Big	Aspect			By the end of each respective	pathway the pupils will have the	following knowledge and skills		
Idea		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Humankind	Human Body	Understanding the World The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. Different body parts are used for different things, such as the eyes are used to see. Draw pictures of the human body and name some of the different body parts.	Animals including Humans The basic body parts are the head, arms, legs, nose, eyes, ears, mouth, hands and feet. The five senses are hearing, sight, smell, taste and touch. Ears are used for hearing, eyes are used to see, the nose is used to smell, the tongue is used to taste and skin gives the sense of touch. Draw and label the main parts of the human body and say which body part is associated with which sense.	Animals including Humans Human offspring go through different stages as they grow to become adults. These include baby, toddler, child, teenager, adult and elderly. Describe the stages of human development (baby, toddler, child, teenager, adult and elderly).	Animals including Humans Humans have a skeleton and muscles for movement, support and protecting organs. Major bones in the human body include the skull, ribs, spine, humerus, ulna, radius, pelvis, femur, tibia and fibula. Major muscle groups in the human body include the biceps, triceps, abdominals, trapezius, gluteals, hamstrings, quadriceps, deltoids, gastrocnemius, latissimus dorsi and pectorals. Describe how humans need the skeleton and muscles for support, protection and movement.	Animals including Humans The digestive system is responsible for digesting food and absorbing nutrients and water. The main parts of the digestive system are the mouth, oesophagus, stomach, small intestines, large intestines and rectum. The mouth starts digestion by chewing food and mixing it with saliva. The oesophagus transports the chewed food to the stomach, where it mixes with stomach acid and gets broken down into smaller pieces. In the small intestine, nutrients from the food are absorbed by the body. In the large intestine, water is absorbed by the body. The remaining undigested waste is stored in the rectum before excretion through the anus. Describe the purpose of the digestive system, its main parts and each of their functions.	Animals including Humans Humans reproduce sexually, which involves two parents (one female and one male) and produces offspring that are different from the parents. Describe the process of human reproduction.	Animals including Humans The circulatory system includes the heart, blood vessels and blood. The heart pumps blood through the blood vessels and around the body. There are three types of blood vessel: arteries, veins and capillaries. They each have a different-sized hole (lumen) and walls. The blood carries gases (oxygen and carbon dioxide), water and nutrients to where they are needed. The red blood cells carry oxygen and carbon dioxide around the body. The blood also contains white blood cells, which protect the body from infection. Name and describe the purpose of the circulatory system and the functions of the heart, blood vessels and blood.

Staying safe	Understanding the World Rules help to keep us safe in different environments and when using certain equipment. Follow instructions when in different environments and when handling simple equipment, such as scissors	Animals including Humans It is important to stay safe. Some ways to stay safe include staying safe in strong sunlight (sun cream, sun hat and sunglasses), crossing roads (stop, look and listen), in the kitchen (not touching hot or sharp objects) and with household chemicals (not touching, drinking or eating). Describe ways to stay safe in some familiar situations.	Animals including Humans Humans need water, food, air and shelter to survive. Describe what humans need to survive.	Animals including Humans Light from the Sun is damaging for vision and the skin. Protection from the Sun includes sun cream, sun hats, sunglasses and staying indoors or in the shade. Explain why light from the Sun can be dangerous.	Electricity Working with electrical circuits can be dangerous. Precautions include not touching electrical components with wet hands and not putting batteries in mouths. Explain the precautions needed for working safely with electrical circuits.	Materials Very hot and very cold materials can burn skin. Heating materials should be done safely. Explain the precautions needed for working safely when heating, burning, cooling and mixing materials.	Light Lasers are intense beams of light and they should never be pointed at people's faces or aircraft. Explain the dangers of using lasers and ways to use them safely.
Healthy Lifestyle	Understanding the World Washing and drying their hands, especially after using the toilet and before eating, helps stop the spread of harmful germs. Wash and dry hands regularly and say why this is important.	Animals including Humans Hand washing and good hygiene are important parts of a healthy lifestyle and prevent the spread of germs. Explain why hand washing and cleanliness are important.	Animals including Humans A healthy lifestyle includes exercise, good personal hygiene, good quality sleep and a balanced diet. Risks associated with an unhealthy lifestyle include obesity, tooth decay and mental health problems. Describe the importance of a healthy lifestyle, including exercise, a balanced diet, good quality sleep and personal hygiene.	Animals including Humans Humans have to get nutrition from what they eat. It is important to have a balanced diet made up of the main food groups, including proteins, carbohydrates, fruit and vegetables, dairy products and alternatives, and fats and spreads. Humans need to stay hydrated by drinking water. Explain the importance and characteristics of a healthy, balanced diet.	Animals including Humans Regular teeth brushing, limiting sugary foods and visiting the dentist are important for good oral hygiene. Describe what damages teeth and how to look after them.	Animals including Humans Good personal hygiene (washing, wearing clean clothes and brushing teeth) can prevent disease or illness. Puberty is the period during which adolescents reach sexual maturity and become capable of reproduction. It causes physical and emotional changes. Explain why personal hygiene is important during puberty	Animals including Humans Lifestyle choices can have a positive (exercise and eating healthily) or negative (drugs, smoking and alcohol) impact on the body. Explain the impact of positive and negative lifestyle choices on the body

		Understanding the World	Seasonal Change	Seasonal Change	Light	Sound	Light
		The weather can change	There are four seasons:	The UK has typical weather	Shadows change shape and	Pitch is how high or low a	A shadow appears when an
		throughout the day, week	spring, summer, autumn and	in each of the seasons. For	size when the light source	sound is. Parts of an	object blocks the passage of
		and month. The weather is	winter. Certain events and	example, winter is cold and	moves. For example, when	instrument that are shorter,	light. Apart from some
		different at different times in	weather patterns happen in	sometimes frosty, whereas	the light source is high above	tighter or thinner produce	distortion or fuzziness at the
		the year. Notice and begin to	different seasons. Observe	summer is warm and	the object, the shadow is	high-pitched sounds. Parts of	edges, shadows are the
		describe patterns of weather	changes across the four	sometimes sunny. Describe	short and when the light	an instrument that are	same shape as the object.
		in summer and winter.	seasons.	typical UK seasonal weather	source is low down, the	longer, looser or fatter	The distortion or fuzziness
				patterns.	object's shadow is long. Find	produce low-pitched sounds.	depends on the position or
					patterns in the way shadows	Compare and find patterns	type of light source. Explain,
					change during the day.	in the pitch of a sound, using	using words, diagrams or a
						a range of equipment, such	model, why shadows have
						as musical instruments.	the same shape as the
						Assign	objects that cast them and
							how shadows can be
						Volume is how loud or quiet	changed.
						a sound is. The harder an	
						instrument is hit, plucked or	Earth and Space
	b .0					blown, the stronger the	As Earth orbits the Sun, it
S	ř					vibrations and the louder the	also spins on its axis. It takes
SSE	See					sound. Compare and find	Earth a day (24 hours) to
Processes	E					patterns in the volume of a	complete a full spin. During
P	Pattern Seeking					sound, using a range of	the day, the Sun appears to
	Ра					equipment, such as musical	move through the sky.
						instruments.	However, this is due to the
							Earth rotating and not the
							Sun moving. Earth rotates to
							the east or, if viewed from
							above the North Pole, it
							rotates anti-clockwise, which
							means the Sun rises in the
							east and sets in the west. As
							Earth rotates, different parts
							of it face the Sun, which
							brings what we call daytime.
							The part facing away is in
							shadow, which is night time.
							Use the idea of Earth's
							rotation to explain day and
							night, and the Sun's
							apparent movement across
							the sky.

	Understanding the World	Seasonal Change	Materials	Rocks	States of Matter	Materials
	The number of daylight	Day length (the number of	Some objects and materials	Fossils form over millions of	Heating or cooling materials	Reversible changes include
	hours varies throughout the	daylight hours) is longer in	can be changed by	years and are the remains of	can bring about a change of	heating, cooling, melting,
	year, according to the	the summer months and	squashing, bending, twisting,	a once-living organism,	state. This change of state	dissolving and evaporating.
	season. The days are longer	shorter in the winter	stretching, heating, cooling,	preserved as rock. Scientists	can be reversible or	Irreversible changes include
i	in summer and shorter in	months. Observe and	mixing and being left to	can use fossils to find out	irreversible. The	burning, rusting, decaying
	winter. Notice and talk about	describe how day length	decay. Describe how some	what life on Earth was like in	temperature at which	and chemical reactions.
	the differences in day length	changes across the year.	objects and materials can be	prehistoric times. Fossils	materials change state varies	Identify, demonstrate and
	between the seasons.		changed and how these	form when a living thing dies	depending on the material.	compare reversible and
			changes can be desirable or	in a watery environment.	Water changes state from	irreversible changes.
			undesirable.	The body gets covered by	solid (ice) ⇌ liquid (water) at	
				mud and sand and the soft	0°C and from liquid (water)	
				tissues rot away. Over time,		
				the ground hardens to form	100°C. The process of	
Changes				sedimentary rock and the	changing from a solid to	
ang				skeletal or shell remains turn	liquid is called melting. The	
ਤੌ				to rock. Describe simply how	reverse process of changing	
				fossils are formed, using	from a liquid to a solid is	
				words, pictures or a model.	called freezing. The process	
					of changing from a liquid to a	
					gas is called evaporation.	
					The reverse process of	
					changing from a gas to a	
					liquid is called condensation.	
					Observe and explain that	
					some materials change state	
					when they are heated or	
					cooled and measure or	
					research the temperature in	
					degrees Celsius (°C) at which	
					materials change state.	

Understandir Ways to describ weather includ rainy, windy, ch or cold. Weather in the summer sunshine and co winter with mo and rain. Describow weather cl seasons change	Different types of weather include sunshine, rain, hail, wind, snow, fog, lightning, storm and cloud. The weather can change daily and some weather types are more common in certain seasons, such as snow in winter. Observe and describe	Seasonal Change The Earth is spherical and is covered in water and land. When it is daytime in one location, it is night time on the other side of the world. Describe features of Earth using words and pictures.	Rocks Soils are made from tiny pieces of eroded rock, air and organic matter. There are a variety of naturally occurring soils, including clay, sand and silt. Different areas have different soil types. Investigate soils from the local environment, making comparisons and identifying features.	States of Matter The water cycle has four stages: evaporation, condensation, precipitation and collection. Water in lakes, rivers and streams is warmed by the Sun, causing the water to evaporate and rise into the air as water vapour. As the water vapour rises, it cools and condenses to form water droplets in clouds. The clouds become full of water until the water falls back to the ground as precipitation (rain, hail, snow and ice). The fallen water collects back in lakes, rivers and streams. Evaporation and condensation are caused by temperature changes. Describe the water cycle using words or diagrams and explain the part played by	Light Light travels in straight lines. Identify that light travels in straight lines. Identify that light travels in straight lines. Light sources give out light. They can be natural or artificial. When light hits an object, it is absorbed, scattered, reflected or a combination of all three. Light from a source or reflected light enter the eye. Vertebrates, such as mammals, birds and reptiles, have a cornea and lens that refracts light that enters the eye and focuses it on the nerve tissue at the back of the eye, which is called the retina. Once light reaches the retina, it is transmitted to the brain via the optic nerve. Explain that, due to
				Describe the water cycle using words or diagrams and	the retina, it is transmitted to the brain via the optic

	Understanding the World	Light	Sound	Light
	Natural phenomena include	Dark is the absence of ligh	t When an instrument is	White' light is a term used to
	weather, shadows, rainbows,	and we need light to be al	ole played, the air around or	describe visible, ordinary
	clouds, flooding and waves.	to see. Describe the	inside it vibrates. These	daylight. White light can be
	Name and describe natural	differences between dark	vibrations travel as a sound	split into a spectrum of
	phenomena, such as the size	and light and how we nee	d wave. Sound waves travel	colours (rainbow) by
	of shadows, the colours of a	light to be able to see.	through a medium, such as	droplets of water or prisms.
	rainbow, the speed of clouds		air or water, to the ear.	Describe, using scientific
	moving across the sky and	A shadow is formed when	•	language, phenomena
	the strength of a wave.	light from a light source,	made and heard using	associated with refraction of
		such as the Sun, is blocked	9	light.
		by an object. Opaque obje		1.6
		cast dark shadows.	methods of versally.	Earth and Space
		Translucent objects cast p	ale	The Solar System is made up
		shadows. Transparent		of the Sun and everything
		objects cast very pale		that orbits around it. There
		shadows. Explain, using		are eight planets in our Solar
		words or diagrams, how		System: Mercury, Venus,
		shadows are formed when		Earth, Mars, Jupiter, Saturn,
<u>a</u>		light source is blocked by		Uranus and Neptune. Earth
Jer		opaque object.	111	orbits around the Sun and a
او		opaque object.		year (365 days) is the length
Phenomena				of time it takes for Earth to
۵				complete a full orbit.
				Describe or model the
				movement of the planets in
				·
				our Solar System, including
				Earth, relative to the Sun.
				The Advance day of the Control
				The Moon orbits Earth,
				completing a full orbit every
				month (28 days). Describe or
				model the movement of the
				Moon relative to Earth.
				TI 0 5 11 11
				The Sun, Earth, Moon and
				the planets in our solar
				system are roughly spherical.
				All planets are spherical
				because their mass is so
				large that they have their
				own force of gravity. This

							force of gravity pulls all of a planet's material towards its centre, which compresses it into the most compact shape – a sphere. Describe the Sun, Earth and Moon as approximately spherical bodies and use this knowledge to understand the phases of the Moon and eclipses.
Forces	Understanding the World Some objects float and others sink. When an object sinks it falls through water to the bottom of the vessel. An object that floats stays at the water's surface. Describe, predict and sort things that float and sink and talk about the forces that they can feel.	Seasonal Change Simple equipment can be used for measuring weather, such as measuring temperature with a thermometer; identifying wind direction and force with a windsock or measuring rainfall with a rain gauge. Investigate weather using toys, models or simple equipment.	Some objects float and others sink. Objects that float are typically light or hollow. Objects that sink are typically heavy or dense. Sort and group objects that float and sink.	An object will not move unless a pushing or pulling force is applied. Some forces require direct contact, whereas other forces can act at a distance, such as magnetic force. Explain that an object will not move unless a push or pull force is applied, describing forces in action and whether the force requires direct contact or whether the force can act at a distance (magnetic force).	A series circuit is a simple loop with only one path for the electricity to flow. A series circuit must be a complete loop to work and have a source of power from a battery or cell. Predict and describe whether a circuit will work based on whether or not the circuit is a complete loop and has a battery or cell.	Forces Gravity is a force of attraction. Anything with a mass can exert a gravitational pull on another object. The Earth's large mass exerts a gravitational pull on all objects on Earth, making dropped objects fall to the ground. Explain that objects fall to Earth due to the force of gravity.	Voltage is measured in volts (V) and is a measure of the difference in electrical energy between two parts of a circuit. The bigger the voltage, the more electrons are pushed through the circuit. The more voltage flowing through a lamp, buzzer or motor, the brighter the lamp, the louder the buzzer and the faster the motor. Explain how the brightness of a lamp or volume of a buzzer is affected by the number and voltage of cells used in a circuit.

		Understanding the World	Electricity	D&T	D&T	Electricity	Forces	Electricity
	Modelling	Some light sources need electricity or batteries to work, such as a torch, and some do not, such as candles. Explore and describe electrical and non-electrical light sources.	Electrical circuits can light lamps or sound a buzzer. A switch turns an electrical circuit off and on. Describe, following exploration, what simple electrical circuits can do.	Models can have moving parts that use levers, sliders, wheels and axles. Make models with moving parts.	Make working models with simple mechanisms or electrical circuits.	Electrical components include cells, wires, lamps, motors, switches and buzzers. Switches open and close a circuit and provide control. Construct operational simple series circuits using a range of components and switches for control.	Mechanisms, such as levers, pulleys and gears, give us a mechanical advantage. A mechanical advantage is a measurement of how much a simple machine multiplies the force that we put in. The bigger the mechanical advantage, the less force we need to apply. Describe and demonstrate how simple levers, gears and pulleys assist the movement of	There are recognised symbols for different components of circuits. Create circuits using a range of components and record diagrammatically using the recognised symbols for electrical components.
Creativity	Report and Conclude	Communication and Language Represent scientific observations by mark making, drawing or creating simple charts and tables. Offer explanations for why things happen, making use of vocabulary, such as, because, then and next.	Working Scientifically The results are information that has been found out from an investigation. Talk about what they have done and say, with help, what they think they have found out.	Working Scientifically The results are information that has been found out from an investigation and can be used to answer a question. Begin to notice patterns and relationships in their data and explain what they have done and found out using simple scientific language.	Working Scientifically Results are information that has been discovered as part of an investigation. A conclusion is the answer to a question that uses the evidence collected. Use suitable vocabulary to talk or write about what they have done, what the purpose was and, with help, draw a simple conclusion based on evidence collected, beginning to identify next steps or improvements.	Working Scientifically Results are information, such as data or observations that have been found out from an investigation. A conclusion is the answer to a question that uses the evidence collected. Use scientific vocabulary to report and answer questions about their findings based on evidence collected, draw simple conclusions and identify next steps, improvements and further questions.	working Scientifically The results are information, such as measurements or observations that have been collected during an investigation. A conclusion is an explanation of what has been discovered using evidence collected. Use relevant scientific vocabulary to report on their findings, answer questions and justify their conclusions based on evidence collected, identify improvements, further questions and predictions.	Working Scientifically The results are information, such as measurements or observations that have beer collected during an investigation. A conclusion is an explanation of what has been discovered, using correct, precise terminology and collected evidence. Report on and validate their findings, answer questions and justify their methods, opinions and conclusions, and use their results to suggest improvements to their methodology, separate facts from opinions and make predictions for what they might observe.

		I		1	1	1		
		Mathematics	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically
		Data can be recorded in	Data can be recorded and	Data can be recorded and	Data can be recorded and	Data can be recorded and	Data can be recorded and	Data can be recorded and
		tables and pictograms.	displayed in different ways,	displayed in different ways,	displayed in different ways,	displayed in different ways,	displayed in different ways,	displayed in different ways,
	œ	Record data in simple tables	including tables, pictograms	including tables, charts,	including tables, charts,	including tables, charts,	including tables, bar and line	including tables, bar and line
	data	and pictograms.	and drawings. With support,	pictograms and drawings.	graphs and labelled	graphs, keys and labelled	charts, classification keys	charts, scatter graphs,
	5		gather and record simple	Use a range of methods	diagrams. Data can be used	diagrams. Gather, record,	and labelled diagrams.	classification keys and
	record		data in a range of ways (data	(tables, charts, diagrams and	to provide evidence to	classify and present	Gather and record data and	labelled diagrams. Choose an
	d re		tables, diagrams, Venn	Venn diagrams) to gather	answer questions. Gather	observations and	results of increasing	appropriate approach to
	and		diagrams).	and record simple data with	and record findings in a	measurements in a variety of	complexity, selecting from a	recording accurate results,
	er			some accuracy.	variety of ways (diagrams,	ways (pictorial	range of methods (scientific	including scientific diagrams,
	Gather				tables, charts and graphs)	representations, timelines,	diagrams, labels,	labels, timelines,
	G				with increasing accuracy.	diagrams, keys, tables, charts	classification keys, tables,	classification keys, tables,
						and graphs).	graphs and models).	models and graphs (bar, line
								and scatter), linking to
								mathematical knowledge.
		Communication and	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically
		Language	Question words include	Questions can help us find	Questions can help us find	Questions can help us find	Questions can help us find	Questions can help us find
		Question words include who,	what, why, how, when, who	out about the world. Ask and	out about the world and can	out about the world and can	out about the world and can	out about the world and can
		why, what, when, where and	and which. Ask simple	answer scientific questions	be answered in different	be answered using scientific	be answered using scientific	be answered using a range of
<u>_</u>	p0	how. Ask a relevant scientific	scientific questions.	about the world around	ways. Ask questions about	enquiry. Ask relevant	enquiry. Ask relevant	scientific enquiries, including
Investigation	Questioning	question to find out more,		them.	the world around them and	scientific questions,	scientific questions,	fair tests, research and
tig	tio	explain how things work and			explain that they can be	independently, about the	independently, about the	observation. Ask and answer
ves	nes	why they might happen.			answered in different ways.	world around them and	world around them and	deeper and broader
<u>ڪ</u>	Q					begin to identify how they	begin to identify how they	scientific questions about
						can answer them.	can answer them.	the local and wider world
								that build on and extend
								their own and others'
								experiences and knowledge.

	Mathematics	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically
	Simple equipment can be	Simple equipment is used to	Simple equipment is used to	Equipment is used to take	Equipment is used to take	Specialised equipment is	Specialised equipment is
	used to measure distance,	take measurements and	take measurements and	measurements in standard	measurements in standard	used to take measurements	used to take accurate
	height, weight and time.	observations. Examples	observations. Examples	units. Examples include data	units. Examples include data	in standard units. Examples	measurements in standar
	With support, use simple	include metre sticks,	include timers, hand lenses,	loggers plus sensors, timers	loggers plus sensors, timers	include data loggers plus	units. Examples include d
	equipment, such as timers,	measuring tapes, egg timers	metre sticks and trundle	(seconds, minutes and	(seconds, minutes and	sensors, such as light (lux),	loggers plus sensors, such
¥	rulers and containers, to	and hand lenses. With	wheels. Use simple	hours), thermometers (°C)	hours), thermometers (°C),	sound (dB) and temperature	light (lux), sound (dB) and
Measurement	measure length, height,	support, use simple	equipment to measure and	and metre sticks	and metre sticks, rulers or	(°C); timers (seconds,	temperature (°C); timers
ren	capacity and time.	equipment to measure and	make observations.	(millimetres, centimetres	trundle wheels (millimetres,	minutes and hours);	(seconds, minutes and
nsı	capacity and time.	make observations.	make observations.	and metres). Taking repeat	centimetres, metres). Take	thermometers (°C), and	hours); thermometers (°
٧es		make observations.			accurate measurements in	, ,,	
2				readings can increase the		measuring tapes	and measuring tapes
				accuracy of the	standard units, using a range	(millimetres, centimetres,	(millimetres, centimetre
				measurement. Take	of equipment.	metres). Take increasingly	metres). Take accurate,
				measurements in standard		accurate measurements in	precise and repeated
				units, using a range of simple		standard units, using a range	measurements in standa
				equipment.		of chosen equipment.	units, using a range of
							chosen equipment.
	Understanding the World	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifically	Working Scientifical
	When we try things out to	Simple tests can be carried	Tests can be carried out by	Tests can be set up and	Scientific enquiries can be	A method is a set of clear	A method is a set of clea
	see if they work, it is called a	out by following a set of	following a set of	carried out by following or	set up and carried out by	instructions for how to carry	instructions for how to
	test. Observe how activities	instructions. With support,	instructions. A prediction is a	planning a set of	following or planning a	out a scientific investigation.	out a scientific investiga
	are going and adapt their	follow instructions to	guess at what might happen	instructions. A prediction is a	method. A prediction is a	A prediction is a statement	including what equipme
	ideas if necessary.	perform simple tests and	in an investigation. Follow a	best guess for what might	statement about what might	about what might happen in	use and observations to
		begin to talk about what	set of instructions to	happen in an investigation	happen in an investigation,	an investigation based on	make. A variable is
		they might do or what might	perform a range of simple	based on some prior	based on some prior	some prior knowledge or	something that can be
		happen.	tests, making simple	knowledge. Set up and carry	knowledge or	understanding. Plan and	changed during a fair te
L C			predictions for what might	out some simple,	understanding. A fair test is	carry out a range of	prediction is a statemer
ati			happen and suggesting ways	comparative and fair tests,	one in which only one	enquiries, including writing	about what might happo
stig			to answer their questions.	making predictions for what	variable is changed and all	methods, identifying	an investigation based of
Investigation				might happen.	others remain constant.	variables and making	some prior knowledge o
드					Begin to independently plan,	predictions based on prior	understanding. Plan and
					set up and carry out a range	knowledge and	carry out a range of
					of comparative and fair	understanding.	enquiries, including writ
					tests, making predictions		methods, identifying an
					and following a method		controlling variables,
					accurately.		deciding on equipment
							data to collect and maki
							predictions based on pri
							knowledge and
							understanding.

rvation	Communication and Language With support, observe, record and talk about materials and living things.	Working Scientifically Objects, materials and living things can be looked at and compared. Observe objects, materials, living things and changes over time, sorting and grouping them based on their features.	Working Scientifically Objects, materials and living things can be looked at, compared and grouped according to their features. Observe objects, materials, living things and changes over time, sorting and grouping them based on their features and explaining	Working Scientifically An observation involves looking closely at objects, materials and living things, which can be compared and grouped according to their features. Make increasingly careful observations, identifying similarities, differences and changes and	Working Scientifically An observation involves looking closely at objects, materials and living things. Observations can be made regularly to identify changes over time. Begin to choose which observations to make and for how long and make systematic, careful	Working Scientifically An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time. Within a group, decide which observations to make, when	Working Scientifically An observation involves looking closely at objects, materials and living things. Accurate observations can be made repeatedly or at regular intervals to identify changes over time, identify processes and make comparisons. Independently
Obse			their reasoning.	making simple connections.	observations and comparisons, identifying changes and connections.	and for how long, and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.	decide which observations to make, when and for how long and make systematic and careful observations, using them to make comparisons, identify changes, classify and make links between cause and effect.

					T		
	Understanding the World	Materials	Materials	Light	States of Matter	Materials	
	Objects are made from	A material is what an object	Some foods, such as ice and	Light can be reflected from	Materials can be grouped	Materials can be grouped	
	different materials. Everyday	is made from. Everyday	chocolate, melt when	different surfaces. Some	according to whether they	according to their basic	
	materials include, wood,	materials include wood,	heated, but then harden	surfaces are poor reflectors,	are solids, liquids or gases.	physical properties.	
	plastic, glass, fabric, metal	plastic, glass, metal, water,	(solidify or freeze) when	such as some fabrics, while	Solids stay in one place and	Properties include hardness,	
	and stone. Materials have	rock, brick, paper and fabric.	cooled. Observe what	other surfaces are good	can be held. Some solids can	solubility, transparency,	
	different properties. Name	Identify and name what an	happens when a range of	reflectors, such as mirrors.	be squashed, bent, twisted	conductivity (electrical and	
	and sort everyday items into	object is made from,	everyday materials, including	Group and sort materials as	and stretched. Examples of	thermal) and magnetism.	
	groups of the same material.	including wood, plastic,	foods, are heated and	being reflective or non-	solids include wood, metal,	Compare and group	
		glass, metal, water and rock.	cooled, sorting and grouping	reflective.	plastic and clay. Liquids	everyday materials by their	
			them based on their		move around (flow) easily	properties, including	
			observations.		and are difficult to hold.	hardness, solubility,	
					Liquids take the shape of the	transparency, conductivity	
					container in which they are	(electrical and thermal) and	
					held. Examples of liquids	magnetism.	
					include water, juice and milk.		
Ę					Gases spread out to fill the	Some materials (solutes) will	
ica					available space and cannot	dissolve in liquid (solvents)	
ssif					be held. Examples of gases	to form a solution. The	
als					include oxygen, helium and	solute can be recovered by	
erië					carbon dioxide. Air is a	evaporating off the solvent	
Materials on and Cl					mixture of gases. Group and	by heating. Explain, following	
<u>‡</u> ≥					sort materials into solids,	observation, that some	
ica					liquids or gases.	substances (solutes) will	
Materials Identification and Classification						dissolve in liquid (solvents)	
de						to form a solution and the	
						solute can be recovered by	
						evaporating off the solvent.	
						Heat energy is transferred in	
						three different ways:	
						conduction, convection and	
						radiation. A material that	
						allows heat energy to travel	
						through it is a thermal	
						conductor. Poor thermal	
						conductors are known as	
						thermal insulators. Insulation	
						is important for the survival	
						of many animals. Blubber is a	
						layer of fat that acts as an	
						insulator under the skin of	

			some animals, such as	
			walruses and whales. It is an	
			adaptation that is essential	
			for their survival. Animals	
			with fur, such as polar bears	
			and Arctic foxes, trap a layer	
			of air close to their skin to	
			insulate them from the cold.	
			Investigate and identify good	
			thermal insulators,	
			describing their common	
			features.	

	Understanding the World	Materials	Materials	Rocks	Electricity	Materials	Light
	Some materials are	Materials have different	A material's physical	There are three different	Electrical conductors allow	Some mixtures can be	Mirrors and lenses are used
	magnetic, which means that	properties, such as hard or	properties make it suitable	rock types: sedimentary,	electricity to flow through	separated by filtering,	in a range of everyday
	they are attracted to (pull	soft; stretchy or stiff; rough	for particular purposes, such	igneous and metamorphic.	them, whereas insulators do	sieving and evaporating.	objects (telescopes,
	towards) a magnet. Some	or smooth; opaque or	as glass for windows and	Sedimentary rocks form	not. Common electrical	Sieving can be used to	periscopes, cards and on
	metals are magnetic. Other	transparent; bendy or rigid;	brick for building walls.	from mud, sand and particles	conductors are metals.	separate large solids from	roads). The human eye has a
	materials are non-magnetic,	waterproof or not	Many materials are used for	that have been squashed	Common insulators include	liquids and some solids from	lens that bends and focuses
	such as wood, dough and	waterproof. Investigate and	more than one purpose,	together over a long time to	wood, glass, plastic and	other solids. Filtering can be	light on the back of the eye
	glass. Identify that materials	describe the simple physical	such as metal for cutlery and	form rock. Examples include	rubber. Describe materials as	used to separate small solids	(retina) so that we can see.
	have different properties	properties of some everyday	cars. Compare the suitability	sandstone and limestone.	electrical conductors or	from liquids. Evaporating can	Describe, using diagrams,
	and explore and sort	materials, such as hard or	of a range of everyday	Igneous rocks are made from	insulators.	be used to separate	how light behaves when
	magnetic and non-magnetic	soft; stretchy or stiff; rough	materials for particular uses,	cooled magma or lava. They		dissolved solids from liquids.	reflected off a mirror (plane,
	materials through play and	or smooth; opaque or	including wood, metal,	usually contain visible		Separate mixtures by	convex or concave) and
	exploration.	transparent; bendy or rigid	plastic, glass, brick, rock,	crystals. Examples include		filtering, sieving and	when passing through a lens
		and waterproof or not	paper and cardboard .	pumice and granite.		evaporating.	(concave or convex).
S		waterproof.		Metamorphic rocks are			
nse				formed when existing rocks		Materials	
pu				are heated by the magma		A material's properties	
Properties and uses				under the Earth's crust or		dictate what it can be used	
rtie				squashed by the movement		for. For example, cooking	
obe				of the Earth's tectonic plates.		pans are made from metal,	
Pro				They are usually very hard. Examples include slate and		which is a good thermal conductor, allowing heat to	
				marble. Compare and group		quickly transfer from the hob	
				rocks based on their		to the contents of the pan.	
				appearance, properties or		Describe, using evidence	
				uses.		from comparative or fair	
				Forces		tests, why a material has	
				Some materials have		been chosen for a specific	
				magnetic properties.		use, including metals, wood	
				Magnetic materials are		and glass.	
				attracted to magnets. All		aa g.u	
				magnetic materials are			
				metals but not all metals are			
				magnetic. Iron is a magnetic			
				metal. Compare and group			
				materials based on their			
				magnetic properties.			

		Understanding the World	Plants	Living things and their	Living things and their	Living things and their	Living things and their	Living things and their
		Plants and trees are living	Plants are living things.	habitats	habitats	habitats	habitats	habitats
		things. They can be	Common plants include the	A habitat is a place where a	Some animals have skeletons	Scientists classify living	Flowering plants reproduce	Classification keys help us
		identified according to their	daisy, daffodil and grass.	living thing lives. A	for support, movement and	things according to shared	sexually. The flower is	identify living things based
		features, such as leaves,	Trees are large, woody	microhabitat is a very small	protection. Endoskeletons	characteristics. Animals can	essential for sexual	on their physical
		seeds and flowers. Begin to	plants and are either	habitat. Identify and name a	are those found inside some	be divided into six main	reproduction. Other plants	characteristics. Use and
		name and group plants and	evergreen or deciduous.	variety of plants and animals	animals, such as humans,	groups: mammals, reptiles,	reproduce asexually. Bulbs,	construct classification
		trees according to their	Trees that lose their leaves in	in a range of habitats and	cats and horses.	amphibians, birds, fish and	corms and rhizomes are	systems to identify animals
		observable features.	the autumn are called	microhabitats.	Exoskeletons are those	invertebrates. These groups	some parts used in asexual	and plants from a range of
			deciduous trees. Examples		found on the outside of	can be further subdivided.	reproduction in plants.	habitats.
		Understanding the World	include oak, beech and	Animals have offspring that	some animals, such as	Classification keys are	Group and sort plants by	
		Animals are living things.	rowan. Trees that shed old	grow into adults. Different	beetles and flies. Some	scientific tools that aid the	how they reproduce.	Scientists classify living
		There are different types of	leaves and grow new leaves	animals have different stages	animals have no skeleton,	identification of living things.		organisms into broad groups
	atic	animal. Parent and baby	all year round are called	of growth or life cycles.	such as slugs and jellyfish.	Compare, sort and group		according to their
	and classificatio	mammals include cow and	evergreen trees. Examples	Describe the basic life cycles	Identify and group animals	living things from a range of		characteristics. Vertebrates
	ass	calf, sheep and lamb, and cat	include holly and pine.	of some familiar animals	that have no skeleton, an	environments, in a variety of		are an example of a
ق	lo b	and kitten. Parent and baby	Identify, compare, group and	(egg, caterpillar, pupa,	internal skeleton	ways, based on observable		classification group. There
Nature	an	birds include duck and duckling, chicken and chick,	sort a variety of common	butterfly; egg, chick, chicken;	(endoskeleton) and an external skeleton	features and behaviour.		are a number of ranks, or levels, within the biological
ž	ion	and goose and gosling.	wild and garden plants, including deciduous and	spawn, tadpole, froglet, frog).	(exoskeleton).			classification system. The
	cati	Match animals to their	evergreen trees, based on	nog).	(exoskeletoli).			first rank is called a kingdom,
	ξ	young.	observable features.					the second a phylum, then
	dentification	young.	observable reacures.					class, order, family, genus
	<u>-</u>		Animals including Humans					and species. Classify living
			Animals are living things.					things, including
			Animals can be sorted and					microorganisms, animals and
			grouped into six main					plants, into groups according
			groups: fish, amphibians,					to common observable
			reptiles, birds, invertebrates					characteristics and based on
			and mammals. Identify,					similarities and differences.
			compare, group and sort a					
			variety of common animals,					
			including fish, amphibians,					
			reptiles, birds, invertebrates					
			and mammals, based on					
			observable features.					

	Understanding the World	Plants	Plants	Plants	Animals including Humans	Living things and their	Evolution and Inheritance
	Parts of plants and trees	The basic plant parts include	Plants need water, light and	The plant's roots anchor the	There are four different	habitats	Animals that sexually
	include trunk, branch, twig,	root, stem, leaf, flower,	a suitable temperature to	plant in the ground and	types of teeth: incisors,	Parts of a flower include the	reproduce generate new
	roots, stem, flowers and	petal, fruit, seed and bulb.	grow and stay healthy.	transport water and minerals	canines, premolars and	stamen, filament, anther,	offspring of the same kind by
	leaves. Name and describe	Trees have a woody stem	Without any one of these	from the ground to the	molars. Incisors are used for	pollen, carpel, stigma, style,	combining the genetic
	basic features of plants and	called a trunk. Label and	things, they will die. Describe	plant. The stem (or trunk)	cutting. Canines are used for	ovary, ovule and sepal.	material of two individuals.
	trees.	describe the basic structure	how plants need water, light	support the plant above the	tearing. Premolars and	Pollination is when the male	Each offspring inherits two
	trees.	of a variety of common	and a suitable temperature	ground. The leaves collect	molars are used for grinding	part of a plant (pollen) is	of every gene, one from the
	Understanding the World	plants.	•	energy from the Sun and		' ' '	, •
	Different animal groups have	plants.	to grow and stay healthy.	make food for the plant.	and chewing. Carnivores, herbivores and omnivores	carried, by wind, insects or other animals, to the female	female parent and one from
		Animala in dividing House on		Flowers make seeds to		•	the male parent. Identify
	some common body parts,	Animals including Humans			have characteristic types of	part of the plant (carpel).	that living things produce
us	such as birds have wings and	Different animal groups have		produce new plants. Name and describe the functions of	teeth. Herbivores have many	The pollen travels to the	offspring of the same kind,
Ę;	fish have fins. Identify	some common body parts,			large molars for grinding	ovary, where it fertilises the	although the offspring are
Ĭ	common features for	such as eyes and a mouth,		the different parts of	plant material. Carnivores	ovules (eggs). Seeds are then	not identical to either
Parts and Functions	different groups of animals,	and some different body		flowering plants (roots,	have large canines for killing	produced, which disperse far	parent.
anc	including wild and domestic	parts, such as fins or wings.		stem, leaves and flowers).	their prey and tearing meat.	away from the parent plant	
ts .	animals.	Label and describe the basic		8 1	Identify the four different	and grow new plants. Label	Animals and plants can be
Ра		structures of a variety of		Plants	types of teeth in humans and	and draw the parts of a	bred to produce offspring
		common animals, including		Water is transported in	other animals, and describe	flower involved in sexual	with specific and desired
		fish, amphibians, reptiles,		plants from the roots,	their functions.	reproduction in plants	characteristics. This is called
		birds and mammals.		through the stem and to the		(stamen, filament, anther,	selective breeding. Examples
				leaves, through tiny tubes		pollen, carpel, stigma, style,	include cows that produce
				called xylem. Investigate		ovary, ovule and sepal).	large quantities of milk or
				how water is transported			crops that are disease-
				within plants.			resistant. Describe how
							animals and plants can be
							bred to produce offspring
							with specific and desired
							characteristics (selective
							breeding).

	Understanding the World					
		Animals including Humans	Living things and their	Animals including Humans	Animals including Humans	Animals including Humans
	Animals eat different kinds	Carnivores eat other animals	habitats	Animals cannot make their	Food chains show what	The role of the circulatory
	of food, including other	(meat), herbivores eat plants	Food chains show how living	own food and need to get	animals eat within a habitat	system is to transport
	animals, plants or both	and omnivores eat other	things depend on one	nutrition from the food they	and how energy is passed on	oxygen, water and nutrients
	animals and plants. Match	animals and plants. Group	another for food. All food	eat. Carnivores get their	over time. All food chains	around the body. They are
	animals to the foods that	and sort a variety of	chains start with a plant,	nutrition from eating other	start with a producer, which	transported in blood and
	they eat.	common animals based on	followed by animals that	animals. Herbivores get their	is typically a green plant. The	delivered to where they are
		the foods they eat.	either eat the plant or other	nutrition from plants.	producer is eaten by a	needed. Explain that the
			animals. Interpret and	Omnivores get their	primary consumer (prey),	circulatory system in animals
			construct simple food chains	nutrition from eating a	which is eaten by a	transports oxygen, water
			to describe how living things	combination of both plants	secondary consumer (prey),	and nutrients around the
			depend on each other as a	and other animals. Compare	which is eaten by a tertiary	body.
			source of food.	and contrast the diets of	consumer. All food chains	
				different animals.	end with a top or apex	
					predator. Changes within a	
_					food chain, such as an	
Nutrition					abundance or lack of one	
+					food type, have an impact on	
					the entire food chain.	
					Construct and interpret a	
					variety of food chains and	
					webs to show	
					interdependence and how	
					energy is passed on over	
					time.	
					Population changes in a	
					habitat can have significant	
					consequences for food	
					chains and webs. Describe,	
					using their knowledge of	
					food chains and webs, what	
					could happen if a habitat had	
					a living thing removed or	
					introduced.	

	Survival	Understanding the World Plants and animals are living things. Plants need water, sunlight and air to survive. Animals need food, water, air and shelter to survive. Describe some ways that plants or animals should be cared for in order for them to survive.	Animals including Humans Living things need to be cared for in order for them to survive. They need water, food, warmth and shelter. Describe how to care for plants and animals, including pets.	Animals including Humans Animals need water, food, air and shelter to survive. Their habitat must provide all these things. Explain how animals, including humans, need water, food, air and shelter to survive.	Plants Plants need air, light, water, minerals from the soil and room to grow, in order to survive. Different plants have different needs depending on their habitat. Examples include cacti, which need less water than is typical, and ferns, which can grow in lower light levels. Describe the requirements of plants for life and growth (air, light, water, nutrients and room to grow) and how they vary from plant to plant.	Animals including Humans An adaptation helps an animal or plant survive in its habitat. If living things are unable to adapt to changes within their habitat, they are at risk of becoming extinct. Explain how adaptations help living things to survive in their habitat.	Animals including Humans Reproduction is the process of producing offspring and is essential for the continued survival of a species. There are two types of reproduction: sexual and asexual. Sexual reproduction involves two parents (one female and one male) and produces offspring that are different from the parents. Asexual reproduction involves one parent and produces offspring that is identical to the parent. Describe the life process of reproduction in some plants and animals.	Evolution and Inheritance An adaptation is a physical or behavioural trait that allows a living thing to survive and fill an ecological niche. Adaptations evolve by natural selection. Favourable traits help an organism survive and pass on their genes to subsequent generations. Identify how animals and plants are adapted to suit their environment, such as giraffes having long necks for feeding, and that adaptations may lead to evolution.
Place and space	Habitats	Understanding the World A habitat is a place where living things live. Local habitats include woodlands, gardens and ponds. Other habitats include hot places, such as deserts, and cold places, such as the Arctic. Observe and describe living things and their habitats within the local environment.	Seasonal Change The local environment is a habitat for living things and can change during the seasons. Observe the local environment throughout the year and ask and answer questions about living things and seasonal change.	Living things and their habitats Local habitats include parks, woodland and gardens. Habitats beyond the locality include beaches, rainforests, deserts, oceans and mountains. All living things live in a habitat to which they are suited and it must provide everything they need to survive. Describe a range of local habitats and habitats beyond their locality (beaches, rainforests, deserts, oceans and mountains) and what all habitats provide for the things that live there.	Living things and their habitats Environments are constantly changing due to natural influences, such as seasons, extreme weather, population changes and availability of food. Living things must adapt to these changes in order to survive. Describe how environments can change due to natural influences and how living things need to be able to adapt to these changes.	Living things and their habitats Humans can affect habitats in negative ways, such as littering, pollution and land development, or positive ways, such as garden ponds, bird boxes and wildflower areas. Describe how environments can change due to human and natural influences and the impact this can have on living things.		Living things and their habitats Living things are classified into groups, according to common observable characteristics and based on similarities and differences. Research unfamiliar animals and plants from a range of habitats, deciding upon and explaining where they belong in the classification system.

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	Understanding the World		Forces	Sound	Forces	Electricity
	A shadow is the same shape		Friction is a force between	Sounds are louder closer to	Friction, air resistance and	A circuit needs a power
	as the object that makes it.		two surfaces as they move	the sound source and fainter	water resistance are forces	source, such as a battery or
	Shadows change during the		over each other. Friction	as the distance from the	that oppose motion and slow	cell, with wires connected to
	day. Make a shadow bigger		slows down a moving object.	sound source increases.	down moving objects. These	both the positive and
	or smaller using toys, play		Smooth surfaces usually	Compare how the volume of	forces can be useful, such as	negative terminals. Other
	equipment and a light		generate less friction than	a sound changes at different	bike brakes and parachutes,	components include lamps,
	source.		rough surfaces. Compare	distances from the source.	but sometimes we need to	buzzers or motors, which an
			how objects move over		minimise their effects, such	electric current passes
			surfaces made from different		as streamlining boats and	through and affects a
			materials.		planes to move through	response, such as lighting a
			Sound		water or air more easily and	lamp or turning a motor.
			Volume is how loud or quiet		using lubricants and ball	When a switch is open, it
o			a sound is. Pitch is how high		bearings between two	creates a gap and the
Jen			or low a sound is. Compare		surfaces to reduce friction.	current cannot travel around
Phenomena			the volume and pitch of		Compare and describe, using	the circuit. When a switch is
Jer			sounds made by		a range of toys, models and	closed, it completes the
<u>~</u>			instruments, their voices or		natural objects, the effects	circuit and allows a current
			other objects.		of water resistance, air	to flow all the way around it.
			Light		resistance and friction.	Compare and give reasons
			Shadows are normally the			for variations in how
			same shape as the object			components in electrical
			that cast them. Shadows			circuits function (brightness
			change during the day as the			of lamps; volume of buzzers
			Sun appears to change			and function of on or off
			position in the sky. Shadows			switches).
			occur where light is blocked			,
			by an opaque object.			
			Compare shadows made by			
			different objects and			
			materials.			

		Understanding the World	Plants	Plants	Plants	Living things and their	Animals including Humans	Evolution and Inheritance
		Living things change over	Animals including Humans	Plants grow from seeds and	Flowers are important in the	habitats	Humans go through	Scientists compare fossilised
		time. This includes growth	All living things (plants and	bulbs. Seeds and bulbs need	life cycle of flowering plants.	Habitats change over time,	characteristic stages as they	remains from the past to
		and decay. Explore the	animals) change over time as	water and warmth to start	The processes of a plant's life	either due to natural or	develop towards old age.	living species that exist today
		natural world around them	they grow and mature.	growing (germinate). As the	cycle include germination,	human influences. Natural	These stages include baby,	to hypothesise how living
		and give simple descriptions,	Describe, following	plant grows bigger, it	flower production,	influences include extreme	infant, toddler, child,	things have evolved over
	SS	following observation, of	observation, how plants and	develops leaves and flowers.	pollination, seed formation	or unseasonable weather.	adolescent, young adult,	time. Humans and apes
90	Things	changes.	animals change over time.	Observe and describe how	and seed dispersal. Insects	Human influences include	adult and senior citizen.	share a common ancestry
an	1			seeds and bulbs change over	and the wind can transfer	habitat destruction or	Puberty is the transition	and evidence for this comes
5	Living			time as they grow into	pollen from one plant to	pollution. These changes can	between childhood and	from fossil discoveries and
	É			mature plants.	another (pollination).	pose a risk to animals and	adulthood. Describe the	genetic comparison. Explain
					Animals, wind, water and	plants that live in the	changes as humans develop	that living things have
					explosions can disperse	habitat. Explain how	from birth to old age.	changed over time, using
					seeds away from the parent	unfamiliar habitats, such as a		specific examples and
					plant (seed dispersal). Draw	mountain or ocean, can		evidence.
					and label the life cycle of a	change over time and what		
					flowering plant.	influences these changes.		