



Science Medium Term Curriculum Plan 2021-2022

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	Topic	Settling in/Routines/Feelings - zones of regulation	Why do leaves go crispy?	How many colours in a rainbow?	Are eggs alive?	Why can't I have chocolate for breakfast?	Can we explore it?
	I can	<ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary. • Explore how things work. • Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. 					
	Vocab		Autumn Harvest Conker Acorn Oak Chestnut Leaves Pumpkin Forest	Colourful Rainbow Light Raindrop Sunshine Nature Sparkle Glitter Black	Caterpillar Butterfly Cocoon Lifecycles Spring Growing Changing Chicks Eggs	Healthy Unhealthy Fruit Vegetables breakfast Lunch Dinner meal Taste	Adventure Hunt Journey Map Explore Hide Tunnel Hole Maze



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			Mud Sticks Squirrel Rabbit Bird hedgehog Pinecone Scarecrow Fruit vegetables Spiderweb Farmer	White Night Day Gold Silver Colour names Shimmer Bright Dark Collage	Chickens Ducklings Ducks Frogspawn Tadpoles Frogs Easter Blossom Beans Seeds Beanstalk Weather	Popcorn Milkshake Milk Cheese Delicious Crunchy Juicy Choice Drink Energy fresh Nutritious	Weather Camp Tent Cave Ocean Outdoors Field garden Den
Reception	Topic	Feelings Tell me a story	Why do squirrels hide their nuts?	Are we there yet?	Are Carrots Orange?	Why do Ladybirds have spots?	Who Lives in a Rockpool?
	Enquiry Learning/ Skills	Classification Sort images of people according to their characteristics. Researching using secondary sources Find out information from visitors (dentist, nurse etc.).	Classification Which clothes are suitable for each season? Observing over time How does a puddle change over time? How does a snowman change as it melts? How does the natural	Comparative testing How many cubes/small plastic animals can fit in different 'boats'? Compare how cars move down ramps/gutters. Compare how wheels turn when	Classification Name and describe different plants, fruit and vegetables Observing over time What happens to a seed when it has been planted?	Classification Name and describe plants and animals they find in the school grounds. Pattern seeking Look for minibeasts in different areas of the school grounds.	Classification Sort animals according to where they live. Researching using secondary sources Learn how animals from a different habitat are cared for.



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		<p>Pattern seeking Are taller children faster? Are taller children stronger?</p> <p>Talk about members of their immediate family and community. Name and describe people who are familiar to them.</p>	<p>world change with the seasons? Researching using secondary sources Find out about how animals behave in different seasons. Find out about the weather and seasons</p> <p>Explore the natural world around them. Describe what they see, hear and feel whilst outside. Understand the effect of changing seasons on the natural world around them.</p>	<p>sand or water is poured through. Compare how objects fall with and without parachutes. Compare how different balls bounce. Compare how things move when blown. Compare how a marble moves through different liquids. Compare how different paper aeroplanes fly.</p> <p>Explore the natural world around them. Describe what they see, hear and feel whilst outside</p>	<p>Explore the natural world around them. Describe what they see, hear and feel whilst outside</p> <p>Understand the effect of changing seasons on the natural world around them.</p>	<p>Look for plants in different areas of the school grounds</p> <p>Draw information from a simple map. Explore the natural world around them. Describe what they see, hear and feel whilst outside. Recognise some environments that are different to the one in which they live.</p>	<p>Learn about animals in a different habitat.</p> <p>Recognise some environments that are different to the one in which they live.</p>
	Key Vocab	hair (black, brown, dark, light, blonde, ginger, grey, white, long, short,	spring, summer, autumn, winter, seasons, sunny, cloudy, hot, warm,	float, sink, up, down, top, bottom, surface, move, roll, drop, fly, turn, spin,		plant, tree, bush, flower, vegetable, herb, weed, animal, names of plants and	names of animals, live, on land, in water, jungle,



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		<p>straight, curly), eyes (blue, brown, green, grey), skin (black, brown, white), big/tall, small/short, bigger/smaller, baby, toddler, child, adult, old person, old, young, brother, sister, mother, father, aunt, uncle, grandmother, grandfather, cousin, friend, family, boy, girl, man, woman</p> <p><u>Supplemental:</u> bald, elderly, wrinkles, male, female, freckles</p>	<p>cold, shower, raining, storm, thunder, lightning, hail, sleet, snow, icy, frost, puddles, windy, rainbow, animals, young, plants, flowers</p> <p><u>Supplemental:</u> hibernate, migrate, snowflake</p>	<p>fall, fast, slow, faster, slower, fastest, slowest, further, furthest, wind, air, water, blow Expose children to</p> <p><u>Supplemental:</u> force, rotate, solid, liquid, gravity</p>		<p>animals they see, name of a contrasting environment such as grassland, forest</p> <p><u>Supplemental:</u> environment, minibeast</p>	<p>desert, North Pole, South Pole, sea, hot, cold, wet, dry, snow, ice</p> <p><u>Supplemental:</u> environment, polar regions, ocean, camouflage</p>
	Knowledge	<p>Understand that people are different both physically and emotionally. Understand that different body parts can be</p>	<p>How they feel in different types of weather/seasons. Clothes they wear in different seasons and why.</p>	<p>Can talk about how they changed objects to make them float or sink. Can talk about how they changed how</p>	<p>Can talk about conditions needed for seeds to grow Can name parts of a plant</p>	<p>Talk about and name the minibeasts they find. Identify different plants e.g. trees,</p>	<p>Name and describe animals that live in different habitats Descriptions of habitats. How animals are cared for when</p>



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		different shapes and sizes in different individuals	How the weather throughout the year. How the ground changes when it rains. How puddles change over time after it rains. Plants and animals that they find in different seasons.	cars move down ramps or gutters. Can talk about how they changed how wheels turn when sand or water is poured through them. Can talk about how they changed how balls bounce. Can compare how different boats and aeroplanes performed. Can describe how objects fall with and without a parachute. Can describe how a marble moves through different liquids.	Can name different fruits and vegetables Understand the lifecycle of a seed eg sunflower	bushes, flowers, vegetables, herbs. Name the plants they find.	they live outside their natural habitat.
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Year 1	Topic	Materials and Building	Waterproof Materials	Plants and Gardens	Weather	Animals	Human Body
	I can	1) Sort items according to their properties 2) Distinguish between an object and the material from which it is made 3) Explore the properties of magnets 4) Describe the simple physical properties of a variety of everyday materials	1) Look at a selection of materials and consider which one is best for fixing a torn umbrella 2) Test a selection of materials for water resistance 3) Understand what happens to the particles in ice when it melts 4) Devise an investigation into ice melting speed 5) Observe what happens to a puddle over time	1) Map out the school garden area and decorate with sketches, facts and labels 2) Prepare and plant a root vegetable 3) Predict What will happen when seeds grow 4) Understand more of the role pollen plays in the growing of fruit and vegetables 5) Understand	1) Make forecasts about the weather at school 2) Observe the weather, drawing what you see and describing what you hear and feel. 3) Observe shadows closely, using simple equipment. 4) Design a weather station to help collect data about the weather at school 6) Observe a link between wind	1) Observe and discuss animal behaviour patterns 2) Make predictions about an animals habitat 3) Plan an investigation to test the absorbency of different types of paper 4) Identify and name a variety of common animals including fish, amphibians, reptiles, birds	1) Identify, name, draw and label the basic parts of the human body 2) say which parts of the body is associated with which sense 3) Consider simple factors affecting how well we hear 4) Explore different foods using different senses and classify into groups



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		<p>5) Use appropriate material choices to build a structure</p> <p>6) I can make predictions about the performance of a material</p>	<p>and record the results.</p> <p>6) Continue to explore puddles and observe how they change</p>	<p>the structure of a flower</p> <p>6) Understand the structure of a tree</p>	<p>direction and rainfall</p>	<p>and mammals</p> <p>5) Discuss what pets like and what you need to do to keep them happy and heal. Observe closely, using simple equipment.</p> <p>6) Sort animals into groups according to their feature</p>	<p>5) Explore an environment using 5 senses</p> <p>6) Identify and group sensory objects</p>
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	Skills	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions 	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions 	<ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions
	Key Vocab	<ul style="list-style-type: none"> • material • wood • plastic • glass • metal 	<ul style="list-style-type: none"> • fish • amphibians • reptiles • birds • mammals 	<ul style="list-style-type: none"> • senses • tongue - taste • nose - smell • eyes - vision • skin - touch 	<ul style="list-style-type: none"> • material • wood • plastic • glass • metal 	<ul style="list-style-type: none"> • season • summer • winter • autumn • spring 	<ul style="list-style-type: none"> • wild plants • garden plants • deciduous • evergreen • plant



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	<ul style="list-style-type: none"> • water • rock • brick • paper • fabrics • elastic • foil • properties • hard/soft • stretchy/stiff • shiny/dull • rough/smooth • bendy/not bendy 	<ul style="list-style-type: none"> • pets • omnivore • herbivore • carnivore 	<ul style="list-style-type: none"> • ears - hearing • head • neck • arms • elbows • leg • knees • face • ears • eyes • hair • mouth • teeth 	<ul style="list-style-type: none"> • water • rock • brick • paper • fabrics • elastic • foil • properties • hard/soft • stretchy/stiff • shiny/dull • rough/smooth • bendy/not bendy • waterproof/not waterproof • absorbent/not absorbent 	<ul style="list-style-type: none"> • day • daytime • weather • wind • rain • snow • hail • sleet • fog • sun • hot • warm • cold 	<ul style="list-style-type: none"> • leaf • root • leaves • bud • flowers • blossom • petals • root • stem • tree • deciduous • evergreen • trunk • branches • leaf • root • fruit • vegetables • bulb • seed
Sticky Knowledge	<ul style="list-style-type: none"> • distinguish between an object and the material from which it is made • identify and name a variety of 	<ul style="list-style-type: none"> • identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals 	<ul style="list-style-type: none"> • identify, name, draw and label the basic parts of the human body and say which part of the body is 	<ul style="list-style-type: none"> • distinguish between an object and the material from which it is made • identify and name a variety 	<ul style="list-style-type: none"> • observe changes across the four seasons. • observe and describe weather associated with 	<ul style="list-style-type: none"> • identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.



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		<p>everyday materials, including wood, plastic, glass, metal, water, and rock</p> <ul style="list-style-type: none"> describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties 	<ul style="list-style-type: none"> identify and name a variety of common animals that are carnivores, herbivores and omnivores iii) describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) 	<p>associated with each sense</p>	<p>of everyday materials, including wood, plastic, glass, metal, water and rock</p> <ul style="list-style-type: none"> describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties 	<p>the seasons and how day length varies.</p>	<ul style="list-style-type: none"> identify and describe the basic structure of a variety of common flowering plants, including trees.
Year 2	Topic	Healthy Animals	Habitats	Absorbent Materials	Growing plants	Materials Strength and Stretch	Gardens and Allotments
	I can	<p>1) Observe closely and make scientific drawings</p> <p>2) Make a timeline of human development</p>	<p>1) Identify differences between living and dead creatures</p> <p>2) Explore</p>	<p>1) Explore the properties of different kitchen papers and disposable cloths</p>	<p>1) Explore how plants spread their seeds</p> <p>2) Make models of different types of</p>	<p>1) Explore how high different balls bounce and record results</p>	<p>1) Identify the right conditions for growth and attracting the right mini-beasts to an</p>



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	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions 	<p>questions and recognising that they can be answered in different ways</p> <ul style="list-style-type: none"> observing closely, using simple equipment performing simple tests identifying and classifying using their observations and ideas to suggest answers to questions gathering and recording data to help in answering questions
Key Vocab	<ul style="list-style-type: none"> offspring grow adults egg caterpillar pupa 	<ul style="list-style-type: none"> living dead never alive habitats micro-habitats food 	<ul style="list-style-type: none"> wood metal plastic glass brick rock 	<ul style="list-style-type: none"> metal coins cans cars table legs wood 	<ul style="list-style-type: none"> common wild plants garden plants deciduous evergreen plant 	<ul style="list-style-type: none"> fruit vegetables bulb seed water light 	



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	<ul style="list-style-type: none"> • butterfly • spawn • tadpole • frog • lamb • sheep • baby • toddler • child • teenager • adult • survival • water • food • air • exercise • hygiene • nutrition • reproduce • egg • chick • chicken 	<ul style="list-style-type: none"> • food chain • sun • grass • cow • human • alive • healthy • logs • leaf litter • stony path • under bushes • shelter • seashore • woodland • ocean • rainforest • conditions • hot/warm/cold • dry/damp/wet • bright/shade/dark 	<ul style="list-style-type: none"> • paper • cardboard • spoons • plastic • John Dunlop • rubber • Charles Macintosh • waterproof fabric • John McAdam • macadamisation 	<ul style="list-style-type: none"> • matches • floors • telegraph poles • wood, metal but • not glass • squashing • bending • twisting • stretching 	<ul style="list-style-type: none"> • leaf • root • leaves • bud • flowers • blossom • petals • root • stem • tree • deciduous • evergreen • trunk • branches • leaf • root • fruit • vegetables • bulb • seed • water • light • suitable • temperature • germination • reproduction • grow • healthy • 	<ul style="list-style-type: none"> • suitable • temperature
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	Sticky Knowledge	<ul style="list-style-type: none">• notice that animals, including humans, have offspring which grow into adults• find out about and describe the basic needs of animals, including humans, for survival (water, food and air)• describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene	<ul style="list-style-type: none">• explore and compare the differences between things that are living, dead, and things that have never been alive• identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of animals and plants, and how they depend on each other	<ul style="list-style-type: none">• identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses• find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	<ul style="list-style-type: none">• identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses• find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	<ul style="list-style-type: none">• observe and describe how seeds and bulbs grow into mature plants.• find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	<ul style="list-style-type: none">• identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.• identify and name a variety of plants and animals in their habitats, including microhabitats.• describe how animals obtain their food from plants and other animals, using the idea of a
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							simple food chain, and identify and name different sources of food.
Year 3	Topic	Forces and Magnets	Light and Shadows	Rocks and Fossils	Keeping Healthy	Growing Plants	Flowers
	I can	1) Compare how things move on different surfaces 2) Understand forces can act at a distance 3) Compare and classify objects 4) Understand magnetic polarity 5) Apply knowledge of magnets to a real world context	1) Recognise light is needed to see things and that dark is the absence of light 2) Understand light can be reflected 3) Investigate the properties of mirrors 4) Investigate how shadows are made 5) Design and conduct a fair test 6) Investigate how colour interacts with light and shadow	1) Observe, group, draw and describe rock samples 2) Design and conduct a fair test for hardness and permeability of rocks 3) Conduct a survey to compare and group rocks 4) Understand how fossils are made 5) Recognise the composition of soil 6) Present scientific findings	1) Analyse data 2) Design a healthy meal 3) Understand the structure of the human skeleton 4) Understand how muscles work 5) Understand the effect the diaphragm has on breathing 6) Present scientific findings	1) Develop relevant question to investigate 2) Observe and make detailed, labelled drawings of plants 3) Classify food plants 4) Investigate how water is transported through plants 5) Present scientific findings graphically and explain them verbally and in writing 6) Apply plant knowledge to a real	1) Create representations of flowers which incorporate accurate scientific detail 2) Investigate pollination 3) Describe the process of fruit development 4) Classify fruits 5) Investigate and experiment with methods of seed dispersal



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		6) Report on scientific investigation				world context	6) Present scientific findings in a varied and engaging way
Skills	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, gathering, recording, 	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, gathering, recording, classifying and presenting data in 	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, recording findings using 	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, recording findings using 	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, gathering, recording, 	<ul style="list-style-type: none"> asking relevant questions and using different types of scientific enquiries to answer them setting up simple practical enquiries, comparative and fair tests making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, gathering, recording, 	



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		<p>classifying and presenting data in a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • identifying differences, similarities or changes related 	<p>a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables • 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 • using 	<p>simple scientific language, drawings, labelled diagrams, bar charts, and tables</p> <ul style="list-style-type: none"> • 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 • using straightforward scientific evidence to answer questions 	<p>simple scientific language, drawings, labelled diagrams, bar charts, and tables</p> <ul style="list-style-type: none"> • 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 • using straightforward scientific evidence to answer questions 	<p>classifying and presenting data in a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • identifying differences, similarities or changes related 	<p>classifying and presenting data in a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • identifying differences, similarities or changes related
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		<p>to simple scientific ideas and processes</p> <ul style="list-style-type: none"> • using straightforward scientific evidence to answer questions or to support their findings 	<p>straightforward scientific evidence to answer questions or to support their findings</p>	<p>or to support their finding</p>	<p>or to support their findings</p>	<p>to simple scientific ideas and processes</p> <ul style="list-style-type: none"> • using straightforward scientific evidence to answer questions or to support their findings 	<p>to simple scientific ideas and processes</p> <ul style="list-style-type: none"> • using straightforward scientific evidence to answer questions or to support their findings
	Key Vocab	<ul style="list-style-type: none"> • force • push • pull • open • surface • magnet • magnetic • attract • repel • magnetic poles • North • South 	<ul style="list-style-type: none"> • light • see • dark • reflect • surface • natural • star • Sun • Moon • shadow • blocked • solid • artificial • torch • candle • lamp • sunlight 	<ul style="list-style-type: none"> • appearance • physical • properties • hard/soft • shiny/dull • rough/smooth • absorbent/not absorbent • fossils • sedimentary • rock • soils • organic matter • buildings • gravestones • grains • crystals 	<ul style="list-style-type: none"> • nutrition • nutrients • carbohydrates • protein • fats • fibre • water • vitamins • minerals • skeleton • bones • joints • endoskeleton • exoskeleton • hydrostatic • skeleton • vertebrate 	<ul style="list-style-type: none"> • wild plants • garden plants • deciduous • evergreen • tree • deciduous • evergreen • trunk • branches • leaf • root • plant • leaf • root • leaves • bud • flowers • blossom • petals • root • stem • seed 	<ul style="list-style-type: none"> • leaf • root • plant • leaf • root • leaves • bud • flowers • blossom • petals • root • stem • seed



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		<ul style="list-style-type: none"> • dangerous • protect eyes 			<ul style="list-style-type: none"> • invertebrate • contract • relax • muscles • ball joint • socket joint • hinge joint • gliding joint 	<ul style="list-style-type: none"> • blossom • petals • root • stem • fruit • vegetables • bulb • seed 	
	<p>Sticky Knowledge</p>	<ul style="list-style-type: none"> • compare how things move on different surfaces • notice that some forces need contact between two objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • compare and group together a 	<ul style="list-style-type: none"> • recognise that they need light in order to see things and that dark is the absence of light • notice that light is reflected from surfaces • recognise that light from the sun can be dangerous and that there are ways to protect their eyes • recognise that shadows are formed when the light from a light source is blocked 	<ul style="list-style-type: none"> • compare and group together different kinds of rocks on the basis of their appearance and simple physical properties • describe in simple terms how fossils are formed when things that have lived are trapped within rock • recognise that soils are made from rocks and organic matter 	<ul style="list-style-type: none"> • Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat • Identify that humans and some other animals have skeletons and muscles for support, protection and movement 	<ul style="list-style-type: none"> • identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers • explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant • investigate the 	<ul style="list-style-type: none"> • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal



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		<p>variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials</p> <ul style="list-style-type: none"> • describe magnets as having two poles • predict whether two magnets will attract or repel each other, depending on which poles are facing • 	<p>by an opaque object</p> <ul style="list-style-type: none"> • find patterns in the way that the size of shadows change 			<p>way in which water is transported within plants</p> <ul style="list-style-type: none"> • 	
Year 4	Topic	Habitats and the Environment	States of Matter	Sound	Living Creatures	Digestion and Food Chains	Electricity
	I can	1) Identify and hypothesise on environmental change	1) Investigate the differences between solids and liquids	1) Identify environmental sounds and discuss how sound is made	1) Present scientific information on living things	1) Understand the first stage of digestion	1) Challenge misconceptions about electricity



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		<p>2) Design a creature resistant to environmental change</p> <p>3) Design and conduct an experiment on greenhouse gases</p> <p>4) Present information on an aspect of environmental change</p> <p>5) Apply knowledge to a real world context, design a way to positively change an area's environment</p> <p>6) Identify ways to help improve environments on a larger scale</p>	<p>2) Understand some properties of gases</p> <p>3) Investigate how particles behave in different states of matter</p> <p>4) Investigate processes in the water cycle</p> <p>6) Create a working model of the water cycle</p> <p>7) Present scientific findings</p>	<p>2) Investigate vibrations and how sound travels</p> <p>3) Investigate volume and pitch through musical instruments</p> <p>4) Explore sound dampening</p> <p>5) Plan and conduct a sound dampening investigation</p> <p>6) Present scientific findings and demonstrate a scientific solution</p>	<p>2) Observe and record local habitats</p> <p>3) Make a database to classify living creatures</p> <p>4) Use a dichotomous classification key to group animals</p> <p>6) Create large scale scientific drawings of insects</p> <p>7) Apply scientific findings to a real world context</p>	<p>2) Describe the parts and functions of the human digestive system</p> <p>3) Investigate the role of the small intestine</p> <p>4) Understand why humans produce excrement</p> <p>5) Interpret food chains</p> <p>6) Present findings on the importance of teeth</p>	<p>2) Discover and present information on electrical dangers</p> <p>3) Represent an electrical circuit</p> <p>4) Identify and sort conductors and insulators</p> <p>5) Build a circuit to fulfil a specific purpose</p> <p>6) Apply science findings to a real world context</p>
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	Skills	<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, • gathering, recording, classifying and presenting data in a variety of ways to help in answering 	<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables • reporting on findings from 	<ul style="list-style-type: none"> • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording 	<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, 	<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, 	<ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording,
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		<p>questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables • 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 • using straightforward 	<p>enquiries, including oral and written explanations, displays or presentations of results and conclusions</p> <ul style="list-style-type: none"> • using straightforward scientific evidence to answer questions or to support their findings 	<p>findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> <ul style="list-style-type: none"> • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying 	<p>classifying and presenting data in a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions 	<p>classifying and presenting data in a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions 	<p>classifying and presenting data in a variety of ways to help in answering questions</p> <ul style="list-style-type: none"> • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions
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	scientific evidence to answer questions or to support their findings		<p>differences, similarities or changes related to simple scientific ideas and processes</p> <ul style="list-style-type: none"> • using straightforward scientific evidence to answer questions or to support their findings 	<p>for new values, suggest improvements and raise further questions</p> <ul style="list-style-type: none"> • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings 	<p>for new values, suggest improvements and raise further questions</p> <ul style="list-style-type: none"> • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings 	<p>for new values, suggest improvements and raise further questions</p> <ul style="list-style-type: none"> • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings
Key Vocab	<ul style="list-style-type: none"> • environment • dangers! • human impact • positive - nature reserves, • ecologically planned parks, 	<ul style="list-style-type: none"> • solid • solidify • iron • ice • melt • freeze • liquid 	<ul style="list-style-type: none"> • vibrate • vibration • vibrating • air • medium • ear • hear 	<ul style="list-style-type: none"> • flowering • non-flowering • plants • animals • vertebrate • environment • dangers! 	<ul style="list-style-type: none"> • human digestive system • digestion • mouth • tongue - mixes, moistens • saliva 	<ul style="list-style-type: none"> • appliances • electricity • electrical circuit • cell • wire • bulb • buzzer



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	<ul style="list-style-type: none"> • garden ponds • negative - population, development, litter, deforestation 	<ul style="list-style-type: none"> • evaporate • condense • gas • container • changing state • heated • heatcooled • cool • degrees Celsius °C • thermometer • water cycle • evaporation • condensation • temperature • melting • warm/cool • water • water vapour 	<ul style="list-style-type: none"> • sound • volume • pitch • faint • fainter • loud • louder • string • percussion • woodwind • brass • insulate • 	<ul style="list-style-type: none"> • vertebrate • fish • amphibians • reptiles • birds • mammals • • invertebrate • snails • slugs • worms • spiders • insects • plants • flowering plants (including grasses) • non-flowering (including mosses and ferns) 	<ul style="list-style-type: none"> • oesophagus • transports • stomach • acid • enzymes • small intestine - absorbs • water • vitamins • large intestine - compacts • colon • teeth • incisors - cutting, slicing • canines - ripping, tearing • molars - chewing, grinding • floss • brush • food chain • sun • producers • prey • predators • carnivore • herbivore 	<ul style="list-style-type: none"> • danger • electrical safety • sign • insulators • wood • rubber • plastic • glass • conductors • metal • water • switch • open • closed •
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	<p>Sticky Knowledge</p>	<ul style="list-style-type: none"> recognise that environments can change and that this can sometimes pose dangers to living things 	<ul style="list-style-type: none"> compare and group materials together, according to whether they are solids, liquids or gases observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with 	<ul style="list-style-type: none"> identify how sounds are made, associating some of them with something vibrating recognise that vibrations from sounds travel through a medium to the ear find patterns between the pitch of a sound and features of the object that produced it find patterns between the volume of a sound and the strength of the vibrations that produced it recognise that sounds get 	<ul style="list-style-type: none"> recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment 	<ul style="list-style-type: none"> omnivore describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey 	<ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers 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 recognise that a switch opens and closes a circuit
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			temperature	fainter as the distance from the sound source increases			and associate this with whether or not a lamp lights in a simple series circuit <ul style="list-style-type: none"> recognise some common conductors and insulators, and associate metals with being good conductors
Year 5	Topic	Space	Forces	Materials	Changing Materials	Life Cycles	Life Changes
	I can	1) Develop enquiry questions 2) Create a model of the Solar System 3) Build an orrery 4) Investigate the Earth's rotation 5) Apply science learning to a real	1) Explain the effect gravity has on objects 2) Identify the effects of air resistance 3) Explore the function of levers and pulleys 4) Explore the	1) Identify and classify food safe materials 2) Investigate the insulating properties of materials 3) Apply science learning to a real world context	1) Investigate soluble and insoluble materials 2) Explore methods to separate materials 3) Investigate the effect of heat on different materials and mixtures	1) Create a botanical drawing of a dissected flower 2) Investigate asexual reproduction 3) Set up an observation of life cycle	1) Describe the changes which occur as humans age 2) Explore foetal development 3) Research and present information on how the human body grows



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		<p>world context (make a sundial)</p> <p>6) Investigate the phases of the moon</p>	<p>function of gears</p> <p>5) Explore the friction of different surfaces</p> <p>6) Identify the effects of water resistance</p>	<p>4) Devise and conduct a fair test for absorbent materials</p> <p>5) Identify and compare conductors and insulators</p> <p>6) Identify and test soundproof materials</p>	<p>4) Explore reversible and irreversible changes</p> <p>5) Investigate new materials and their purposes</p> <p>6) Present scientific findings</p>	<p>4) Research bird and mammalian life cycles</p> <p>5) Present research findings</p> <p>6) Understand the importance of naturalism and behavioural studies</p>	<p>4) Understand changes that occur in puberty</p> <p>5) Explore ways to care for an aging body</p> <p>6) Represent human growth graphically</p>
	Skills	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific 	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific equipment, with 	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of 	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of 	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of 	<ul style="list-style-type: none"> • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of



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		<p>equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> Recording results using scientific diagrams and labels Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms 	<p>increasing accuracy and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> Recording results using scientific diagrams and labels Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations 	<p>scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> Recording results using scientific diagrams and labels Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of 	<p>scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> Recording results using scientific diagrams and labels Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of 	<p>scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> Recording results using scientific diagrams and labels Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of 	<p>scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</p> <ul style="list-style-type: none"> Recording results using scientific diagrams and labels Using test results to make predictions to set up further comparative and fair tests Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of
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		<p>such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>trust in results, in oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>trust in results, in oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>trust in results, in oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>trust in results, in oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments
	Key Vocab	<ul style="list-style-type: none"> Earth Sun Moon moons planets stars solar system Mercury Venus Mars Jupiter Saturn Uranus Neptune 	<ul style="list-style-type: none"> gravity air resistance water resistance friction surface force effect move accelerate decelerate stop change direction brake mechanism 	<ul style="list-style-type: none"> properties hardness solubility transparency electrical conductor thermal conductor response to magnets solids liquids gases evaporating 	<ul style="list-style-type: none"> dissolve solution separate separating evaporation filtering sieving melting irreversible new material burning rusting 	<ul style="list-style-type: none"> life cycles mammal amphibian insect bird life process of reproduction plants animals vegetable garden flower boarder animal naturalists David 	<ul style="list-style-type: none"> puberty life cycle gestation growth reproduce foetus baby fertilisation toddler child teenager adult old age life expectancy



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		<ul style="list-style-type: none"> • Pluto • rotate • day • night • Aristotle • Ptolemy • Galileo • Copernicus • Brahe • Alhazen • orbit • axis • spherical • heliocentric • geocentric • hemisphere • season • tilt 	<ul style="list-style-type: none"> • pulley • gear • spring • theory of gravitation • Galileo Galilei • Isaac Newton 	<ul style="list-style-type: none"> • reversible changes • dissolving • mixing • magnetism • electricity • chemists • Spencer Silver • Ruth Benerito • quantitative • measurements • conductivity • insulation • chemical 		<p>Attenborough</p> <ul style="list-style-type: none"> • animal behaviourist • Jane Goodall • reproduction • plants: sexual, asexual • animals: sexual • lifecycles around the world • rainforest • oceans • desert • prehistoric • similarities • differences 	<ul style="list-style-type: none"> • adolescence • adulthood • early adulthood • middle adulthood • late adulthood • childhood
	Sticky Knowledge	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object 	<ul style="list-style-type: none"> • Compare and group together everyday materials on the basis of their properties, including their hardness, transparency, 	<ul style="list-style-type: none"> • Compare and group together everyday materials on the basis of their properties, including their solubility and response to 	<ul style="list-style-type: none"> • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird • Describe the life process of reproduction in 	<ul style="list-style-type: none"> • Describe the changes as humans develop to old age



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		<p>the Earth</p> <ul style="list-style-type: none">• 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•	<ul style="list-style-type: none">• 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•	<p>and conductivity (electrical and thermal)</p> <ul style="list-style-type: none">• Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic•	<p>magnets</p> <ul style="list-style-type: none">• Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution• Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating• Demonstrate that dissolving, mixing and changes of state are reversible changes• Explain that some changes result in the formation of new	<p>some plants and animals</p> <ul style="list-style-type: none">•	
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					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		
Year 6	Topic	Light	Electricity	Classification	Evolution and Inheritance	Circulation and Blood	Science in the Real World - Sport
	I can	1) Identify misconceptions about light 2) Demonstrate light travels in straight lines 3) Explore reflection and apply it to a real world context	1) Identify electrical components and create a simple circuit 2) Understand current, voltage and resistance 3) Investigate ways to overcome resistance	1) Group living organisms based on observable characteristics 2) Identify levels of classification and their purpose 3) Create a classification key	1) Identify inherited and environmental characteristics 2) Explore how mutations and adaptations can be helpful to an organism 3) Use knowledge of survival	1) Explore the composition and function of blood 2) Explore the structure and function of the human heart 3) Investigate how water and nutrients are transported	Variable and dependent on identified gaps and needs



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		<p>4) Explore factors which cause shadows to change size and shape</p> <p>5) Research the light spectrum</p> <p>6) investigate the reflection and absorption of colours</p>	<p>4) Apply understanding of resistance to create a dimmer switch</p> <p>5) Create a prototype circuit to specific criteria</p> <p>6) Build a circuit to specific criteria</p>	<p>4) Apply classification skills to organisms found in the local environment</p> <p>5) Justify classification for challenging creatures</p> <p>6) Create imagined creatures to fits classification criteria</p>	<p>characteristics to 'design' an organism for a varied and changing environment</p> <p>4) Explore and investigate proof for evolution</p> <p>5) Explore cladograms</p> <p>6) Explore and explain evolutionary characteristics</p>	<p>through the body</p> <p>4) Research the function of platelets</p> <p>5) Investigate and present information about the impact of diet and exercise</p> <p>6) Explore information and misconceptions about the effects of drugs and alcohol</p>	
	Skills	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and controlling 	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where 	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and 	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and 	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and 	<ul style="list-style-type: none"> Planning different types of scientific enquiries to answer questions, including recognising and



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		<p>variables where necessary</p> <ul style="list-style-type: none"> • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording results using scientific diagrams and labels • Using test results to make predictions to set up further comparative and fair tests • Reporting and presenting findings from enquiries, including conclusions, causal 	<p>necessary</p> <ul style="list-style-type: none"> • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording results using scientific diagrams and labels • Using test results to make predictions to set up further comparative and fair tests • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of 	<p>controlling variables where necessary</p> <ul style="list-style-type: none"> • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Using test results to make predictions to 	<p>controlling variables where necessary</p> <ul style="list-style-type: none"> • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Using test results to make predictions to 	<p>controlling variables where necessary</p> <ul style="list-style-type: none"> • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Using test results to make predictions to 	<p>controlling variables where necessary</p> <ul style="list-style-type: none"> • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Using test results to make predictions to
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		<p>relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>and degree of trust in results, in oral and written forms such as displays and other presentations</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>set up further comparative and fair tests</p> <ul style="list-style-type: none"> Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>set up further comparative and fair tests</p> <ul style="list-style-type: none"> Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations <p>Identifying scientific evidence that has been used to support or refute ideas or arguments</p>	<p>set up further comparative and fair tests</p> <ul style="list-style-type: none"> Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments 	<p>set up further comparative and fair tests</p> <ul style="list-style-type: none"> Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations Identifying scientific evidence that has been used to support or refute ideas or arguments
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	<p>Key Vocab</p>	<ul style="list-style-type: none"> • light • travels • straight • reflect • reflection • transparent • translucent • opaque • light source • object • shadows • mirrors • periscope • prism • rainbow • optical filters 	<ul style="list-style-type: none"> • voltage • brightness • volume • switches • danger • series circuit • working safely with • electricity • electrical safety • sign • circuit diagram • switch • bulb • buzzer • motor • recognised • symbols 	<ul style="list-style-type: none"> • kingdom • phylum • class • order • family • genus • species • clade • omnivore • herbivore • carnivore • plants • animals • classify • compare • Linnaean • Carl Linnaeus • classification • domain • characteristics • vertebrates • invertebrates • microorganisms • organism • flowering • non-flowering 	<ul style="list-style-type: none"> • evolution • adaption • inherited traits • adaptive traits • natural selection • inheritance • Charles Darwin • Alfred Wallace • DNA • genes • variation • parent • offspring • fossil • environment • habitat • fossilisation • plants • animals • living things 	<ul style="list-style-type: none"> • internal organs • heart • lungs • liver • kidney • brain • skeletal • skeleton • muscle • muscular • digest • digestion • digestive • circulatory system • heart • blood vessels • blood • impact • diet • exercise • drugs • lifestyle • nutrients • water • damage • drugs • alcohol • substances 	<ul style="list-style-type: none"> • Range of key words from prior units as decided by teachers
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	<p align="center">Sticky Knowledge</p>	<ul style="list-style-type: none"> Recognise that light appears to travel in straight lines Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes Use the idea that light travels in straight lines to explain why shadows have the same shape as 	<ul style="list-style-type: none"> Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches Use recognised symbols when representing a simple circuit in a diagram 	<ul style="list-style-type: none"> Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals Give reasons for classifying plants and animals based on specific characteristics 	<ul style="list-style-type: none"> Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways 	<ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function Describe the ways in which nutrients and water are transported within animals, including humans 	<ul style="list-style-type: none"> Key prior knowledge from National Curriculum identified by teachers
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		the objects that cast them		and that adaptation may lead to evolution	
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