the and and the strength s that produced it. t sounds get fainter from the sound s.• Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.other animals had muscles for supp movement.* Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators, and associate metals with being good conductors.Key learning movement* Reveluence this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors.order to get the need. Food conta different nutrien conductors.* Reveluence to supply movement.order to get the 	<ul> <li>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</li> <li>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</li> <li>Recognise some common conductors and insulators, and a medium from the associate metals with being good conductors.</li> <li>Resognise that a switch opens and closes a circuit.</li> <li>Recognise some common conductors and insulators, and associate associate associate associate, and enditing from the and the strength.</li> <li>Recognise some common conductors.</li> <li>Recognise and insulators, and associate associate associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good conductors.</li> <li>Recognise and insulators, and associate metals with being good associate metals with being good and hy the body to stay healthy. A piece of food will often provide a range of nutrients. Humans, and some other</li> <li>Recognise and insulators, and associate metals and hy the body to stay healthy. A piece of food will often provide a ra</li></ul>



				SCCRE .
a heap and they do not keep a level surface when tipped. Each individual grain demonstrates the properties of a solid. Melting is a state change from solid to liquid. Freezing is a state change from liquid to solid. The freezing point of water is 0oC. Boiling is a change of state from liquid to gas that happens when a liquid is heated to a specific temperature and bubbles of the gas can be seen in the liquid. Water boils when it is heated to 100oC. Evaporation is the same state change as boiling (liquid to gas), but it happens slowly at lower temperature is higher, the liquid is spread out or it is windy. Condensation is the change back from a gas to a liquid caused by cooling. Water at the surface of seas, rivers etc. evaporates into water vapour (a gas). This rises, cools and condenses back into a liquid forming clouds. When too much water has condensed, the water droplets in the cloud get too heavy and fall back down as rain, snow, sleet etc. and drain back into rivers etc. This is known as precipitation. This is the water cycle.	us to hear (sense) the sound. The loudness (volume) of the sound depends on the strength (size) of vibrations which decreases as they travel through the medium. Therefore, sounds decrease in volume as you move away from the source. A sound insulator is a material which blocks sound effectively. Pitch is the highness or lowness of a sound and is affected by features of objects producing the sounds. For example, smaller objects usually produce higher pitched sounds.	consists of a cell or battery connected to a component using wires. If there is a break in the circuit, a loose connection or a short circuit, the component will not work. A switch can be added to the circuit to turn the component on and off. Metals are good conductors so they can be used as wires in a circuit. Non-metallic solids are insulators except for graphite (pencil lead). Water, if not completely pure, also conducts electricity.		
			pulary	
Solid, liquid, gas, state change, melting, freezing, melting point, boiling point, evaporation, temperature, water cycle	Sound, source, vibrate, vibration, travel, pitch (high, low), volume, faint, loud, insulation	Electricity, electrical appliance/device, mains, plug, electrical circuit, complete circuit, component, cell, battery, positive, negative, connect/connections, loose connection, short circuit, crocodile clip, bulb, switch, buzzer, motor, conductor, insulator, metal, non-metal, symbol	Nutrition, nutrients, carbohydrates, sugars, protein, vitamins, minerals, fibre, fat, water, skeleton, bones, muscles, joints, support, protect, move, skull, ribs, spine	Classification, classification keys, environment, habitat, human impact, positive, negative, migrate, hibernate



		Opportunities for Links in Learning									
		Water cycle - Y3 geography. Y4 States of matter									
		Year 5									
		National Curriculum									
Areas of Learning											
Autumn 1	Autumn 2	Spring		Summer 1	Summer 2						
Earth and Space	Forces	Properties and changes of materials		Living things and their habitats	Animals, including humans						
Previous Learning:	Previous Learning:	Previous Learning:		Previous Learning:	Previous Learning:						
Explore the natural world around	Compare how things move on	Identify and compare the suitability of a variety of everyday n	naterials,	Notice that animals, including	Notice that animals, including						
them. (Reception – Earth and	different surfaces. (Y3 - Forces and	including wood, metal, plastic, glass, brick, rock, paper and ca	ardboard for	humans, have offspring which grow	humans, have offspring which grow						
space)	magnets)	particular uses. (Y2 - Uses of everyday materials)		into adults. (Y2 - Animals, including	into adults. (Y2 - Animals, including						
Describe what they see, hear and	Notice that some forces need	Find out how the shapes of solid objects made from some ma		humans)	humans)						
feel whilst outside. (Reception –	contact between two objects, but	changed by squashing, bending, twisting and stretching. (Y2 -	Uses of	Explore the part that flowers play in	Common misconceptions:						
Earth and space)	magnetic forces can act at a	everyday materials)		the life cycle of flowering plants,	Some children may think:						
Observe changes across the four	distance. (Y3 - Forces and magnets)	Compare and group together a variety of everyday materials		including pollination, seed	<ul> <li>a baby grows in a mother's</li> </ul>						
seasons. (Y1 - Seasonal changes)	Observe how magnets attract or	whether they are attracted to a magnet, and identify some m	hagnetic	formation and seed dispersal. (Y3 -	tummy						
Observe and describe weather	repel each other and attract some	materials. (Y3 - Forces and magnets)		Plants)	<ul> <li>a baby is "made".</li> </ul>						
associated with the seasons and	materials and not others. (Y3 -	Compare and group materials together, according to whether	r they are	C							
how day length varies. (Y1 -	Forces and magnets)	solids, liquids or gases. (Y4 - States of matter)	tod or cooled	Common misconceptions:							
Seasonal changes)	Compare and group together a variety of everyday materials on	Observe that some materials change state when they are hea and measure or research the temperature at which this happ	-	Some children may think: • all plants start out as seeds							
Common misconceptions:	the basis of whether they are	Celsius (°C). (Y4 - States of matter)	ens in degrees	<ul> <li>all plants start out as seeds</li> <li>all plants have flowers</li> </ul>							
Some children may think:	attracted to a magnet, and identify	Identify the part played by evaporation and condensation in	the water	<ul> <li>plants that grow from bulbs do</li> </ul>							
• the Earth is flat	some magnetic materials. (Y3 -	cycle and associate the rate of evaporation with temperature		not have seeds							
• the Sun is a planet	Forces and magnets)	of matter)		• only birds lay eggs.							
• the Sun rotates around the Earth	Describe magnets as having two										
<ul> <li>the Sun moves across the sky</li> </ul>	poles. (Y3 - Forces and magnets)	Common misconceptions:									
during the day	Predict whether two magnets will	Lots of misconceptions exist around reversible and irreversibl	le changes,								
• the Sun rises in the morning and	attract or repel each other,	including around the permanence or impermanence of the ch	nange. There is								
sets in the evening	depending on which poles are	confusion between physical/chemical changes and reversible	and								
<ul> <li>the Moon appears only at night</li> </ul>	facing. (Y3 - Forces and magnets)	irreversible changes. They do not correlate simply. Chemical of	changes result								
<ul> <li>night is caused by the Moon</li> </ul>	Common misconceptions:	in a new material being formed. These are mostly irreversible									
getting in the way of the Sun or the	Some children may think:	changes are often reversible but may be permanent. These de									
Sun moving further away from the	<ul> <li>the heavier the object the faster it</li> </ul>	new materials e.g. cutting a loaf of bread. It is still bread, but	it is no longer								
Earth.	falls, because it has more gravity	a loaf. The shape, but not the material, has been changed.									
	acting on it	Some children may think:									
	<ul> <li>forces always act in pairs which</li> </ul>	thermal insulators keep cold in or out									
	are equal and opposite	thermal insulators warm things up									
	<ul> <li>smooth surfaces have no friction</li> <li>shipts always travel better on</li> </ul>	<ul> <li>solids dissolved in liquids have vanished and so you cannot</li> <li>lit candles ask molt, which is a reversible change</li> </ul>	get them back								
	<ul> <li>objects always travel better on smooth surfaces</li> </ul>	<ul> <li>lit candles only melt, which is a reversible change.</li> </ul>									
	<ul><li>smooth surfaces</li><li>a moving object has a force which</li></ul>										
L											



	<ul> <li>is pushing it forwards and it stops</li> <li>when the pushing force wears out</li> <li>a non-moving object has no</li> <li>forces acting on it</li> <li>heavy objects sink and light</li> <li>objects float.</li> </ul>			
Autumn 1	Autumn 2	Spring	Summer 1	Summer 2
Earth and Space Specific Knowledge- • Describe the movement of the Earth, and other planets, relative to the Sun in the solar system. • Describe the movement of the Moon relative to the Earth. • Describe the Sun, Earth and Moon as approximately spherical bodies. • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. <b>Key learning</b> The Sun is a star. It is at the centre of our solar system. There are 8 planets (can choose to name them, but not essential). These travel around the Sun in fixed orbits. Earth takes 365¼ days to complete its orbit around the Sun. The Earth rotates (spins) on its axis every 24 hours. As Earth rotates half faces the Sun (day) and half is facing away from the Sun (night). As the Earth rotates, the Sun appears to move across the sky. The Moon orbits the Earth. It takes about 28 days to complete its orbit. The Sun, Earth and Moon are approximately spherical.	Forces Specific Knowledge- • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • 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. Key learning A force causes an object to start moving, stop moving, speed up, slow down or change direction. Gravity is a force that acts at a distance. Everything is pulled to the Earth by gravity. This causes unsupported objects to fall. Air resistance, water resistance and friction are contact forces that act between moving surfaces. The object may be moving through the air or water, or the air and water may be moving over a stationary object. A mechanism is a device that allows a small force to be increased to a larger force. The pay back is that it requires a greater movement. The small force moves a long distance and the resulting large force moves a small distance, e.g. a crowbar or bottle top remover. Pulleys, levers and gears	<ul> <li>Properties and changes of materials</li> <li>Specific Knowledge- <ul> <li>Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.</li> <li>Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution.</li> <li>Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.</li> <li>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</li> <li>Demonstrate that dissolving, mixing and changes of state are reversible changes.</li> <li>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.</li> </ul> </li> <li>Key learning <ul> <li>Materials have different uses depending on their properties and state (liquid, solid, gas). Properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets. Some materials will dissolve in a liquid and form a solution while others are insoluble and form sediment. Mixtures can be separated by filtering, sieving and evaporation. Some changes to materials such as dissolving, mixing and changes of state are reversible, but some changes such as during wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible.</li> </ul> </li> </ul>	Living things and their habitats Specific Knowledge- • 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. Key learning As part of their life cycle, plants and animals reproduce. Most animals reproduce sexually. This involves two parents where the sperm from the male fertilises the female egg. Animals, including humans, have offspring which grow into adults. In humans and some animals, these offspring will be born live, such as babies or kittens, and then grow into adults. In other animals, such as chickens or snakes, there may be eggs laid that hatch to young which then grow to adults. Some young undergo a further change before becoming adults e.g. caterpillars to butterflies. This is called a metamorphosis. Plants reproduce both sexually and asexually. Bulbs, tubers, runners and plantlets are examples of asexual plant reproduction which involves only one parent. Gardeners may force plants to reproduce asexually by taking cuttings. Sexual reproduction occurs through pollination, usually involving wind or insects.	Animals, including humans Specific Knowledge- • Describe the changes as humans develop to old age. Key learning When babies are young, they grow rapidly. They are very dependent on their parents. As they develop, they learn many skills. At puberty, a child's body changes and develops primary and secondary sexual characteristics. This enables the adult to reproduce. This needs to be taught alongside PSHE.



Earth, Sun, Moon, sphere, circle, evidence, flat, round. star, planet, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune. orbit, levers	ble machines. e, gravity, Earth, air resistance, er resistance, friction, chanisms, simple machines,	Vocabulary Thermal/electrical insulator/conductor, change of state, mixture, dissolve, solution, soluble, insoluble, filter, sieve, reversible/non-reversible change,	Life cycle, reproduce, sexual,	Puberty – the vocabulary to
vidence, flat, round. star, planet, water Mercury, Venus, Mars, Jupiter, mech aturn, Uranus, Neptune. orbit, lever	er resistance, friction, hanisms, simple machines,	solution, soluble, insoluble, filter, sieve, reversible/non-reversible change,		Puberty – the vocabulary to
rotate, heliocentric, geocentric. day, night, rotate, axis, shadow, time, countries, daylight, night time, distance, light, dark, rotate, face, spherical, solar system, star, planets	rs, pulleys, gears	burning, rusting, new material	sperm, fertilises, egg, live young, metamorphosis, asexual, plantlets, runners, bulbs, cuttings	describe sexual characteristics: e sperm, fetus, baby, toddler, chilo teenager, adult, old age, development, growth, human, infancy, childhood, adulthood, adolescence, prenatal, data, tabl bar graphs, line graphs, present, findings, information, height, ma puberty, changes, breasts, pubic hair, hips, facial hair, body hair, genitals, muscular development, menstruation, old age, development, growth rate, decrease, changes, compare. gestation, animals, vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, protoze coelenterates, flatworms, anneli worms, echinoderms, molluscs, arthropods, arachnids, crustaceaa insects, myriapods, life expectan gestation, animals, variable, association, causal relationship, correlation, positive, negative.
		Opportunities for Links in Learning		
		Opportunities for Links in Learning		correlation, positive, negative



		Scie	ence	
		Yea	ar 6	
		National C	Curriculum	
		Areas of	Learning	
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer
Light	Electricity	Evolution and Inheritance	Living Things and their habitats	Animals including humans
Previous Learning:	Previous Learning:	Previous Learning:	Previous Learning:	Previous Learning:
<ul> <li>Recognise that they need light in</li> </ul>	<ul> <li>Identify common appliances that</li> </ul>	Identify that most living things live	<ul> <li>Recognise that living things can</li> </ul>	Describe the importance for humans of exercise, eating the right amounts
order to see things and that dark is	run on electricity. (Y4 - Electricity)	in habitats to which they are suited	be grouped in a variety of ways. (Y4	of different types of food, and hygiene. (Y2 - Animals, including humans)
the absence of light. (Y3 - Light)	<ul> <li>Construct a simple series</li> </ul>	and describe how different habitats	<ul> <li>Living things and their habitats)</li> </ul>	Identify that animals, including humans, need the right types and amount
<ul> <li>Notice that light is reflected from</li> </ul>	electrical circuit, identifying and	provide for the basic needs of	<ul> <li>Explore and use classification keys</li> </ul>	of nutrition, and that they cannot make their own food; they get nutrition
surfaces. (Y3 - Light)	naming its basic parts, including	different kinds of animals and	to help group, identify and name a	from what they eat. (Y3 - Animals, including humans) Describe the simple
<ul> <li>Recognise that light from the sun</li> </ul>	cells, wires, bulbs, switches and	plants, and how they depend on	variety of living things in their local	functions of the basic parts of the digestive system in humans. (Y4 -
can be dangerous and that there	buzzers. (Y4 - Electricity)	each other. (Y2 - Living things and	and wider environment. (Y4 - Living	Animals, including humans)
are ways to protect their eyes. (Y3 -	<ul> <li>Identify whether or not a lamp</li> </ul>	their habitats)	things and their habitats)	Identify the different types of teeth in humans and their simple functions.
Light)	will light in a simple series circuit,	Notice that animals, including	<ul> <li>Describe the differences in the</li> </ul>	(Y4 - Animals, including humans)
<ul> <li>Recognise that shadows are</li> </ul>	based on whether or not the lamp	humans, have offspring which grow	life cycles of a mammal, an	Common misconceptions:
formed when the light from a light	is part of a complete loop with a	into adults. (Y2 - Animals, including	amphibian, an insect and a bird. (Y5	Some children may think:
source is blocked by an opaque	battery. (Y4 - Electricity)	humans) Explore the part that	<ul> <li>Living things and their habitats)</li> </ul>	<ul> <li>your heart is on the left side of your chest</li> </ul>
object. (Y3 - Light)	<ul> <li>Recognise that a switch opens</li> </ul>	flowers play in the life cycle of	<ul> <li>Describe the life process of</li> </ul>	<ul> <li>the heart makes blood</li> </ul>
<ul> <li>Find patterns in the way that the</li> </ul>	and closes a circuit and associate	flowering plants, including	reproduction in some plants and	• the blood travels in one loop from the heart to the lungs and around the
size of shadows change. (Y3 - Light)	this with whether or not a lamp	pollination, seed formation and	animals. (Y5 - Living things and their	body
<ul> <li>Compare and group together</li> </ul>	lights in a simple series circuit. (Y4 -	seed dispersal. (Y3 - Plants)	habitats)	when we exercise, our heart beats faster to work the muscles more
everyday materials on the basis of	Electricity)	Describe in simple terms how		<ul> <li>some blood in our bodies is blue and some blood is red</li> </ul>
their properties, including their	Recognise some common	fossils are formed when things that	Common misconceptions:	• we just eat food for energy
hardness, solubility, transparency,	conductors and insulators, and	have lived are trapped within rock.	Some children may think:	all fat is bad for you
conductivity (electrical and	associate metals with being good	(Y3 - Rocks)	all micro-organisms are harmful	all dairy is good for you
thermal), and response to magnets.	conductors. (Y4 - Electricity)	Recognise that environments can	<ul> <li>mushrooms are plants.</li> </ul>	• protein is good for you, so you can eat as much as you want
(Y5 - Properties and changes of		change and that this can sometimes		foods only contain fat if you can see it
materials)	Common misconceptions:	pose dangers to living things. (Y4 -		<ul> <li>all drugs are bad for you.</li> </ul>
C	Some children may think:	Living things and their habitats)		
Common misconceptions:	larger-sized batteries make bulbs     brighter	Describe the life process of		
Some children may think:	<ul> <li>brighter</li> <li>a complete circuit uses up</li> </ul>	reproduction in some plants and animals. (Living things and their		
• we see objects because light				
travels from our eyes to the object.	<ul><li>electricity</li><li>components in a circuit that are</li></ul>	habitats - Y5)		
	<ul> <li>components in a circuit that are closer to the battery get more</li> </ul>	Common misconceptions:		
	electricity.	Some children may think:		
	electricity.	<ul> <li>adaptation occurs during an</li> </ul>		
		animal's lifetime: giraffes' necks		
		stretch during their lifetime to		
		reach higher leaves and animals		
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eyes.representing a simple circuit in a diagram.are adapted to suit their environment in different ways and that adaptation may lead to evolution.the heart and is then pumped around the body. Nutrients, water and oxygen are transported in the blood to the muscles and other parts of the body where they are needed. As they are used, they produce carbon dioxide and other waste products. Carbon dioxide is carried by the blood that adaptation may lead to evolution.• Use the idea that light travels in shadows have the same shape as the objects that cast them.Key learning motor spin faster or a buzzer make a louder sound. If you use a battery from them goes into our eyes. The light may come directly from light sources, but for other objects some light must be reflected from the buzzers, each motor will spin moreKey learning All living things have offspring are into these groups e.g. micro- organisms such as bacteria and yeast, and toadstools and mushrooms. Plants can make their own food whereas animals cannot. Animals can be divided into twothe heart and is then pumped around the body. Nutrients, water and oxygen are transported in the blood to the muscles and other parts of the body where they are needed. As they are used, they produce carbon dioxide and other waste products. Carbon dioxide is carried by the blood back to the heart and then the cycle starts again as it is transported blood back to the heart and then the cycle starts again as it is transported blood back to the heart and then the cycle starts again as it is transported blood back to the heart and then the cycle starts again as it is transported blood back to the heart and then the cycle starts again as it is transported blood back to the heart and then the cycle starts again as it is transported blood the lungs to be removed fr					
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straight lines to explain why shadows have the same shape as the objects that cast them. Key learning Light appears to travel in straight lines, and we see objects when light sources, but for other objects some light may come directly from light to be seen. Objects that bok light to be seen. Objects that blok light the shadow will be the same as the will the turn off as well. You can use recognised circuit symbols to the renvironment and will die. use recognised circuit sy	eyes.	representing a simple circuit in a	are adapted to suit their		the heart and is then pumped around the body. Nutrients, water and
shadows have the same shape as the objects that cast them.Key learning Adding more cells to a complete circuit will make a bulb brighter, a motor spin faster or a buzzer make a louder sound. If you use a battery with a higher voltage, the same thing happens. Adding more bulbs from them goes into our eyes. The tight must be reflected from the objects that block light (are not fully transparent) will cause shadows. Because light travels in straight lines the shape of the shape of the object.Key learning evolution.grouped according to characteristics. Plants and animals are two main groups but there are to be seno. Dipetes that block light quieter. Turning a switch off (open) braks a circuit so the circuit is not cause shadows. Because light the shape of the object.Key learning evolution.dioxide and other waste products. Carbon dioxide is carried by the blood characteristics. Plants and animals are two main groups but there are organisms such as bacteria and yeast, and to a circuit symbols todioxide and other waste products. Carbon dioxide is carried by the blood back to the heart and then the cycle starts again as it is transported back to the shandow will be the same as the organisms such as bacteria and yeast, and toadstools and maing groups those that have backhones (vertebrates); and those their environment and will die. Use the rest as a circuit symbols toKey learning the same statedioxide and other waste products. Carbon dioxide is carried by the blood back to the heart and then the cycle starts again as it is transported back to the same state organisms such as bacteria and yeast, and toadstools and maing roups these that have backhones (vertebrates); and the style we are to suffer from conditions such as diabetes, how clearly we that do not (inverteb	<ul> <li>Use the idea that light travels in</li> </ul>	diagram.	environment in different ways and	Key learning	oxygen are transported in the blood to the muscles and other parts of the
the objects that cast them.Adding more cells to a complete circuit will make a bulb brighter, a motor spin faster or a buzzer make a louder sound. If you use a battery tight appears to travel in straight lines, and we see objects when light may come directly from light sources, but for other objects some object tinto our eyes. The light must be reflected from the object into our eyes for the object.Adding more cells to a complete circuit will make ach bulb ess bright. Using more motors or buzzers, each motor will spin more sources, but for other objects some will be the same as the sources, but for other object.Adding more cells to a complete circuit will make ach bulb less bright. Using more motors or buzzers, each motor will spin more sources, but for other objects some will be the same as the sources, but for other objects in the same ashe of travels in straight lines the shape of the shadow will be the same as the into the segnes or builtAdding more cells to a complete circuit will make each bulb ess bright. Using more motors or buzzers, each motor will spin more slowly and each buzzer will be travels in straight lines the shape of the shadow will be the same as the sources, bud bos chightAdding more cells to a complete circuit symbols toKey learning the same ather offlow. Any bulbs, motors or buzzers the new environment changes slowly, if the environment changes slowly, usitions the environment changes slowly, usitions the environment changes slowly, group has common characteristics.Characteristics. Plants and animals are two main groups that do not fit into these groups e.g. micro- own food whereas animals cannot. Animals can be divided into two main groups: those that have backboars. Plants and mains have characteristics that main groups:	straight lines to explain why		that adaptation may lead to	Living things can be formally	body where they are needed. As they are used, they produce carbon
Key learning Light appears to travel in straight lines, and we see objects when light from them goes into our eyes. The light may come directly from light sources, but for other objects some light mays be reflected from the object into our eyes for the object.Key learning All living things have offspring of the same kind, as features in the offspring are inherited from the parents. Due to sexual reproduction, the offspring are not to a circuit will make each bubles bright. Using more motors or slowly and each buzzer will be are the shape of the object.Key learning All living things have offspring of offspring are inherited from the parents. Due to sexual reproduction, the offspring are not to a circuit will make each bubles 	shadows have the same shape as	Key learning	evolution.	grouped according to	dioxide and other waste products. Carbon dioxide is carried by the blood
Key learning Light appears to travel in straight lines, and we see objects when light rom them goes into our eyes. The light may come directly from light sources, but for other objects some light may come directly from them object into our eyes for the objectmotor spin faster or a buzzer make a louder sound. If you use a battery offspring are inherited from the parents. Due to sexual reproduction, the offspring are onto identical to their parents and vary from each other. Plants and object into our eyes for the object.other living things that do not fit into these groups e.g. micro- organisms such as bacteria and yeast, and toadstools and mushrooms. Plants can make their own food whereas animals cannot. Animals can be divided into two main groups: those that have backbones (vertebrates); and those the shadow will be the same as the outline shape of the object.motor spin faster or a buzzer make a louder sound. If you use a battery offspring are inherited from the offspring are inherited from the parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that make them suited (adapted) to their environment changes rapidly, some small groups: fish; amphibians; reptile; birds; and mammals. Each group has common characteristics.other living things that do not fit into these groups e.g. micro- organisms such as bacteria and yeast, and toadstools and mushrooms. Plants can make their own food whereas animals cannot. Animals can be divided into two main groups: those that have backbones (vertebrates).other living things that do not fit into these groups e.g. micro- organisms such as bacteria and yeast, and toadstools and mushrooms. Plants can make their own food whereas an	the objects that cast them.	Adding more cells to a complete		characteristics. Plants and animals	back to the heart and then the cycle starts again as it is transported back to
Light appears to travel in straight lines, and we see objects when light from them goes into our eyes. The light may come directly from light sources, but for other objects some light must be reflected from the object into our eyes for the object cause shadows. Because light travels in straight lines the shape of the shape of the object. outline shape of the object.		circuit will make a bulb brighter, a	Key learning	are two main groups but there are	the lungs to be removed from the body. This is the human circulatory
lines, and we see objects when light from them goes into our eyes. The light may come directly from light sources, but for other objects some light must be reflected from the object into our eyes for the object (are not fully transparent) will cause shadows. Because light travels in straight lines the shape of the shadow will be the same as the outline shape of the object.with a higher voltage, the same offspring are inherited from the parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that make them suited (adapted) to their environment changes rapidly, some travels in straight lines the shape of the shadow will be the same as the outline shape of the object.with a higher voltage, the same thing happens. Adding more bulbs parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that make them suited (adapted) to their environment. If the environment changes rapidly, some 	Key learning	motor spin faster or a buzzer make	All living things have offspring of	other living things that do not fit	system. Diet, exercise, drugs and lifestyle have an impact on the way our
from them goes into our eyes. The light may come directly from light sources, but for other objects some light must be reflected from the object into our eyes for the object (are not fully transparent) will cause shadows. Because light travels in straight lines the shape of the shado will be the same as the outline shape of the object.thing happens. Adding more bulbs parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that to be seen. Objects that block light travels in straight lines the shape of the shado will be the same as the outline shape of the object.thing happens. Adding more bulbs parents. Due to sexual reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that their environment changes slowly,yeast, and toadstools and mushrooms. Plants can make their own food whereas animals cannot. Animals can be divided into two main groups: those that have backbones (vertebrates); and those their environment changes rapidly, some variations of a species may not suit the new environment changes slowly,the new environment changes slowly, group has common characteristics.think, and generally how fit and well we feel. Some conditions are caused the inhink, and generally how fit and well we feel. Some conditions are caused by deficiencies in our diet e.g. lack of vitamins.	Light appears to travel in straight	a louder sound. If you use a battery	the same kind, as features in the	into these groups e.g. micro-	bodies function. They can affect how well our heart and lungs work, how
light may come directly from light sources, but for other objects some light must be reflected from the object into our eyes for the object to be seen. Objects that block light (are not fully transparent) will braks a circuit so the circuit is not travels in straight lines the shape of the shadow will be the same as the outline shape of the object.to a circuit will make each bulb less reproduction, the offspring are not identical to their parents and vary from each other. Plants and animals have characteristics that make them suited (adapted) to their environment. If the environment changes rapidly, some variations of a species may not suit the new environment changes rapidly, some use recognised circuit symbols tomushrooms. Plants can make their own food whereas animals cannot. Animals can be divided into two main groups: those that have backbones (vertebrates); and those that do not (invertebrates). Vertebrates can be divided into five small groups: fish; amphibians; reptiles; birds; and mammals. Each group has common characteristics.by deficiencies in our diet e.g. lack of vitamins. by deficiencies in our diet e.g. lack of vitamins.	lines, and we see objects when light	with a higher voltage, the same	offspring are inherited from the	organisms such as bacteria and	likely we are to suffer from conditions such as diabetes, how clearly we
sources, but for other objects some light must be reflected from the object into our eyes for the objectbright. Using more motors or identical to their parents and vary from each other. Plants and animals have characteristics that to be seen. Objects that block light (are not fully transparent) will travels in straight lines the shape of the shadow will be the same as the outline shape of the object.bright. Using more motors or identical to their parents and vary from each other. Plants and animals have characteristics that their environment. If the environment changes rapidly, some the new environment and will die. the new environment changes rapidly, some the new environment changes slowly, group has common characteristics.own food whereas animals cannot. Animals can be divided into two main groups: those that have backbones (vertebrates); and those that do not (invertebrates).cause shadows. Because light to shadow will be the same as the outline shape of the object.complete and electricity cannot the new environment changes slowly, If the environment changes slowly, If the environment changes slowly,Vertebrates can be divided into five small groups: fish; and mammals. Each group has common characteristics.	from them goes into our eyes. The	thing happens. Adding more bulbs	parents. Due to sexual	yeast, and toadstools and	think, and generally how fit and well we feel. Some conditions are caused
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the shadow will be the same as the use recognised circuit symbols to the new environment and will die. If the environment changes slowly, group has common characteristics.	0		<b>o</b> 1 <i>1 1</i>		
outline shape of the object. use recognised circuit symbols to If the environment changes slowly, group has common characteristics.	<b>.</b> .				
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		that are best suited survive in greater numbers to reproduce and pass their characteristics on to their young. Over time, these inherited characteristics become more dominant within the population. Over a very long period of time, these characteristics may be so different to how they were originally that a new species is created. This is evolution. Fossils give us evidence of what lived on the Earth millions of year ago and provide evidence to support the theory of evolution. More recently,	number of groups, including insects, spiders, snails and worms. Plants can be divided broadly into two main groups: flowering plants; and non-flowering plants.	
		scientists such as Darwin and Wallace observed how living things adapt to different environments to		
		become distinct varieties with their own characteristics.		
		Vocat	pulary	
Light, light source, dark, absence of light, transparent, translucent, opaque, shiny, matt, surface, shadow, reflect, mirror, sunlight, dangerous, straight lines, light rays	Circuit, complete circuit, circuit diagram, circuit symbol, cell, battery, bulb, buzzer, motor, switch, voltage N.B. Children do not need to understand what voltage is, but will use volts and voltage to describe different batteries. The words "cells" and "batteries" are now used interchangeably.	Offspring, sexual reproduction, vary, characteristics, suited, adapted, environment, inherited, species, fossils	Vertebrates, fish, amphibians, reptiles, birds, mammals, invertebrates, insects, spiders, snails, worms, flowering, non- flowering	Heart, pulse, rate, pumps, blood, blood vessels, transported, lungs, oxygen, carbon dioxide, nutrients, water, muscles, cycle, circulatory system, diet, exercise, drugs, lifestyle



Working scientifically Reception	Aut 1	Aut 2	Spr 1	Spr 2	Sum1	Sum2
asking simple questions and recognising that they can be answered in different ways	TAPS: <u>Brown</u> apples					
performing simple tests		TAPS: <u>Incy</u> spider shelter				
observing closely, using simple equipment	TAPS: Forensic Footprints		TAPS: <u>Frozen</u> <u>balloons</u>	Observing caterpillars & chicken eggs hatching.		
gathering and recording data to help in answering questions					TAPS: Scavenger sort	
identifying and classifying						TAPS: <u>Butter</u>
using their observations and ideas to suggest answers to questions		Blubber experiment		TAPS: <u>Taste test</u>		

Working scientifically Y1	Aut 1	Aut 2	Spr 1	Spr 2	Sum1	Sum2
asking simple questions and recognising that they can be answered in different ways				TAPS:		
				Materials: transparency		
performing simple tests				TAPS: Materials		
				floating & sinking		
observing closely, using simple equipment		observing and		observing and		TAPS: Plants:
		recording the weather		recording the weather		<u>structure, leaf</u> look
gathering and recording data to help in answering questions			TAPS: <u>Season:</u> seasonal change			
identifying and classifying			<u>scasonar change</u>		TAPS: Nature	
					spotters	
using their observations and ideas to suggest answers to questions	TAPS: <u>Body</u>	observing and		observing and		
	parts	recording the		recording the		
		weather		weather		



Working scientifically Y2	Aut	Spr	Sum1	Sum2
asking simple questions and recognising that they can be answered in different ways				
	TAPS: <u>Separating colours</u> (link to Art)			
performing simple tests			TAPS: <u>Daisy</u> footprints	
observing closely, using simple equipment		TAPS_Feeding simulation		
gathering and recording data to help in answering questions	TAPS: Materials hunt			
identifying and classifying		TAPS: Living things: nature spotters		
using their observations and ideas to suggest answers to questions				TAPS: <u>Animals</u> inc H: handspans

Working Scientifically Y3	Aut 1	Aut 2	Spr 1	Spr 2	Sum1	Sum2
asking relevant questions and using different types of scientific enquiries to answer them				TAPS: <u>Cupcake</u> parachutes		
setting up simple practical enquiries, comparative and fair tests				TAPS:Forces: shoe grip		
making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers						TAPS: <u>Plants:</u> <u>measuring</u> <u>plants</u>
gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables			TAPS: <u>Light:</u> <u>making</u> <u>shadows</u>			
reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions identifying differences, similarities or changes related to simple scientific ideas and processes	TAPS: <u>Rocks:</u> <u>rock reports</u>	TAPS: Teeth in liquid				
using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions using straightforward scientific evidence to answer questions or to support their findings.						



Working Scientifically Y4	Aut 1	Aut 2	Spr 1	Spr 2	Sum1	Sum2
asking relevant questions and using different types of scientific enquiries to answer them		TAPS Sound: investigating pitch		TAPS: <u>Animals</u> inc Humans: investigating <u>skeletons</u>		
setting up simple practical enquiries, comparative and fair tests	TAPS <u>Materials:</u> <u>drying materials</u>					
making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers			TAPS: <u>Electricity:</u> <u>Circuit products</u>			
gathering, recording, classifying and presenting data in a variety of ways to help in answering questions recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables						TAPS: <u>Living</u> <u>things: local</u> <u>survey</u>
reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions identifying differences, similarities or changes related to simple scientific ideas and processes		TAPS: <u>Sound:</u> string telephones				
using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions using straightforward scientific evidence to answer questions or to support their findings.	TAPS: <u>Materials:</u> <u>Dunking</u> <u>biscuits</u>					

Working Scientifically Y5	Aut 1	Aut 2	Spr 1	Spr 2	Sum1	Sum2



planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary			TAPS: <u>Mat: dissolving</u>		
using test results to make predictions to set up further comparative and fair tests				TAPS: <u>Materials:</u> insulation layers	
taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate					TAPS: <u>Humans:</u> growth survey
recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	TAPS: <u>Space:</u> <u>craters</u>				
reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations				TAPS: <u>Living</u> <u>things: life cycle</u> <u>research</u>	
identifying scientific evidence that has been used to support or refute ideas or arguments		TAPS: Forces: aquadynamics or marble run or Bridge engineers			

Working Scientifically Y6	Aut 1	Aut 2	Spr 1	Spr 2	Sum1	Sum2



planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	TAPS: <u>Light</u> <u>questions</u>					
using test results to make predictions to set up further comparative and fair tests					TAPS: <u>Animals</u> inc Humans: heart rate	
taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate		TAPS: Elect: conductive dough				
recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs						Transition TAPS: Blood splatter
reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations				TAPS <u>Living</u> <u>things:</u> <u>invertebrate</u> <u>research</u>		
identifying scientific evidence that has been used to support or refute ideas or arguments			TAPS: Evolution: fossil habitats			