✓ AUTUMN 1	×	✓	AUTUMN 2	• 0	SPRING 1	~	• SPRING 2	 ✓ 	SUMMER 1	>	✓ SUMMER 2
\checkmark		~			✓ YEAR 1/2 Cycl	e A 🗸 🗸		\checkmark			\checkmark
			Everyday Materials To identify the difference between and object and the material which it is made from. To identify and name a variety of everyday materials - plastic, glass, rubber, wood, rock, paper, brick and metal. To identify and name different properties of materials. To identify whether materials are hard or soft. To identify whether materials are rough or smooth. To identify whether materials are dull or shiny. To identify whether materials are bendy or stiff. To identify whether materials are bendy or stiff. To identify whether materials are waterproof or absorbent. WS To group and sort materials, objects or living things based on their properties or features, with support. To begin to explain, with support, what the data gathered shows and how it can help answer questions. To use a variety of simple equipment to carry out scientific enquiries, with support, simple scientific language, and vocabulary. To carry out simple tests, with support. To begin to notice, with support, patterns and relationships from observations.	 ✓ Anima Huma ✓ To iden and lab the hun elbow, foot, w ✓ To iden senses hearing the par associa e.g. no: ✓ To iden variety across (amphi mamm ✓ To iden groups (amphi mamm ✓ To iden groups (amphi mamm ✓ To iden betwee of anim structu ✓ To iden betwee of anim structu ✓ To iden betwee of anim structu ✓ To iden betwee of anim structu ✓ To knoi is and n exampl ✓ To knoi is and n ✓ To knoi ✓ To knoi	als Including Ins tify, name, draw eel the basic parts of nan body e.g. head, stomach, knee, rist, chest, shoulder. tify and name the 5 – sight, taste, smell, g, touch. To name ts of the body ted with each sense se and smell. tify and name a of common animals all groups bians, birds, fish, als, reptiles). tify and name of animals bians, birds, fish, als, reptiles) based r features. tify similarities en different groups hals e.g., their re. tify differences en different groups hals e.g., their re. w what a carnivore hame some es. w what an herbivore hame some es. w what an omnivore o name some es. w what an omnivore o name some es. w what an omnivore o name some es. w what an omnivore ties of materials, or living things, pport. (WS) observations, with t, to begin to tanswers to ons. (WS)		Seasonal Changes To name the four seasons: Spring, Summer, Autumn, Winter. To name the months associated with each season. To identify changes to the environment across the four seasons. To explain how the weather changes over the 4 seasons To describe that the day changes in length depending on which season we are in. WS To ask simple questions about the world around them, with support. (WS) To use a variety of simple equipment to carry out scientific enquiries, with support. (WS) To use simple measurements e.g., cm, metres, seconds, and grams, with support, when recording data. (WS) To observe simple changes over time, with support. (WS) To use observations, with support, to begin to suggest answers to questions. (WS) To record scientific enquiry data and observations, using scaffolded support and structured templates and frames e.g., labelled diagrams, labelled photographs. (WS Plants To name the basic parts of a tree – root, trunk, branch, twig, leaf and bark. To name some dciduous trees e.g. oak, ash, birch, weeping willow. To name some		Plants To name the basic parts of a flower, leaf and petal. To observe how some plants change over a long period of time - some trees lose their leaves, leaves change colour in Autumn, flowers die in the Winter, in Spring some plants emerge from the ground. WS To identify features or properties of materials, objects or living things, with support. (WS) To use observations, with support, to begin to suggest answers to questions. (WS) To record scientific enquiry data and observations, using scaffolded support and structured templates and frames e.g., labelled diagrams, labelled photographs. (WS) To begin to make careful observations, with support and guidance, when carrying out scientific enquiries. (WS) To observe simple changes over time, with support. (WS) To use a variety of simple equipment to carry out scientific enquiries, with support. (WS) To begin to describe how a test was carried out to find answers to questions, with scaffolded support. (WS)		 Everyday Materials To identify whether materials are waterproof or not waterproof. WS To carry out simple tests, with support. (WS) To explain, with support, why data need to be captured accurately. (WS) To identify features or properties of materials, objects or living things, with support. (WS) To group and sort materials, objects or living things based on their properties or features, with support. (WS) To use a variety of simple equipment to carry out scientific enquiries, with support. (WS) To use a variety of simple equipment to carry out scientific enquiries, with support. (WS) To begin to describe how a test was carried out to find answers to questions, with scaffolded support. (WS) To begin to make careful observations, with support and guidance, when carrying out scientific enquiries. (WS) To use observations, with support, to begin to suggest answers to questions, with support, to begin to suggest answers to questions. (WS)

	 To use simple secondary sources to find answers to questions, with support. (WS) 	 evergreen trees e.g. fir, laurel, holly. ✓ To understand the difference between wild and garden flowering plants. ✓ To name some common wild and garden flowers and plants e.g. ✓ roses, daffodils, daisies, buttercups, bluebells, ivy, cherry blossom. To observe how some plants change over a long period of time - some trees lose their leaves, leaves change colour in Autumn, flowers die in the Winter, in Spring some plants emerge from
		the ground.

		WS	
		To begin to recognise that simple questions can be answered in different ways, with support. (WS) To use a variety of simple equipment to carry out scientific enquiries, with support. (WS) To identify features or properties of materials, objects or living things, with support. (WS) To use observations, with support, to begin to suggest answers to questions. (WS) To ask simple questions about the world around them, with support. (WS) To group and sort materials, objects or living things based on their properties or features, with support. (WS) To begin to report findings from scientific enquiries in a range of ways: orally, written, labelled diagrams, with scaffolded support. (WS) To begin to use, with support, simple scientific language, and vocabulary. (WS)	





YEAR 1/2 Cycle B					
 Uses of Everyday Materials To explain how the properties of a material make them suitable for certain jobs. To describe which of the following materials: wood, metal, plastic, glass, brick, rock, paper, and cardboard, we would use to make different objects referring to their properties. To explain that some materials can change shape when we do something to them e.g. squash, bend, stretch, twist. To identify and name some materials that can be stretched e.g., rubber. To identify and name some materials that can be squashed e.g., rubber. To identify and name some materials that can be squashed e.g., rubber, foam, sponge. To identify and name some materials that can be squashed e.g., rubber, foam, sponge. To identify and name some materials that can be twisted, wool, cotton. <u>WS</u> To group and sort materials, objects or living things based on their properties or features. (WS) To begin to use simple scientific language, and vocabulary. (WS) To identify features or properties of materials, objects or living things. (WS) To use observations to begin to suggest answers to questions. (WS) To recognise that simple questions can be answered in different ways. (WS) To record scientific enquiry data and observations using structured templates and frames e.g., simple table, pictograms, tally charts, block diagrams and 	YEAR 1/2 Cycle B Animals Including Humans To identify and name animals that lay eggs. To identify and name animals that birth live young. To know that animals have offspring which grow into adults. To explain that some eggs hatch and the offspring may go through stages before they look like their parents e.g., tadpole to frog. To know that all animals need water, food, and air to survive. To know that if animals do not get enough food, air or water, they will eventually die. To know and explain why keeping clean is important. To explain that germs and viruses can spread if we don't keep ourselves clean and can make ourselves and other people ill. To explain how we can keep ourselves clean. 	 Plants To know that mature plants grow from either seeds or bulbs To explain what conditions a seed needs to grow or germinate-water and nutrients. To know that seeds and bulbs like different conditions and may grow at different rates. To know that when a seed germinates. To know that when a seed germinates the gins to grow into an adult plant. To describe what a plant need to grow - water, sunlight, nutrients, and suitable temperature. MS To begin to explain what the data gathered shows and how it can help answer questions. (WS) To begin to use simple scientific language, and vocabulary. (WS) To use simple secondary sources to find answers to questions. (WS) To use observations to 			
 labelled diagrams. (WS) To use a variety of simple equipment to carry out scientific enquiries. (WS) To carry out simple tests. (WS) To begin to make careful observations when carrying out scientific enquiries. (WS) To begin to explain what the data gathered shows and how it can help answer questions. (WS) To begin to notice patterns and relationships from observations. (WS) 	 exercise is important for us to keep healthy. To explain that exercise helps our build strong muscles and makes our heart strong too. To know and explain why different food groups and the amount of each we need is different for a balanced diet. <u>WS</u> To identify features or properties of materials, objects or living things. (WS) To group and sort materials, objects or living things based on their properties or 	Image: Strength or orgener answers to questions. (WS) ✓ To begin to report findings from scientific enquiries in a range of ways: orally, written, labelled ✓ To know and explain the order of a food chain e.g. plant, herbivore, carnivore. ✓ To know that a food chain always starts with a plant. ✓ To know that if something happens to one part of a food chain, then it will impact the others.To explain that all habitats and microhabitats provide the conditions that animals and plants like to live. ✓ To understand that a food chain. ✓ ✓ To understand that a food chain always starts with a plant.			

features. (WS) To begin		(WS) To	 To understand that if
to report findings from		observe	something happens to one
scientific enquiries in a		simple	part of a food chain, then it
range of ways: orally,		changes over	will impact the others.
written, labelled		time. (WS)	W/C
diagrams. (WS)	✓	To carry out	
✓ To carry out simple		simple tests.	 I o group and sort materials,
tests. (WS) To observe		(WS) To	objects or living things based
simple changes over		recognise that	on their
time. (WS)		simple	 properties or features. (WS)
✓ To use a variety of simple		questions can	
equipment to carry out		be answered	
scientific enquiries. (WS)		in different	
		ways. (WS)	
	✓	To record	
		scientific	
		enguiry data	
		and	
		observations	
		using structured	
		templates and	
		frames e.g.,	
		simple table,	
		pictograms,	
		tally charts,	
		block diagrams	
		and labelled	
		diagrams. (WS)	
	✓	To begin to	
		describe how a	
		test was carried	
		out to find	
		answers to	
		questions. (WS)	
	✓	To group and	
		sort materials,	
		objects or living	
		things based on	
		their properties	
		or features.	
		(WS)	

YEAR 3/4 Cycle A

			1	
<u>Rocks</u>	Animals Including	<u>Light</u>	<u>Plants</u>	Forces and
✓ To compare and	Humans	✓ To know that	✓ To identify and describe the	✓ To know that
 To Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties e.g., hard, soft, grains, 	 Humans ✓ To know that skeletons are made of bones. ✓ To know that most animals, including humans, have skeleton. 	 To know that darkness is the absence of light. To explain that we need light in order to see things. To know that there are different sources 	 To identify and describe the functions of the basic parts of a flowering plant: roots, stem/trunk, leaves, flower. To know that roots anchor the plant in place. To know that the stem holds the leaves and flowers up. 	 To know that To identify example To describe here comparisons. To know that To know that To know that
crystals. ✓ To explain that a fossil is an imprint or the preserved remains, found in	 ✓ To know that skeletons support the animal's body. ✓ To identify and name parts of a skeleton 	of light. To name and identify different sources of light. ✓ To know we need to protect	 To know that leaves use sunlight and water to produce the plant's food, and that this process is called photosynthesis. 	 ✓ To know how ✓ To know that ✓ To use knowle magnets will a poles. ✓ To know that

Magnets

a force is a push, pull or twist. camples of different forces e.g., pulling a door g a trolley etc. low things move on different surfaces, making friction is a contact force.

ow friction can affect an object.

magnets have two poles.

magnets can attract or repel each other.

a magnetic forces can act at a distance.

edge of magnets to predict whether the

attract or repel each other, referring to their

magnets attract some materials and not others.

 rock, of something that was once living. ✓ To describe, in simple terms, the process of how fossils are formed. To use observations of fossils to name living things they could be, making reasoned justifications. To explain and describe the process of weathering. ✓ To describe how weathering affects rocks, including the type of rocks. To know that soils are made from rocks and organic matter. WS ✓ To identify patterns and relationships from data and observations from science enquiries, with support. (WS) To report findings from scientific enquiries in a variety of ways, with support e.g., oral and written explanations, displays, presentation. (WS) 	 that protect parts of the body e.g. skull protects the brain. To describe how skeletons protect important organs. To identify parts of the skeleton that allows animals to move. To explain that skeletons allow movement through different types of joints. To describe how muscles work, along with joints, to enable an animal's skeleton to move. To explain that animals, including humans, need the right types and amount of nutrition. To explain that animals cannot make their own food but get nutrition from what they eat. To describe and give examples of the effects of insufficient nutrition on the human body. 	 our eyes and our skin from the sun's harmful rays. To know and name different opaque, translucent and transparent materials. To know that a shadow is formed when an object blocks light. To describe, with help, why a shadow has the same shape as the object casting it. To use knowledge of opaque materials to explain why they cast the best shadows. To understand that there are patterns in the way the size of the shadow can be changed. To know that light is reflected from the surface of objects into our eyes and that is how we see them. MS To plan, with support, which measurements and standard units (if applicable) to use to 	 To explain how differences in plants e.g. root length, help their survival. To describe the process of transpiration. To know that roots absorb water and nutrients from the soil. To know that the stem transports water and nutrients around the plant. To know that some plants have flowers, and this enables the plant to reproduce. To name and identify the parts of a flower needed for pollination: stamen, stigma, ovary. 	 To compare and group together everyday materials on whether they are magnetic or non-magnetic. To name and identify magnetic materials. <u>WS</u> To begin to ask relevant questions about the world around them. (WS) To structure questions, with support, to be answered in a scientific enquiry. (WS) To use a range of equipment appropriately, including data loggers (e.g., Lux meters), with support, to collect relevant data. (WS) To know, with support and scaffolding, the most appropriate way to record findings from scientific enquiries. (WS) To record findings from scientific enquires using drawings, labelled diagrams, keys, bar charts and tables, with scaffolding and support. (WS) To analyse findings from scientific enquiries, with support, to find answers to a question. (WS) To begin to suggest ways to improve a scientific enquiry process, with support. (WS)

Imaging when recording findings, with support. (WS) ¹ Or made careful observations to called amount of nutrition it requires. ¹ VS ¹ To made careful observations to called amount of nutrition it requires. ¹ VS ¹ To made careful observations to called amount of nutrition it requires. ¹ VS ¹ To made careful observations to called amount of nutrition it requires. ¹ VS ¹ To made careful observations to called amount of nutrition it requires. ¹ To have a range of requirements and balax, with support, toring findings, with support, ¹ To be any ¹ To be an	\checkmark	To use simple scientific	✓ To explain that the size and age	gather relevant data.	✓ To describe pollination as pollen,	✓ To begin to
findings, with support. amount of nutrition it requires. * To oue a require of comparison to collect requirements and to logans (e.g., Lux, reduced to the collect relevant data to subject and societific equires using dawneys, labeled diagrams, keys, bare charts, and tables, with scattfictings and support. * To note a require of the dawneys scattering support. * To note a require the dawneys scattering support. * To describe approximation the dawneys scattering support. * To describe approximating sca		language when recording	of an animal can affect the	(WS)	which is produced by the	observatio
 (W3) (W4) (W4) (W4) (W4) <li< td=""><td></td><td>findings, with support.</td><td>amount of nutrition it requires.</td><td>✓ To use a range of</td><td>stamen, being transferred onto</td><td>✓ To report find</td></li<>		findings, with support.	amount of nutrition it requires.	✓ To use a range of	stamen, being transferred onto	✓ To report find
 To make careful observations to collect observation to collect observa		(WS)		equipment	the stigma.	support, e.
 deservations to collect relevant data to answer a question, (NS) To cock indings from scientific enguines using diagram. Newson sec.(NS) and tables, with scientific enguines, with support, the not scientific enguines, with support, with suppo	\checkmark	To make careful		appropriately, including	✓ To know that seeds are formed	(WS)
 to callect relevant data to answer a question. (WS) To record findings from section for data securities exact with expert of the securities experiment is needed to gather effective. With support, using extended to gather effective, with support, with support, and explain the form endures explained exact with support, the securities explained explainexplained explained explained explained explained explained exp		observations to collect		meters) with support	in the ovary.	✓ To use second
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 To record findings from seaturements, with support, to impact to shape of the sector of		question. (WS)		(WS)	seeds, sometimes contained in	✓ To make lin
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 scaffoldings and support. (WS) To begin to select, with support. (WG) To any end field if exploring to an any end if an escheric enquires, with support. (WS) Simple fair test, citeria for growing, sorting, and class and observations to constrained to select the support and class and observations to make, including the frequency of observations to constrained to support, to find a new sets to any other support, with support. (WS) To gather data from science constrained to support, sing notes, with support, with support, to find a fair test, citeria for growing, sorting, and class and observations, to and grow a plant thanges through each stage of is life optice. (WS) To gather data from science constrained to support, sing notes, simple tables and standard units, (WS) To clearith enquirings, with support, with support, with support, with support, (WS) To to test ange of equipment is needed to gather relevant data. (WS) To table tables and standard units, (WS) To to extend the support, (WS) To clearith enquirings, with support, (WS) To clearith enquirings, (WAS) To clearith enquirings in a scientific enquiring in a scientific enquiry (WS) To is destribute and scientific enquiring in a scientific enquiris in		and tables, with		\checkmark To use simple scientific	 To group and sort seeds on how 	
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support, the most appropriate type of scientific enquires, with simple fair test, criteria for grouping, sorting, and classifying, comparative test etc. • (WS) • To pan, with support and scaffolding, what simple equipment is needed to gather relevant data. (WS) • To gather data from scientific enquires, with support, using notes, simple tables and standard unst. (WS) • To gather data from scientific enquires, with support, using notes, simple tables and standard unst. (WS) • To facture questions • (WS) • To facter for equires, with support, using notes, simple tables and standard unst. (WS) • To facter for equires, with support, using notes, simple tables and standard unst. (WS) • To facter for equires, with support, using notes, simple tables and standard unst. (WS) • To facter for equires, with support, using notes, simple tables and standard unst. (WS) • To repart indings from scientific enquires, with support, using notes, simple tables and standard unst. (WS) • To repart indings from scientific enquires, with support, to collect relevant data. (WS) • To repart indings from scientific enquires, with support, to collect relevant data. (WS) • To repart indings from scientific enquires, with support, to collect relevant data. (WS) • To repart indings from scientific enquires, with support, to collect relevant data. (WS) • To repart indings from scientific enquires, with support, (WS) • To repart indings from scientific enquires, with support, two support. (WS) • To repart indings from scientific enquires, with support, two support. (WS) • To repart indings from scientific enquires, with support. (WS) • To structure questions, to and observations, to support. (WS) • To structure questions, with support. (WS) •	\checkmark	To begin to select, with		✓ To analyse finding from	 To describe germination as the 	
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 scentric equipy to answer a question e.g., simple fair test, criteria for grouping, sorting, and questions into the set of the set		appropriate type of		support, to find answers to	begins to sprout and grow	
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o make predictions more generally based on data or on gathered and analysed. (WS) findings from scientific enquiries in a variety of ways, with

e.g., oral and written explanations, displays, presentations.

ondary sources to support explanations to scientific with help. (WS)

inks between observations and data from scientific enquires rch from secondary sources, with support. (WS) , with support and scaffolding, the most appropriate way to dings from scientific enquires. (WS)

 Animals Including Humans To identify and name the different type of teeth – incisors, canines, molars. To describe the simple function of each type of tooth. To identify features of the structure of a typical tooth. To know why good oral hygiene is important. To describe ways to support good oral hygiene. To know and name the basic parts of the digestive system: mouth, oesophagus, stomach, small intestine, large intestine, anus. To know how to construct and interpret food chains. To know how to construct and prey in a food chain. To know how energy is transferred through a food chain. 	 States of Matter ✓ To know the properties of solids, liquids and gases. ✓ To identify materials as solids, liquids or gases. ✓ To group materials according to whether they are solids, liquids or gases. ✓ To know the particle structure of a solid, liquid and gas. ✓ To know what a non-Newtonian 	 ✓ To know and name appliances that use electricity. ✓ To use knowledge of appliances to group them on whether they use main electricity or batteries. ✓ To know how to construct a simple series electrical circuit. ✓ To identify and name the basic parts of a series electrical circuit - cells, wires, bulbs, switches, buzzers. 	 Sound ✓ To know sound is a type of energy. To know that sound is caused by something vibrating. ✓ To know that sounds travel through a medium to the ear. ✓ To know that the further the distance from a sound source, the fainter the sound, due to weaker vibrations. 	 Living Things and Their Habitats ✓ To know that living things can be grouped according to some of their features and characteristics. ✓ To know that classification keys can be used to groups, identify and names a variety of living things. ✓ To use knowledge of classification keys to group, identify and name living things in the local and wider
 To know that energy in a food chain is provided by the Sun. To know and describe how changes to environments or populations can have implications to food chains. <u>WS</u> To report findings from scientific enquiries in a variety of ways e.g., oral and written explanations, displays and presentations. (WS) To draw simple conclusions from results to find answers to a question. (WS) To identify similarities, differences and changes in data and observations. (WS) To make careful and systematic observations to collect relevant data to answer a question. (WS) To gather data from scientific enquiries using notes, simple tables and standard units. (WS) To record findings from scientific enquiries using drawings, labelled diagrams, keys, bar charts and tables, with support. (WS) To ask relevant questions about the world around them. (WS) To decide, with support, the observations to make, including the frequency of observations, in order to find answers to a question. (WS) To decide, with support, in order to find answers to a question. (WS) 	 substance is. To know that some materials change state when they are heated and cooled. To know the temperature at which some materials change state. To know and describe the process of evaporation. To know and describe the process of condensing. To know and describe the process of condensing. To know and describe the roles played by evaporations and condensation in the water cycle. To know the relationship between temperature and rate of evaporation. WS To make careful and systematic observations to collect relevant data to answer a question. (WS) To record findings from scientific enquiries using drawings, labelled diagrams, keys, bar charts and tables, with support. (WS) To use simple scientific language when recording findings. (WS) To report findings from scientific enquiries in a variety of ways e.g., oral and written explanations, displays, presentations. (WS) To use secondary sources 	 To know what a complete series circuit is: complete loop, batter. To identify whether a lamp in a series circuit will light using knowledge of a complete circuit. To know that a switch opens and closes a circuit. To identify whether a lamp in a series circuit will light using knowledge of a switch. To know an electrical conductor allows electricity to pass through it without difficulty. To know and name some common conductors. To know that some materials, like metals, are good conductors of electricity. To know and name some common insulators. To know and name some common insulators. To know and name some common insulators. Mon and name some common insulators. To know and name some common insulators. To know and name some common insulators. Mon and name some common insulators. Mon and name some common insulators. To know and name some common insulators. 	 To know that the volume of a sound is how loud or how quiet it is. To know that stronger vibrations create a louder sound. To know that pitch is how high or low a sound is. WS To make careful and systematic observations to collect relevant data to answer a question. (WS) To record findings from scientific enquiries using drawings, labelled diagrams, keys, bar charts and tables, with support. (WS) To plan which measurements and standard units (if applicable) to use to gather relevant data. (WS) To gather data from scientific enquiries using notes, simple tables, and standard units. (WS) To analyse findings from scientific enquiries to find answers to a question. (WS) To identify patterns and relationships from data and observations from science enquiries. (WS) To structure questions to be answered in a scientific enquiry. (WS) To select, with support, the most appropriate type of scientific enquiry 	 environment. To know that environments can change which can pose danger to living things. To know some environmental changes are due to mankind e.g., an oil spill. To know that some environmental changes occur naturally e.g., flood or earthquake. <u>WS</u> To select, with support, the most appropriate type of scientific enquiry to answer a question e.g. simple fair test, criteria for grouping, sorting and classifying, comparative test etc. (WS) To record findings from scientific enquiries using drawings, labelled diagrams, keys, bar charts and tables, with support. (WS) To use secondary sources to support explanations to scientific questions. (WS)

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	 to support explanations to scientific enquiries. (WS) ✓ To make links between observations and data from scientific enquiries and research from secondary sources. (WS) To explain what needs to stay the same and what is changing in a comparative and fair test. (WS) To decide, with support, the observation to makes, including the frequency of observations, in order to find answers to a question. (WS) To identify new questions to investigate based on the observations or data obtained from an enquiry. (WS) ✓ To begin to suggest ways to improve a scientific enquiry process. (WS) 	 gathered and analysed. (WS) To decide the most appropriate way to record findings from scientific enquiries. (WS) To select, with support, the most appropriate type of scientific enquiry to answer a question e.g. simple fair test, criteria for grouping, sorting and classifying, comparative test etc. (WS) To report findings from scientific enquiries in a variety of ways e.g., oral and written explanations, displays, presentations. (WS) To explain what needs to stay the same and what is changing in comparative and fair tests. (WS) To plan, with support, what simple equipment is needed to gather relevant data. (WS) To use relevant scientific language to discuss and communicate findings, to suit a given audience. (WS) To identify patterns and 	to answers a que e.g. simple fair to criteria for group sorting and class comparative test (WS) To use a ra equipment appro- including data lo (e.g., Lux meters collect relevant of (WS) To explain what stay the same ar changing in com and fair tests. (W To draw simple conclusions from and observation answer a question To identify simila difference and cl data and observa (WS)
		 ✓ relationships from data and observations from science enquiries. (WS) ✓ To ask relevant questions about the world around them. (WS) 	
	YEAR 5/6 Cy	ycle A	

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<u>Living Things and Their</u> <u>Habitats</u>

- To explain the differences in the lifecycles of mammals, amphibians, insects, and birds.
- ✓ To know most mammals give birth to live offspring and that they look like their adult parent.
- ✓ To know that some animals experience metamorphosis e.g., caterpillar to butterfly.
- ✓ To know that metamorphosis supports survival in some species.
- ✓ To know that most animals reproduce sexually.
- ✓ To know that some animals from some broad groups (birds, reptiles, amphibians) lay eggs to produce young.
- To know the different features of different types of eggs.
- To know that eggs can be fertilised internally or externally.
- To know that some plants reproduce using sexual reproduction known as pollination.
- ✓ To know that some plants reproduce asexually e.g., bulbs and tubers.

WS

- ✓ To select and plan the most appropriate type of scientific enquiry to answer a scientific question, with support. (WS)
- ✓ To plan and select, with support, the most appropriate equipment needed to take accurate measurements to gather relevant data. (WS)
- ✓ To record data accurately using scientific diagrams and labels, tables. scatter graphs, bar and line graphs, with support. (WS)
- ✓ To use relevant and accurate scientific language to discuss, communicate

Animals Including

<u>Humans</u>

- ✓ To know that humans change as they grow older.
- ✓ To know the stages of the human life cycle.
- ✓ To describe the different features of the different stages of the human life cycle.
- To know and describe the physical changes (e.g., appearance) that occur from adulthood to old age. To know that puberty occurs during adolescence.
- To know that puberty is when sexual development occurs. To know that a gestation period is the length of time a foetus develops in the womb.

<u>WS</u>

- ✓ To explore ideas and identify different kinds of questions, with support, to be answered in scientific enquiry. (WS)
- ✓ To record data and results of increasing complexity accurately using scientific diagrams and label, tables, scatter graphs, bar and line graphs, with support. (WS)
- To analyse results and form conclusions which answer scientific enquiry questions, with support. (WS)
- To use relevant and accurate scientific language to discuss, communicate and justify scientific ideas, with support. (WS)
- To report and present findings from scientific enquiries in a variety of ways (presentations, displays etc.), including both oral and written

Earth and Space

- ✓ To know that the Sun, Earth and Moon are approximately spherical bodies.
 ✓ To know that the Sun is a star. To know and name the eight planets in the Sun is a star.
- the Solar System. ✓ To know that an
- orbit is the path of an object around a particular point in space.
- To know that the planets in the Solar System orbit the Sun. To know that the planets orbit the Sun in and ellipse shape.
- To know that the Earth rotates at an angle.
- To know that the Earth's rotation on its axis causes day and night. To know that the Earth's rotation is the movement that appears to cause the Sun to move across the sky.
- To know that one full rotation of the Earth is approximately 24 hours; a day.
- To know that a moon is a celestial body that makes an orbit around a planet.
- To know that planets in the Solar System have different numbers of moons.
- To know that the Moon orbits the Earth.

Forces

- To know that a force is a push, pull or twist and to give everyday examples of these in action.
 To know that a levers, pulleys and gears are simple machines.
 To know that a lever has a fulcrum, load, and effort.
 To know that a levers, pulleys and gears are simple machines.
 To know that a levers, pulleys and gears are simple machines.
 To explain that some simple machines allow a smaller force to have a greater effect.
 To describe how movement increases when twining a complement.
- To describe now movement increases when turning a small force into a bigger force.
 To know that gravity is a
- pulling force.
- To use knowledge of gravity to explain why unsupported objects fall towards the Earth.
- To know the difference between mass and weight e.g., mass is constant, weight is affected by gravitational force.
- To know that the mass of an object does not affect the time taken for it to fall to the ground.
- To use knowledge of friction as a contact force, to explain what causes it e.g., the resistance that one surface/object has when moving over another.
- To use knowledge of friction to explain how different surfaces affect friction.
- To explain how to increase or reduce friction.
- ✓ To know that air resistance is a pushing force.
- To describe air resistance as a force that is caused by air particles colliding with any object that moves through it.
- To use force arrows to show the size and direction of a force.
- To know that water resistance is a force that uses friction to slow things down as they move through water.

✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓

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Properties and Changes of Materials

To use knowledge of a material's/object's multiple properties e.g., hardness and ability to compress, to explain and justify its uses.

✓ To use knowledge of magnetism to explain why some materials are more magnetic than others.

✓ To use knowledge of light to describe the suitability of materials/objects for a given purpose, referring to their properties e.g. transparency.

✓ To use knowledge of conductivity to describe whether a material/ object conducts heat.

To use knowledge of a material/object's properties to justify their suitability for a given job e.g., electrical conductivity/thermal conductivity.

✓ To know what a reversible change is.

 \checkmark To know what an irreversible change is.

✓ To use knowledge of states of matter to identify examples of reversible changes.

✓ To identify examples of irreversible changes.

 To explain the difference between a chemical reaction (irreversible) and a physical reaction (reversible).

To know that an irreversible change results in the formation of new materials e.g., burning.

To know what dissolving is.

To know when a substance dissolves, a solution is made.

To know how to recover a substance from a solution. To identify some materials that will dissolve.

✓ To know the most suitable order to separate a mixture referring to the properties within the mixture.

✓ To use knowledge of materials and their properties to justify the appropriate method to separate them from a mixture e.g., filtering, sieving, evaporating etc.

To select and plan the most appropriate type of

scientific enquiry to answer a scientific question, with support. (WS)

✓ To plan and select, with support, the most appropriate equipment needed to take accurate measurements to gather relevant data. (WS)

✓ To plan what observations to make and how long to make them for, in order to obtain relevant data, with support. (WS)

To use and develop keys, with support, to identify, classify and describe living things and materials. (WS)
 To record data and results of increasing complexity accurately using scientific diagrams and label, tables, scatter graphs, bar and line graphs, with support (WS)
 To explain how measurements and observations will be taken accurately, with support. (WS)

✓ To identify, with support, when further tests and observations are needed from the analysis of the results gathered, including amendments to tests. To use a range of equipment appropriately and accurately, with support, to take readings and

observations in scientific enquires. (WS)
 ✓ To report and present findings from scientific enquiries

in a variety of ways(presentations, displays etc.),

and justify scientific ideas, with support. (WS)	forms, with increasing confidence. (WS) ✓ To identify secondary sources which support ideas and findings, separating fact from opinion, with support. (WS)	 To know the Moon orbits the Earth approximately once every 28 days. To know that the Moon does not change shape, but its apparent change in shape is due to the position of the Sun, Earth and Moon. To know the apparent changes in shape of the Moon are known as the phases of the Moon. To know what a lunar and solar eclipse is and to describe them in simple terms. To know why it is important to develop scientific knowledge of unknown areas e.g., Space. 		
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including both oral and written forms, with increasing confidence. (WS)

	~	To explain, with support, how scientific ideas have developed over time. (WS)	~	To use knowledge of water resistance to explain how the surface area affects the	√ √	To explain, with s why, when condu To identify, with
	×	To identify secondary sources which support ideas and findings,	~	resistance e.g., the greater the surface area to greater the		comparative test
	~	separating fact from opinion, with support.(WS) To take measurements with increasing accuracy	ws	resistance. To identify, with support,		
		and precision, using a range of equipment, including scaled		the different variables in a fair or comparative test e.g., control, dependent,		
	~	measurements (WS) To explore ideas and identify different kinds of	~	To explain, with support, which variables need to be controlled and why.		
		questions, with support, to be answered in scientific enquiry. (WS) To select and plan the most	✓	when conducting a fair or comparative test. (WS) To identify different		
		appropriate type of scientific enquiry to answer a scientific		causal relationships and trends in data, with support. (WS)		
		question, with support. (WS) To identify, with support, the different		refutes or support a scientific idea, with support, (WS)		
		variables in a fair or comparative test e.g., control, dependent, independent (WS)	✓	To use a range of equipment, appropriately and accurately, with		
	~	To explain, with support, which variables need to be controlled and why,		support, to take readings and observations in scientific enquiries. (WS)		
	✓	when conducting a fair or comparative test. (WS) To explain how	, v	take repeat readings, using this knowledge to explain why, with support. (WS)		
		measurements and observations will be taken accurately, with support. (WS)	~	To know and explain whether results are reliable, justifying why,		
	✓ ×	To know when and how to take repeat readings, using this knowledge to	✓	with support. (WS) To analyse results and form conclusions which		
	~	explain why, with support. (WS) To identify evidence that refutes or supports a	✓	questions, with support. (WS) To identify evidence that		
	✓	scientific idea, with support. (WS) To report and present		refutes or support a scientific idea, with support. (WS)		
		findings from scientific enquiries in a variety of ways (presentations,		To record data and results of increasing complexity and accuracy using scientific diagrams and		
		displays etc.) including both oral and written forms, with increasing confidence. (WS)		labels, tables, scatter graphs, bar and line graphs, with support. (WS)		
	~	To use a range of equipment, appropriately	~	To use relevant and accurate scientific language to discuss,		

support, which variables need to be controlled and ducting a fair or comparative test. (WS) a support, the different variables in a fair or it e.g., control, dependent, independent. (WS)

YEAR 5/6 Cycle B



	Animais including Humans		Liectricity		LIGHT		LV0IULI0II al
✓	To identify and name the main parts of the human circulatory system -	\checkmark	To know and identify	 ✓ 	To know that light travels in		Inheritance
	heart, blood vessels, blood.		electrical components by		straight lines.	\checkmark	To know that t
✓	To know that the heart is a muscle.	1	To use knowledge of	×	lo explain now light changes		of the Earth ha
\checkmark	To know that the basic function of the heart is to pump blood around		electrical components		through different shaped		over time, lead
	the body.		and series circuits to		lenses concave convex		things to adapt
\checkmark	To identify and name the main parts of the heart.		construct a series	1	To know and explain that		survive.
✓	To know that the basic function of the blood vessels is to transport		circuit.		objects are seen because they	\checkmark	To know that li
	blood, nutrients, oxygen, and water around the body.	\checkmark	To know that a circuit		emit or reflect light.		things have cha
~	To know that arteries veins and canillaries are the different types of		needs to be closed to	 ✓ 	To know that we see because		over time. To k
	blood vessels		allow electrical current to		light travels from light sources		and explain wh
	To know that most arteries carry blood away from the boart and most		pass along it.		or is reflected from objects		adaptation is.
•	To know that most afteries carry blood away from the heart and most	\checkmark	To identify and give		into the eye.	✓	To know that li
			examples of appliances	 ✓ 	To know that a ray diagram		adapt to their
~	To name the components of the blood: red blood cells, white blood		that use certain electrical		shows the directions the light		environment to
	cells, platelets, plasma.		components.		travels in.		To know and g
~	To know the basic functions of each component of the blood e.g., red	\checkmark	To know and explain the	×	To use knowledge of how light		examples of so
	blood cells transport oxygen.	,	function of a switch.		travels to explain why shadows		animals that ha
\checkmark	To use knowledge of the digestive system to describe how nutrients	✓	To describe how the		nave the same shape as the		become extinc
	are transported around the body.		position of a switch		objects that cast them.		dinosaurs
✓	To know and describe how capillaries are used to transfer nutrients		of a circuit		<u>WS</u>	1	To evolain how
	around the body.	✓	To explain how the	 ✓ 	To record data and results of		living things th
	To know and describe how lifestyle choices about nutrition affect the		function of a		increasing complexity		adapt bacomo
	how and describe now mestyle choices about nutrition affect the		component e.g.,		accurately using scientific		know that som
	Douy.		brightness of a lamp, is		diagrams and label, tables,		know that som
×	To describe the factors that affect now much of each food group a		affected by the number		scatter graphs, bar and line		things become
	person needs to eat.		and voltage of cells in a				due to the action
~	To know and describe how choices about exercise affect the body.		circuit. To use	×	To report and present findings		humans e.g., to
\checkmark	To know and describe how drugs affect the body.		knowledge of		from scientific enquiries in a		changes to the
	WS		component and their		variety of ways (presentations,		environment, p
~	To know and describe how choices about exercise affect the body.		functions to compare		displays etc.), including both		etc. To use kno
~	To evolore ideas and identify different kinds of questions to be		and give reasons for		oral and written forms,		adaptation to e
	answared in scientific anguing (WS)		of a huzzer		confidently. (WS)		some examples
	answered in scientific enquiry. (ws)			✓	To identify secondary sources		animals have a
~	To select and plan the most appropriate type of scientific enquiry to		<u>VVS</u>		which support ideas and		suit their envir
	answer a scientific question. (WS)	•	identify different kinds of		oninion (MS)	✓	To know and e
\checkmark	To plan what observations to make and how long to make them for, in		questions to be answered		To identify evidence that		evolution is.
	order to obtain relevant data. (WS)		in scientific enquiry.		refutes or supports a scientific	\checkmark	To know that a
~	To explain which variables need to be controlled and why when	✓	(WS)		idea. (WS)		over many yea
	conducting a fair or comparative test (WS)	✓	To plan and select the	 ✓ 	To use relevant and accurate		lead to evolution
			most appropriate		scientific language to discuss,		knowledge of a
•	To identify the different variables in a fair or comparative test e.g.,		equipment needed to		communicate and justify		to explain som
	control, dependent, independent. (WS)		take accurate		scientific ideas. (WS)		examples of ho
✓	To use a range of equipment, appropriately and accurately to take		measurements to gather	 ✓ 	To explain how scientific ideas		have adapted t
	readings and observations in scientific enquires. (WS)		relevant data. (WS) To		have developed over time.		their environm
✓	To confidently take measurements with accuracy and precision, using a		use a range of		(WS)	1	To know and o
	range of equipment (WS)		equipment,	 ✓ 	To explain which variables		that fossils pro
	To know when and how to take repeat readings, using this knowledge		appropriately and		need to be controlled and why,		information ab
•	To know when and now to take repeat readings, using this knowledge		readings and		when conducting a fair or		living things th
	to explain why. (WS)		observations in scientific		comparative test. (WS)		inving trings the
\checkmark	To record data and results of increasing complexity accurately using		enquires. (WS) To record	 ✓ 	To identify the different		Innabited the E
	scientific diagrams and label, tables, scatter graphs, bar and line		data and results of		variables in a fair or		millions of year
	graphs. (WS)		increasing complexity		comparative test e.g., control,		To know and e
~	To predict wider results and trends based on the analysis of data		accurately using		dependent, independent.	/	what inheritan
	gathered. (WS)		scientific diagrams and	×.	(WS)	~	TO KNOW that li
1	To know and explain whether results are reliable, justifying why (MC)		label, tables, scatter	×	To plan what observations to		things produce
×,	To know and explain whether results are reliable, justifying why. (WS)		graphs, bar and line		make and now long to make		of the same kir
~	to analyse results and form conclusions which answer scientific	,	graphs. (WS)		relevant data (M/S)		know that offs
	enquiry questions, with support. (WS)	×	to identify when further				not identical to
\checkmark	To identify different causal relationships and trends in data. (WS)		needed from the analysis				parents.
	, , , , , , , , , , , , , , , , , , , ,		needed from the analysis				

ion and

- v that the surface arth has changed ne, leading living o adapt in order to
- v that living
- ave changed ne. To know lain what
- v that living things
- ment to survive.
- v and give es of some that have
- extinct e.g.,
- ain how some ings that do not ecome extinct. To nat some living ecome extinct he actions of e.g., forced to their ment, poaching use knowledge of ion to explain
- amples of how have adapted to ir environment. v and explain what
- v that adaptation any years may evolution. To use ge of adaptation in some es of how plants apted to suit vironment. v and explain sils provide tion about ings that d the Earth of years ago. v and explain heritance is. v that living oroduce offspring
- ame kind. To nat offspring are ntical to their

Living Things and Their Habitats

- To know what vertebrates and invertebrates are.
- ✓ To identify similarities and differences between living things.
- ✓ To classify living things according to their common observable characteristics. ✓ To explain what classification
- is. ✓ To use knowledge of
- observable characteristic to justify the groups livings things have been classified in.

<u>WS</u>

- ✓ To use and develop keys to identify, classify and describe living things and materials. (WS)
- ✓ To explain how scientific ideas have developed over time. (WS)
- ✓ To identify evidence that refutes or supports a scientific idea. (WS)
- ✓ To identify secondary sources which support ideas and findings, separating fact from opinion. (WS)
- ✓ To select and plan the most appropriate type of scientific enquiry to answer a scientific question. (WS)
- ✓ To record data and results of increasing complexity accurately using scientific diagrams and label, tables, scatter graphs, bar and line graphs. (WS)
- ✓ To predict wider results and trends based on the analysis of data gathered. (WS)

communicate and justify scientific ideas. (WS) To report and present findings from scientific enquiries in a variety of ways (presentations, displays etc.), including both oral and written forms, confidently. (WS)	 including amendments to tests. (WS) To report and present findings from scientific enquiries in a variety of ways(presentations, displays etc.), including both oral and written forms, confidently. (WS) To use relevant and accurate scientific language to discuss, communicate and justify scientific ideas. (WS) 	 and observations will be taken accurately. (WS) ✓ To analyse results and form conclusions which answer scientific enquiry questions, with support. (WS) To select and plan the most appropriate type of scientific enquiry to answer a scientific question. (WS) ✓ To confidently take measurements with accuracy and precision, using a range of equipment. (WS) 	 inherit characteristics and features from their parents. To know that variation in offspring can lead to features which make animals more or less able to survive in particular environments. <u>WS</u> To explain how scientific ideas have developed over time. (WS) To identify secondary sources which support ideas and findings, separating fact from opinion. (WS) To explore ideas and identify different kinds of questions to be answered in scientific enquiry. (WS) To identify different causal relationships and trends in data. (WS) To record data and results of increasing complexity accurately using scientific diagrams and label, tables, scatter graphs, bar and line graphs. (WS) To analyse results and form conclusions which answer scientific enquiry questions, with support. (WS) 	
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