

### Knowledge Organisers for the priority subject for each concept to be issued 2-3 weeks before the learning block is taught.

Metacognition: Metacognition can take many forms; it includes knowledge about when and how to use particular strategies for learning or problem-solving. *These will vary depending on the needs of each class.* 

EYFS	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge	What plants are in my	What seasons do we	What positive impact can	Which foods are good for	Can I name and identify	Can I explain why some
	local area?	have?	I have on my	me to eat?	some common plants	plants are weeds?
	What animals are in	How do they affect the	environment?	Which ones should I not	and trees?	Can I explain why you
	my local area?	clothes I wear?	What local factors affect	eat too much of?	Can I draw the plants	would find particular
		How do they affect the	my environment?	How can I keep myself	and animals in my local	plants in certain areas?
		plants that grow?		healthy?	area accurately?	Which plants are food?
				Why is it important to		Which trees are green
				wash my hands?		all year?
						Why is important to
						look after our teeth?
						How much exercise
						should I do?
						How much sleep do I
						need?
Skills	<u>Understanding the</u>	<u>Understanding the</u>	Understanding the World	<u>PSED</u>	Understanding the	Understanding the
	<u>World</u>	<u>World</u>		Manage their own basic	<u>World</u>	<u>World</u>
			Recognise some	hygiene and personal		
	Explore the natural	Understand the effect	environments that are	needs, including	Explore the natural	Explore the natural
	world around them,	of changing seasons on	different to the one in	dressing, going to the	world around them,	world around them,
	making observations	the natural world	which they live.	toilet and understanding	making observations	making observations
	and drawing pictures	around them		the importance of	and drawing pictures of	and drawing pictures of
	of animals and plants;			healthy food choices.	animals and plants;	animals and plants;



						PSED Manage their own needsPhysical DevelopmentKnow and talk about the different factors that support their overall health and wellbeing:- regular physical activity- healthy eating - toothbrushing- sensible amounts of 'screen time'- having a good sleep routine- being a safe pedestrian
Year A Owls	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Civilisation and Democracy	Culture	All Around the World	Exploration and Discoveries	Natural Wonder	Community



NC Objectives	Biology Plants Year 1 identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees.	Physics Seasonal Changes observe changes across the four seasons observe and describe weather associated with the seasons and how day length varies.	Biology Animals Including Humans Year 1 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Biology Animals Including Humans Year 2 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.	Living Things and their Habitats Year 1 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 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 micro- micro- habitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.	Materials (Year 1) Distinguish between an object and the material from which it is made. Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. 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.
Knowledge	What does deciduous mean? Which trees are evergreen? Which plants are wild?	What is a season? What are features of each season? Which months are in each season?	What are the characteristics of different animal classes? Can you sort animals based on their structure?	What are the characteristics of different animal classes? Can you sort animals based on their structure?	What is a habitat? What is Microhabitat?	What are the names of common materials? Where do we find them? What are the uses of common materials?



	Which plants grow in our gardens?	What is the weather pattern like in each season? Can I ask questions to gather data?	What is the difference between carnivores, herbivores and omnivores?	What is the difference between carnivores, herbivores and omnivores?		
Skill Progressio n	<u>WA</u> Identify a range of local plants. Name parts of a range of familiar plants. Compare/contrast a collection of items, sorting into categories 'living', 'dead' and 'things that have never been alive'.	WA Describe seasonal changes. Relate weather patterns and day length to seasons.	WAName a variety of common animals.Identify and group a range of familiar animals.Identify key features of a range of common animals.Relate each of the human senses to organs.	WAName a variety of common animals.Identify and group a range of familiar animals.Identify key features of a range of common animals.Relate each of the human senses to organs.	WA Explain how, for a named animal or plant, it gets what it needs from its habitat and other living things that are there. Identify a range of living things in habitats of various sizes. Construct a simple food chain and identify what is eating what.	WACorrectly identify bothobject and material.Identify and name a rangeof materials.Describe a range ofproperties of a variety ofmaterials.Classify a variety ofmaterials into groupsbased on physicalproperties
Meta	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
Cognition	questions to identify and	information organise	identify and compare	(metacognition) describe	new contexts use	design a course of action
	clarify issues, and	information based on	creative ideas to think	the strategies used in given	information from a	identify alternative
	compare information in	similar or relevant ideas	broadly about a given	situations and tasks	previous experience to	courses of action or
	their world	from several sources	situation or problem		inform a new idea	possible conclusions
				Reflect on processes		when presented with
	Identify and clarify	Imagine possibilities	Seek solutions and put	outline the details and	Apply logic and reasoning	information
	Information and ideas	and connect ideas build	ideas into action investigate	and senarate it into	identify reasoning used in	Further and the second
	identity and explore	on what they know to	options and predict possible	workable parts	choices or actions in	Evaluate procedures and
	from accuracy matterials	create ideas and	ideas into active		specific situations	whether they have
	from source materials	possibilities in ways that	ideas into action			accomplished what they
		are new to them				set out to achieve



Year B Owls	Autumn 1	develop and/or produce spoken or written texts in print or digital forms Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Democracy	culture	All Around the world	Exploration and Discoveries		Community
NC Objectives	Plants (Year 2) Biology 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.	Materials (Year 2) Uses of everyday materials 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.	Animals inc. Humans (Year 2) 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.	Animals inc. Humans (Year 2) 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.	Living Things and their Habitats 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 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 micro- micro- habitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify	Living Things and their Habitats 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 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 micro- micro- habitats Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify



					and name different sources of food.	and name different sources of food.
Knowledge	What is a plant? How do they grow? What do they need to live?	Where do materials come from? How are they made? (natural or man-made) What are the properties of different materials? What are they used for?	What is an animal? What do living things need to stay alive? What are the differences between living things? How can we group them? What are their body parts?	What is an animal? What do living things need to stay alive? What are the differences between living things? How can we group them? What are their body parts?	What is a habitat? What is a microhabitat? How do you know if something is alive? Dead? Or never lived? What is a food chain?	What is a habitat? What is a microhabitat? How do you know if something is alive? Dead? Or never lived? What is a food chain?
Skills	Biology <u>WA</u> Explore and identify what plants need to thrive. Describe stages of development of a full- grown plant.	WA Describe changes achieved by applying forces in different directions. Select and justify a material for a particular use.	WAIdentify human's basicneeds.The human body has anumber of systems, eachwith its own functionDescribe the importance forhumans of exercise, eatingthe right amounts ofdifferent types of food, andhygiene.Describe the importance ofa healthy diet and exercise.	WADescribe the relationshipbetween adult animals andtheir offspring.Identify human's basicneeds.Describe the importance ofa healthy diet and exercise.	WAExplain how, for a named animal or plant, it gets what it needs from its habitat and other living things that are there.Identify a range of living things in habitats of various sizes.Construct a simple food chain and identify what is eating what.	WAExplain how, for a named animal or plant, it gets what it needs from its habitat and other living things that are there.Identify a range of living things in habitats of various sizes.Construct a simple food chain and identify what is eating what.
Metacognit ion	<b>Pose questions</b> pose questions to identify and clarify issues, and	Organise and process information organise information based on	<b>Consider alternatives</b> identify and compare creative ideas to think	Think about thinking (metacognition) describe the strategies used in given situations and tasks	Transfer knowledge into new contexts use information from a	Draw conclusions and design a course of action identify alternative courses of action or



	compare information in their world Identify and clarify information and ideas Identify and explore information and ideas from source materials	similar or relevant ideas from several sources Imagine possibilities and connect ideas build on what they know to create ideas and possibilities in ways that are new to them develop and/or produce spoken or written texts in print or digital forms	broadly about a given situation or problem Seek solutions and put ideas into action investigate options and predict possible outcomes when putting ideas into action	<b>Reflect on processes</b> outline the details and sequence in a whole task and separate it into workable parts	previous experience to inform a new idea <b>Apply logic and reasoning</b> identify reasoning used in choices or actions in specific situations	possible conclusions when presented with information <b>Evaluate procedures and</b> <b>outcomes</b> evaluate whether they have accomplished what they set out to achieve
Year A Buzzards	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Civilisation and Democracy Year 3/4 – Living things (classification) Year 5/6 – Living things (classification)	Culture Year 3/4 - Animals including humans (nutrition) Year 5/6 – Animals including humans (circulation)	All Around the World Year 3/4 – States of matter Year 5/6 – Properties and changes of materials	Exploration and Discoveries Year 3/4 – Light Year 5/6 – Light	Natural Wonder Year 3/4 – Electricity Year 5/6 – Electricity	Community Year 3/4 – Electricity Year 5/6 – Electricity
NC Objectives	Y3/4 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 Recognise that environments can change	Y3/4 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	Y3/4 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)	Y3/4 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	Y3/4 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	Y3/4 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



and that this can sometimes pose dangers	muscles for support,	Identify the part played by evaporation and	Recognise that shadows	Recognise some common conductors and insulators	Recognise some common conductors and
to living things.	movement	condensation in the water	from a light source is	and associate metals with	insulators, and associate
		cycle and associate the rate	blocked by a solid object	being good conductors	metals with being good
Y5/6	Y5/6	of evaporation with	Find patterns in the way	Identify whether or not a	conductors
		temperature	that the size of	lamp will light in a simple	Identify whether or not a
Describe how living things	Identify and name the		shadows change	series circuit, based on	lamp will light in a simple
are classified into broad	main parts of the	Y5/6	U U	whether or not the lamp is	series circuit, based on
groups according to	human circulatory		Y5/6	part of a complete loop	whether or not the lamp
common observable	system, and describe	Compare and group	Recognise that light	with a battery	is part of a complete loop
characteristics and based	the functions of the	together everyday materials	appears to travel in straight	Recognise that a switch	with a battery
on similarities and	heart, blood vessels and	on the basis of their	lines	opens and closes a circuit	Recognise that a switch
differences, including	blood	properties, including their	Use the idea that light	and associate this with	opens and closes a circuit
microorganisms, plants	Recognise the impact of	hardness, solubility,	travels in straight lines to	whether or not a lamp	and associate this with
and animals	diet, exercise, drugs and	transparency, conductivity	explain that objects are	lights in a simple series	whether or not a lamp
Give reasons for	lifestyle on the way	(electrical and thermal) and	seen because they give out	circuit	lights in a simple series
classifying plants and	their bodies function	response to magnets	or reflect light into the eye		circuit
animals based on specific	Describe the ways in	Know that some materials	Explain that we see things	<u>Y5/6</u>	
characteristics.	which nutrients and	will dissolve in liquid to	because light travels from		<u>Y5/6</u>
	water are transported	form a solution, and	light sources to our eyes or	Associate the brightness	
	within animals,	describe how to recover a	from light sources to	of a lamp or the volume of	Associate the brightness
	including humans	substance from a solution	objects and then to our	a buzzer with the number	of a lamp or the volume
		Use knowledge of solids,	eyes	and voltage of cells used	of a buzzer with the
		liquids and gases to decide	Use the idea that light	in a circuit.	number and voltage of
		how mixtures might be	travels in straight lines to	Compare and give reasons	cells used in a circuit.
		separated, including	explain why shadows have	for variations in how	Compare and give
		through filtering, sieving	the same shape as the	components function,	reasons for variations in
		and evaporating	objects that cast them	including the brightness of	how components
		Demonstrate that		builds, the loudness of	function, including the
		dissolving, mixing and		buzzers and the on/off	brightness of builds, the
		roversible changes		position of switches.	the en/off nesition of
		Eveloin that some changes		when representing a	switches
		result in the formation of		simple circuit in a diagram	switches.
		now materials and that this		simple circuit in a diagram	
		new materials and that this			



			kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic			Use recognised symbols when representing a simple circuit in a diagram
Knowledge	Why do we group things? What different categories are there to group animals/plants? What is classification?	What is nutrition? What does each type of nutrition do for the human body? What is the purpose of a skeleton? How does blood get around the body? What substances can affect our health? How does water travel through the body?	How can we group materials? What is evaporation and condensation? How does this work in the water cycle? How does temperature effect evaporation? What changes happen at different temperatures? What are physical properties of materials? What is dissolving? How can we retrieve these? What is separation? What is an irreversible change?	How do we see things? What is dark? Which surfaces reflect light? How does a mirror work? Why is the sun dangerous? How can we protect our eyes? How is shadow formed? How does light travel? How does light enable us to see? What is reflection? What is reflection? What is refraction? What is the visible spectrum? Who was Isaac Newton and what did he discover? What is a shadow? What is a prism?	Which appliances run on electricity? Which materials are insulators or conductors? How do number and voltage of cells affect lamps or buzzers? How are switches used in a circuit? How can I represent a circuit with symbols?	Which appliances run on electricity? Which materials are insulators or conductors? How do number and voltage of cells affect lamps or buzzers? How are switches used in a circuit? How can I represent a circuit with symbols?



				How do we see colours?		
Skill	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
Progressio						
n	Suggest different ways of	Describe why animals	Group materials according	Relate being able to see to	List examples of	List examples of
	sorting the same group of	depend on the correct	to their state of matter.	the presence of light.	appliances that	appliances that
	living things, e.g. grouping	nutrition.			run on electricity.	run on electricity.
	birds according to where		Describe how evaporation	Describe how some objects		
	they live, what they eat	Explain which parts of	and condensation happen in	reflect light	Construct a simple circuit	Construct a simple circuit
	and size of adults.	the skeleton provide	the water cycle, and how	-	and name its components	and name its components
		support and protection,	temperature affects	Describe how and why our		
	Use classification keys to	and how they allow	evaporation.	eyes should be protected	Sort materials into	Sort materials into
	group and identify	for movement		from sunlight.	conductors and insulators,	conductors and
	members from a		Identify changes of state		identifying metals as	insulators, identifying
	range of familiar and less	Y5/6	and research values of	Explain how shadows are	conductors	metals as conductors
	familiar living things.		degrees celsius at which	made.		
		Describe what heart,	changes happen.		Predict whether a	Predict whether a
	Describe examples of	blood vessels and blood		Describe how to change	particular arrangement of	particular arrangement of
	living things that are	do, e.g. carry		the size of a shadow.	components will result in	components will result in
	threatened by	oxygen to all parts of			a bulb lighting.	a bulb lighting.
	changes to environments,	the body.	Y5/6			
	e.g. owls and habitat loss.		-, -	Y5/6	Predict how the operation	Predict how the
		Suggest how their	Compare and group		of a switch will affect	operation of a switch will
		bodies are affected by	together everyday materials	Represent light using	bulbs lighting.	affect bulbs lighting.
	Y5/6	substances and	on the basis of their	straight line ray diagrams.		
		actions, e.g. that a high	appearance and feel.	, , ,	Y5/6	Y5/6
	Use similarities and	fat diet coupled with		Draw diagrams using		
	differences	little exercise is	Know that some materials	straight lines showing light	Explain how number and	Explain how number and
	in observable features to	likely to lead to obesity	will dissolve in liquid to	travelling to the eye.	voltage of cells affects the	voltage of cells affects the
	decide how living things		form a solution.	, ,	lamp or buzzer.	lamp or buzzer.
	should be grouped, e.g. a	Describe with aid of		Explain how we can see an		
	cat is a mammal because	diagrams the route that	Suggest how mixtures might	object by referring to light	Explain the use of	Explain the use of
	it is warm blooded and	water takes within	be separated.	travelling into the eye.	switches, how bulbs can	switches, how bulbs can
	gives birth to live	animals, e.g. through			be made brighter and	be made brighter and
	young.	the human body			buzzers made louder.	buzzers made louder.



	Explain why certain features are useful in classifying living things, e.g. backbones in animals and flowers in plants		Understand that some processes are reversible. Understand that burning is irreversible. Give reasons for the particular uses of everyday materials, including metals, wood and plastic.	Draw a diagram showing an object, shadow and light to relate object shape to shadow shape.	Represent a circuit that has been constructed using symbols.	Represent a circuit that has been constructed using symbols.
Meta	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
Cognition	Deserved in a second	0		Think shout this live	Turnefen hur en de des late	Duran and states and
	Pose questions pose	Organise and process	Consider alternatives	I NINK about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and categorise	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	facts and opinions found	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
	Identify and clarify	in a wide range of	alternatives	conclusions	Apply logic and reasoning	choosing a course of
	information and ideas	sources	Seek solutions and put	Reflect on processes	identify and apply	action or drawing a
	identify main ideas and	Imagine possibilities	ideas into action	identify pertinent	appropriate reasoning and	conclusion
	select and clarify	and connect ideas	experiment with a range of	information in an	thinking strategies for	
	information from a range	expand on known ideas	options when seeking	investigation and separate	outcomes	Evaluate procedures and
	of sources	to create new and	solutions and putting ideas	into smaller parts or ideas		outcomes explain and
		imaginative	into action		UKS2	justify ideas and
		combinations		UKS2		outcomes
			UKS2		Transfer knowledge into	
	UKS2	UKS2		Think about thinking	new contexts apply	UKS2
			Consider alternatives	(metacognition) reflect on	knowledge gained from	
	Pose questions pose	Organise and process	identify situations where	assumptions made,	one context to another	Draw conclusions and
	questions to clarify and	information analyse,	current approaches do not	consider reasonable		design a course of action



	interpret information and	condense, and combine	work, challenge existing	criticism, and adjust their	unrelated context and	scrutinise ideas or
	probe further to discover	relevant information	ideas, and generate	thinking if necessary	identify new meaning	concepts, test conclusions
	causes and consequences	from multiple source <b>s</b>	alternative solutions	Reflect on processes	Apply logic and reasoning	and modify actions when
	Identify and clarify	Imagine possibilities	Seek solutions and put	identify and justify the	assess whether there is	designing a course of
	information and ideas	and connect ideas	ideas into action assess and	thinking behind choices	adequate reasoning and	action
	identify and clarify	combine ideas in a	test options to identify the	they have made	evidence to justify a claim,	
	relevant information and	variety of ways and	most effective solution and		conclusion, or outcome	Evaluate procedures and
	prioritise ideas	from a range of sources	put ideas into action			outcomes evaluate the
		to create new				effectiveness of ideas,
		possibilities				products, performances,
						methods, and courses of
						action against given
						criteria
Year B	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Buzzards						
Concept	Civilisation and	Culture	Al l Around the World	Exploration and Discoveries	Natural Wonder	Community
	Democracy	Year 3/4 – Animals	Year 3/4 – Rocks	Year 3/4 – Sound	Year 3/4 – Forces and	Year 3/4 – Forces and
	Year 3/4 – Plants	including humans	Year 5/6 – Evolution and	Year 5/6 – Earth and Space	Magnets	Magnets
	Year 5/6 – Living things	(digestion)Year 5/6 –	Inheritance		Year 5/6 – Forces	Year 5/6 – Forces
	(Life cycles)	Animals including				
		humans (human				
		changes)				



NC	<u>Y3/4</u>	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
Objectives						
2	Explore the requirements	Animals and humans	Compare and group	Identify how sounds are	Compare how things	Compare how things
	of plants for life and	Describe the simple	together different kinds of	made, associating some of	move on different	move on different
	growth (air, light, water,	functions of the basic	rocks on the basis of their	them with something	surfaces	surfaces
	nutrients from soil, and	parts of the digestive	appearance and simple	vibrating	Notice that some forces	Notice that some forces
	room to grow) and how	system in humans	physical properties	Recognise that vibrations	need contact between	need contact between
	they vary from plant to	Identify the different	Describe in simple terms	from sounds travel through	two objects, but magnetic	two objects, but magnetic
	plant	types of teeth in	how fossils are formed	a medium to the ear	forces can act at a	forces can act at a
	Identify and describe the	humans and their	when things that have lived	Find patterns between the	distance	distance
	functions of different	simple functions	are trapped within rock	pitch of a sound and	Observe how magnets	Observe how magnets
	parts of flowering plants:	Construct and interpret	Recognise that soils are	features of the object that	attract or repel each other	attract or repel each
	roots, stem/trunk, leaves	a variety of food chains,	made from rocks and	produced it	and attract some	other and attract some
	and flowers	identifying producers,	organic matter	Find patterns between the	materials and not others	materials and not others
	Investigate the way in	predators and prev		volume of a sound and the	Compare and group	Compare and group
	which water is		Y5/6	strength of the vibrations	together a variety of	together a variety of
	transported within plants	Y5/6		that produced it	everyday materials on the	everyday materials on the
	Explore the part that	-,-	<b>Evolution and Inheritance</b>	Recognise that sounds get	basis of whether they are	basis of whether they are
	flowers play in the life		Recognise that living things	fainter as the distance from	attracted to a magnet, and	attracted to a magnet,
	cycle of flowering plants,		have changed over time and	the sound source	identify some magnetic	and identify some
	including pollination, seed		that fossils provide	increases.	materials	magnetic materials
	formation and seed		information about living		Describe magnets as	Describe magnets as
	dispersal		things that inhabited the	Y5/6	having two poles	having two poles
	allow a smaller force to		Earth millions of years ago.		Predict whether two	Predict whether two
	have a greater effect.		Recognise that living things	Describe the movement of	magnets will attract or	magnets will attract or
			produce offspring of the	the Earth, and other	repel each other,	repel each other,
	Y5/6		same kind, but normally	planets, relative to the Sun	depending on which poles	depending on which poles
			offspring vary and are not	in the solar system	are facing	are facing
	Describe the differences in		identical to their parents.	Describe the movement of		
	the life cycles of a		Identify how animals and	the Moon relative to the		
	mammal, an amphibian,		plants are adapted to suit	Earth	<u>Y5/6</u>	<u>Y5/6</u>
	an insect and a bird		their environment in	Describe the Sun, Earth and	Explain that unsupported	Explain that unsupported
	Describe the life process		different ways and that	Moon as approximately	objects fall towards the	objects fall towards the
	of reproduction in some		adaptation may lead to	spherical bodies	Earth because of the force	Earth because of the
	plants and animals.		evolution.		of gravity acting between	force of gravity acting



				Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky Describe the movement of the Earth, and other planets, relative to the Sun in the solar system Describe the movement of the Moon relative to the Earth Describe the Sun, Earth and Moon as approximately spherical bodies Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky	the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
Knowledge	What is a living thing? What do plants need to grow successfully? What do the different parts of a plant do? What is pollination? What is seed dispersal? How do plants reproduce? What do different life cycles look like in different types of animals?	What is the digestive system? Which organs do which jobs? What are our teeth for? What is a food chain? What is a predator? How do humans change? What is reproduction?	What are fossils? How are they formed? How is soil made? What different types of rocks are there? What are fossils? What are fossils? What do they tell us? What is offspring? What is variation?	How are sounds made? How does sound travel? How does the ear detect sound? Why are some sounds louder than others? What is pitch? What is gravity? How does the moon orbit Earth? How does Earth orbit the sun?	How do objects move on different surfaces? How do magnets attract and repel? Which materials are magnetic? What are the poles of a magnet? What is gravity? What is air resistance?	What is nutrition? What does each type of nutrition do for the human body? What is the purpose of a skeleton?



			What is evolution?	What is a sphere?		
			What is adaptation?	What causes day and		
				night?		
Skill	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
Progressio						
n	Explain what all plants	Identify what each of	Understand that fossils	Explain, with reference to	Compare how an object,	Compare how an object,
	need to flourish and	the principal organs in	indicate the shape of	vibrations, how an object	such as a toy car, will	such as a toy car, will
	recognise how	the digestive system do	previous life forms.	makes a sound.	move on different	move on different
	these requirements vary	, , , , , , , , , , , , , , , , , , ,			surfaces.	surfaces.
	in amount.	Describe the function of	Describe the appearance of	Describe the role of a		
		each type of tooth in	soil, recognising that it is a	medium in the	Recognise the	Recognise the
	Describe what each part	the human skull	mixture of materials.	transmission of sound.	difference between	difference between
	of a flowering plant does.				contact and contact	contact and contact
		Use a food chain to	Identify that rocks vary in	Describe the effect of	forces.	forces.
	Explain, with the aid of a	represent predator-prey	terms of appearance and	moving further from the		
	diagram or plant, how	relationships.	physical properties.	source of a sound.	Describe how magnets	Describe how magnets
	water is carried up from				attract or repel each other	attract or repel each
	the soil	Y5/6	Y5/6	Explain with reference to a	and attract magnetic	other and attract
				particular object how the	materials.	magnetic materials.
	Explain how pollination,	Describe the changes as	Recognise that fossils	pitch of the sound can be		
	seed formation and seed	humans develop to old	provide information about	changed.	Group materials on the	Group materials on the
	dispersal play a role in the	age, e.g. trends in	iving things from millions of		basis of testing for being	basis of testing for being
	reproduction of flowering	changes to size, weight,	years ago, e.g. understand	Explain with reference to a	magnetic.	magnetic.
	plants.	mobility etc.	that they are preserved	particular object how the	0	
			remains of extinct living	volume of the sound can be	Describe and identify the	Describe and identify the
	Y5/6		things.	changed.	poles of a magnet.	poles of a magnet.
	Identify similarities and		Recognise that living things		Predict outcomes of a	Predict outcomes of a
	differences in two		produce offspring of the	Y5/6	particular arrangement of	particular arrangement of
	different life cycles, e.g.		same kind, but normally		magnets	magnets
	sparrow and butterfly,		offspring vary, e.g. that	Explain that gravity causes		
	with reference to		puppies have common	objects to fall towards	Y5/6	Y5/6
	eggs and intermediate		features but are not	Earth.		
	stages.		identical.			



Meta	Describe in sequence the stages of reproduction in some plants and animals, e.g. dog and a thistle	1K52	Identify ways in which certain animals and plants are adapted to suit their environment in different ways.	Describe how motion may be resisted by air resistance, water resistance or friction. Describe how some devices may turn a smaller force into a larger one Draw a diagram or use a model to describe planetary orbits. Draw a diagram or use a model to describe the Moon's orbit around the Earth. Describe the Sun, Earth & Moon as spheres. Use a diagram or model to explain why the Sun seems to travel across the sky, and what causes day and night.	Explain that gravity causes objects to fall towards Earth. Describe how motion may be resisted by air resistance, water resistance or friction. Describe how some devices may turn a smaller force into a larger one.	Explain that gravity causes objects to fall towards Earth. Describe how motion may be resisted by air resistance, water resistance or friction. Describe how some devices may turn a smaller force into a larger one.
ivieta Cognition	LKSZ	LKSZ	LK5Z	LKSZ	LK5Z	LK52



Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
Identify and clarify	opinions found in a wide	alternatives	conclusions	Apply logic and reasoning	choosing a course of
information and ideas	range of sources	Seek solutions and put	Reflect on processes	identify and apply	action or drawing a
identify main ideas and	Imagine possibilities	ideas into action	identify pertinent	appropriate reasoning and	conclusion
select and clarify	and connect ideas	experiment with a range of	information in an	thinking strategies for	
information from a range	expand on known ideas	options when seeking	investigation and separate	outcomes	Evaluate procedures and
of sources	to create new and	solutions and putting ideas	into smaller parts or ideas		outcomes explain and
	imaginative	into action		UKS2	justify ideas and
	combinations		UKS2		outcomes
		UKS2		Transfer knowledge into	
UKS2	UKS2		Think about thinking	new contexts apply	UKS2
		Consider alternatives	(metacognition) reflect on	knowledge gained from	
Pose questions pose	Organise and process	identify situations where	assumptions made,	one context to another	Draw conclusions and
questions to clarify and	information analyse,	current approaches do not	consider reasonable	unrelated context and	design a course of action
interpret information and	condense, and combine	work, challenge existing	criticism, and adjust their	identify new meaning	scrutinise ideas or
probe further to discover	relevant information	ideas, and generate	thinking if necessary	Apply logic and reasoning	concepts, test conclusions
causes and consequences	from multiple source <b>s</b>	alternative solutions	Reflect on processes	assess whether there is	and modify actions when
Identify and clarify	Imagine possibilities	Seek solutions and put	identify and justify the	adequate reasoning and	designing a course of
information and ideas	and connect ideas	ideas into action assess and	thinking behind choices	evidence to justify a claim,	action
identify and clarify	combine ideas in a	test options to identify the	they have made	conclusion, or outcome	
relevant information and	variety of ways and	most effective solution and			Evaluate procedures and
prioritise ideas	from a range of sources	put ideas into action			outcomes evaluate the
	to create new				effectiveness of ideas,
	possibilities				products, performances,
					methods, and courses of
					action against given
					criteria



Year C	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Buzzards						
Concept	Civilisation and Democracy	Culture Year 3/4 - Animals	All Around the World Year 3/4 – States of matter	Exploration and Discoveries Year 3/4 – Light	Natural Wonder Year 3/4 – Electricity	Community Year 3/4 – Electricity
	Year 3/4 – Living things (classification)	including humans (nutrition)	Year 5/6 – Properties and changes of materials	Year 5/6 – Light	Year 5/6 – Electricity	Year 5/6 – Electricity
	Year 5/6 – Living things	Year 5/6 – Animals				
	(classification)	including humans				
		(circulation)				
NC	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
Objectives	Recognise that living	Identify that animals,	Compare and group	Recognise that they need		
	things can be grouped in a	including humans, need	materials together,	light in order to see things	Identify common	Identify common
	variety of ways	the right types and	according to whether they	and that dark is the	appliances that run on	appliances that run on
	Explore and use	amount of nutrition,	are solids, liquids or gases	absence of light	electricity	electricity
	classification keys to help	and that they cannot	observe that some	from curfaces	construct a simple series	construct a simple series
	a variety of living things in	they get nutrition from	when they are heated or	Recognise that light from	identifying and naming its	identifying and naming its
	their local and wider	what they eat	cooled and measure or	the sun can be dangerous	hasic parts including cells	hasic parts including
	environment	Identify that humans	research the temperature at	and that there are ways to	wires, bulbs, switches and	cells, wires, bulbs,
	Recognise that	and some other animals	which this happens in	protect their eyes	buzzers	switches and buzzers
	environments can change	have skeletons and	degrees Celsius (°C)	Recognise that shadows	Recognise some common	Recognise some common
	and that this can	muscles for support,	Identify the part played by	are formed when the light	conductors and insulators,	conductors and
	sometimes pose dangers	protection and	evaporation and	from a light source is	and associate metals with	insulators, and associate
	to living things.	movement	condensation in the water	blocked by a solid object	being good conductors	metals with being good
			cycle and associate the rate	Find patterns in the way	Identify whether or not a	conductors
	15/6	Y5/6	of evaporation with	that the size of	lamp will light in a simple	Identify whether or not a
	Describe how living things	I de maife e sur de server a de s	temperature	shadows change	series circuit, based on	lamp will light in a simple
	are classified into broad	identify and name the	VE /C	VE /C	whether or not the lamp is	series circuit, based on
	groups according to	human circulatory	13/0	Recognise that light	with a hattery	is part of a complete loop
	common observable	system, and describe	Compare and group	appears to travel in straight	Recognise that a switch	with a battery
	characteristics and based	the functions of the	together everyday materials	lines	opens and closes a circuit	Recognise that a switch
	on similarities and		on the basis of their		and associate this with	opens and closes a circuit
	differences, including					



microorganisms, plants	heart, blood vessels and	properties, including their	Use the idea that light	whether or not a lamp	and associate this with
and animals	blood	hardness, solubility.	travels in straight lines to	lights in a simple series	whether or not a lamp
Give reasons for	Recognise the impact of	transparency, conductivity	explain that objects are	circuit	lights in a simple series
classifying plants and	diet. exercise. drugs and	(electrical and thermal) and	seen because they give out		circuit
animals based on specific	lifestyle on the way	response to magnets	or reflect light into the eve	Y5/6	
characteristics.	their bodies function	Know that some materials	Explain that we see things		Y5/6
	Describe the ways in	will dissolve in liquid to	because light travels from	Associate the brightness	<u> </u>
	which nutrients and	form a solution, and	light sources to our eyes or	of a lamp or the volume of	Associate the brightness
	water are transported	describe how to recover a	from light sources to	a buzzer with the number	of a lamp or the volume
	within animals,	substance from a solution	objects and then to our	and voltage of cells used	of a buzzer with the
	including humans	Use knowledge of solids,	eyes	in a circuit.	number and voltage of
	-	liquids and gases to decide	Use the idea that light	Compare and give reasons	cells used in a circuit.
		how mixtures might be	travels in straight lines to	for variations in how	Compare and give
		separated, including	explain why shadows have	components function,	reasons for variations in
		through filtering, sieving	the same shape as the	including the brightness of	how components
		and evaporating	objects that cast them	bulbs, the loudness of	function, including the
		Demonstrate that		buzzers and the on/off	brightness of bulbs, the
		dissolving, mixing and		position of switches.	loudness of buzzers and
		changes of state are		Use recognised symbols	the on/off position of
		reversible changes		when representing a	switches.
		Explain that some changes		simple circuit in a diagram	Use recognised symbols
		result in the formation of			when representing a
		new materials and that this			simple circuit in a diagram
		kind of change is not usually			
		reversible, including			
		changes associated with			
		burning and the action of			
		acid on bicarbonate of			
		soda.			
		Give reasons, based on			
		evidence from comparative			
		and fair tests, for the			
		particular uses of everyday			
		materials, including metals,			
		wood and plastic			



Knowledge	Why do we group things? What different categories are there to group animals/plants? What is classification?	What is nutrition? What does each type of nutrition do for the human body? What is the purpose of a skeleton? How does blood get around the body? What substances can affect our health? How does water travel through the body?	How can we group materials? What is evaporation and condensation? How does this work in the water cycle? How does temperature effect evaporation? What changes happen at different temperatures? What are physical properties of materials? What is dissolving? How can we retrieve these? What is separation? What is an irreversible change?	How do we see things? What is dark? Which surfaces reflect light? How does a mirror work? Why is the sun dangerous? How can we protect our eyes? How is shadow formed? How does light travel? How does light travel? How does light enable us to see? What is reflection? What is reflection? What is refraction? What is the visible spectrum? Who was Isaac Newton and what did he discover? What is a shadow? What is a prism? How do we see colours?	Which appliances run on electricity? Which materials are insulators or conductors? How do number and voltage of cells affect lamps or buzzers? How are switches used in a circuit? How can I represent a circuit with symbols?	Which appliances run on electricity? Which materials are insulators or conductors? How do number and voltage of cells affect lamps or buzzers? How are switches used in a circuit? How can I represent a circuit with symbols?
Skill	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
n	Suggest different ways of sorting the same group of living things, e.g. grouping birds according to where they live, what they eat	Describe why animals depend on the correct nutrition. Explain which parts of	Group materials according to their state of matter. Describe how evaporation and condensation happen in	Relate being able to see to the presence of light. Describe how some objects reflect light	List examples of appliances that run on electricity. Construct a simple circuit	List examples of appliances that run on electricity. Construct a simple circuit
	and size of adults.	the skeleton provide support and protection,	the water cycle, and how temperature affects	Describe how and why our	and name its components	and name its components
	Use classification keys to group and identify	and how they allow for movement	evaporation.	eyes should be protected from sunlight.	Sort materials into conductors and insulators,	Sort materials into conductors and



<ul> <li>members from a range of familiar and less familiar living things.</li> <li>Describe examples of living things that are threatened by changes to environments, e.g. owls and habitat loss.</li> <li>Y5/6</li> <li>Use similarities and differences in observable features to decide how living things should be grouped, e.g. a cat is a mammal because it is warm blooded and gives birth to live young.</li> <li>Explain why certain features are useful in classifying living things, e.g. backbones in animals and flowers in plants</li> </ul>	Y5/6 Describe what heart, blood vessels and blood do, e.g. carry oxygen to all parts of the body. Suggest how their bodies are affected by substances and actions, e.g. that a high fat diet coupled with little exercise is likely to lead to obesity Describe with aid of diagrams the route that water takes within animals, e.g. through the human body	Identify changes of state and research values of degrees celsius at which changes happen. Y5/6 Compare and group together everyday materials on the basis of their appearance and feel. Know that some materials will dissolve in liquid to form a solution. Suggest how mixtures might be separated. Understand that some processes are reversible. Understand that burning is irreversible. Give reasons for the particular uses of everyday materials, including metals, wood and plastic.	Explain how shadows are made. Describe how to change the size of a shadow. Y5/6 Represent light using straight line ray diagrams. Draw diagrams using straight lines showing light travelling to the eye. Explain how we can see an object by referring to light travelling into the eye. Draw a diagram showing an object, shadow and light to relate object shape to shadow shape.	identifying metals as conductors Predict whether a particular arrangement of components will result in a bulb lighting. Predict how the operation of a switch will affect bulbs lighting. Y5/6 Explain how number and voltage of cells affects the lamp or buzzer. Explain the use of switches, how bulbs can be made brighter and buzzers made louder. Represent a circuit that has been constructed using symbols.	insulators, identifying metals as conductors Predict whether a particular arrangement of components will result in a bulb lighting. Predict how the operation of a switch will affect bulbs lighting. Y5/6 Explain how number and voltage of cells affects the lamp or buzzer. Explain the use of switches, how bulbs can be made brighter and buzzers made louder. Represent a circuit that has been constructed using symbols.
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Meta	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
Cognition						
	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
	Identify and clarify	opinions found in a wide	alternatives	conclusions	Apply logic and reasoning	choosing a course of
	information and ideas	range of sources	Seek solutions and put	Reflect on processes	identify and apply	action or drawing a
	identify main ideas and	Imagine possibilities	ideas into action	identify pertinent	appropriate reasoning and	conclusion
	select and clarify	and connect ideas	experiment with a range of	information in an	thinking strategies for	
	information from a range	expand on known ideas	options when seeking	investigation and separate	outcomes	Evaluate procedures and
	of sources	to create new and	solutions and putting ideas	into smaller parts or ideas		outcomes explain and
		imaginative	into action		UKS2	justify ideas and
		combinations		UKS2		outcomes
			UKS2		Transfer knowledge into	
	UKS2	UKS2		Think about thinking	new contexts apply	UKS2
			Consider alternatives	(metacognition) reflect on	knowledge gained from	
	Pose questions pose	Organise and process	identify situations where	assumptions made,	one context to another	Draw conclusions and
	questions to clarify and	information analyse,	current approaches do not	consider reasonable	unrelated context and	design a course of action
	interpret information and	condense, and combine	work, challenge existing	criticism, and adjust their	identify new meaning	scrutinise ideas or
	probe further to discover	relevant information	ideas, and generate	thinking if necessary	Apply logic and reasoning	concepts, test conclusions
	causes and consequences	from multiple sources	alternative solutions	Reflect on processes	assess whether there is	and modify actions when
	Identify and clarify	Imagine possibilities	Seek solutions and put	identify and justify the	adequate reasoning and	designing a course of
	information and ideas	and connect ideas	ideas into action assess and	thinking behind choices	evidence to justify a claim,	action
	identify and clarify	combine ideas in a	test options to identify the	they have made	conclusion, or outcome	
	relevant information and	variety of ways and	most effective solution and			Evaluate procedures and
	prioritise ideas	from a range of sources	put ideas into action			outcomes evaluate the
		to create new				effectiveness of ideas,
		possibilities				products, performances,
						methods, and courses of



						action against given criteria
Year D Buzzards	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Civilisation and Democracy Year 3/4 - Plants Year 5/6 – Living things (Life cycles)	Culture Year 3/4 – Animals including humans (digestion) Year 5/6 – Animals including humans (human changes)	All Around the World Year 3/4 - Rocks Year 5/6 – Evolution and Inheritance	Exploration and Discoveries STEM/Being Scientific Year 3/4 - Sound Year 5/6 – Earth and Space	Natural Wonder Year 3/4 – Forces and Magnets Year 5/6 – Forces	Community Year 3/4 – Forces and Magnets Year 5/6 – Forces
NC Objectives	Y3/4 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 Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers Investigate the way in which water is transported within plants Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed	Y3/4 Animals and humans 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	Y3/4 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 Y5/6 Evolution and Inheritance Recognise that living things have changed over time and that fossils provide	Y3/4 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 fainter as the distance from the sound source increases.	Y3/4 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 variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials	Y3/4 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 variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials



 formation and seed	information about living		Describe magnets as	Describe magnets as
dispersal	things that inhabited the	VE/G	baying two poles	baying two poles
allow a smaller force to	Earth millions of years ago	13/0	Predict whether two	Predict whether two
anow a smaller force to	Decognico that living things		magnate will attract or	magnets will attract or
have a greater effect.	produce offenring of the	Describe the movement of	ranal aach athar	ropol oach othor
VE /C	some kind, but normally	the Earth, and other	depending on which polos	depending on which poles
15/6	offenring yory and are not	planets, relative to the Sun	are fasing	are facing
Describe the differences in	identical to their parents	in the solar system	are facing	are lacing
bescribe the differences in	Identify how onimple and	Describe the movement of		
	identity now animals and	the Moon relative to the		
mammai, an amphibian,	plants are adapted to suit	Earth	<u>Y5/6</u>	<u>Y5/6</u>
an insect and a bird	their environment in	Describe the Sun, Earth and	Explain that unsupported	Explain that unsupported
Describe the life process	different ways and that	Moon as approximately	objects fail towards the	objects fail towards the
of reproduction in some	adaptation may lead to	spherical bodies	Earth because of the force	Earth because of the
plants and animals.	evolution.	Use the idea of the Earth's	of gravity acting between	force of gravity acting
		rotation to explain day and	the Earth and the failing	between the Earth and
		night and the apparent	object.	the failing object.
		movement of the sun	Identify the effects of air	Identify the effects of air
		across the sky	resistance, water	resistance, water
			resistance and friction	resistance and friction
		Describe the movement of	that act between moving	that act between moving
		the Earth, and other	surfaces.	surfaces.
		planets, relative to the Sun	Recognise that some	Recognise that some
		in the solar system	mechanisms, including	mechanisms, including
		Describe the movement of	levers, pulleys and gears,	levers, pulleys and gears,
		the Moon relative to the	allow a smaller force to	allow a smaller force to
		Earth	have a greater effect.	have a greater effect.
		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		



Knowledge	What is a living thing? What do plants need to grow successfully? What do the different parts of a plant do? What is pollination? What is seed dispersal? How do plants reproduce? What do different life cycles look like in different types of animals?	What is the digestive system? Which organs do which jobs? What are our teeth for? What is a food chain? What is a predator? How do humans change? What is reproduction?	What are fossils? How are they formed? How is soil made? What different types of rocks are there? What are fossils? What are fossils? What do they tell us? What is offspring? What is variation? What is evolution? What is adaptation?	How are sounds made? How does sound travel? How does the ear detect sound? Why are some sounds louder than others? What is pitch? What is gravity? How does the moon orbit Earth? How does Earth orbit the sun? What is a sphere? What causes day and night?	How do objects move on different surfaces? How do magnets attract and repel? Which materials are magnetic? What are the poles of a magnet? What is gravity? What is air resistance?	How do objects move on different surfaces? How do magnets attract and repel? Which materials are magnetic? What are the poles of a magnet? What is gravity? What is air resistance?
Skill	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4	Y3/4
Progressio						
n	Explain what all plants need to flourish and recognise how these requirements vary in amount. Describe what each part of a flowering plant does. Explain, with the aid of a diagram or plant, how water is carried up from the soil Explain how pollination,	Identify what each of the principal organs in the digestive system do Describe the function of each type of tooth in the human skull Use a food chain to represent predator-prey relationships. Y5/6 Describe the changes as	Understand that fossils indicate the shape of previous life forms. Describe the appearance of soil, recognising that it is a mixture of materials. Identify that rocks vary in terms of appearance and physical properties. Y5/6	Explain, with reference to vibrations, how an object makes a sound. Describe the role of a medium in the transmission of sound. Describe the effect of moving further from the source of a sound. Explain with reference to a particular object how the pitch of the sound can be	Compare how an object, such as a toy car, will move on different surfaces. Recognise the difference between contact and contact forces. Describe how magnets attract or repel each other and attract magnetic materials.	Compare how an object, such as a toy car, will move on different surfaces. Recognise the difference between contact and contact forces. Describe how magnets attract or repel each other and attract magnetic materials.



dispersal play a role in the reproduction of flowering plants. Y5/6 Identify similarities and differences in two different life cycles, e.g. sparrow and butterfly, with reference to eggs and intermediate stages. Describe in sequence the stages of reproduction in some plants and animals, e.g. dog and a thistle	humans develop to old age, e.g. trends in changes to size, weight, mobility etc.	Recognise that fossils provide information about living things from millions of years ago, e.g. understand that they are preserved remains of extinct living things. Recognise that living things produce offspring of the same kind, but normally offspring vary, e.g. that puppies have common features but are not identical. Identify ways in which certain animals and plants are adapted to suit their environment in different ways.	Explain with reference to a particular object how the volume of the sound can be changed. Y5/6 Explain that gravity causes objects to fall towards Earth. Describe how motion may be resisted by air resistance, water resistance or friction. Describe how some devices may turn a smaller force into a larger one Draw a diagram or use a model to describe planetary orbits. Draw a diagram or use a model to describe the Moon's orbit around the Earth. Describe the Sun, Earth & Moon as spheres.	Group materials on the basis of testing for being magnetic. Describe and identify the poles of a magnet. Predict outcomes of a particular arrangement of magnets Y5/6 Explain that gravity causes objects to fall towards Earth. Describe how motion may be resisted by air resistance, water resistance or friction. Describe how some devices may turn a smaller force into a larger one.	Group materials on the basis of testing for being magnetic. Describe and identify the poles of a magnet. Predict outcomes of a particular arrangement of magnets Y5/6 Explain that gravity causes objects to fall towards Earth. Describe how motion may be resisted by air resistance, water resistance or friction. Describe how some devices may turn a smaller force into a larger one.
			Describe the Sun, Earth & Moon as spheres.		



				Use a diagram or model to explain why the Sun seems to travel across the sky, and what causes day and night.		
Meta	LKS2	LKS2	LKS2	LKS2	LKS2	LKS2
Cognition	Pose questions pose	Organise and process	Consider alternatives	Think about thinking	Transfer knowledge into	Draw conclusions and
	questions to expand their	information collect,	explore situations using	(metacognition) reflect on,	new contexts transfer and	design a course of action
	knowledge about the	compare, and	creative thinking strategies	explain and check the	apply information in one	draw on prior knowledge
	world	categorise facts and	to propose a range of	processes used to come to	setting to enrich another	and use evidence when
	Identify and clarify	opinions found in a wide	alternatives	conclusions	Apply logic and reasoning	choosing a course of
	information and ideas	range of sources	Seek solutions and put	Reflect on processes	identify and apply	action or drawing a
	identify main ideas and	Imagine possibilities	ideas into action	identify pertinent	appropriate reasoning and	conclusion
	select and clarify	and connect ideas	experiment with a range of	information in an	thinking strategies for	
	information from a range	expand on known ideas	options when seeking	investigation and separate	outcomes	Evaluate procedures and
	of sources	to create new and	solutions and putting ideas	into smaller parts or ideas		outcomes explain and
		imaginative	into action		UKS2	justify ideas and
		combinations		UKS2		outcomes
			UKS2		Transfer knowledge into	
	UKS2	UKS2		Think about thinking	new contexts apply	UKS2
	Dees suggitiens many	Owners in a send ware seen	Consider alternatives	(metacognition) reflect on	knowledge gained from	Duana an aluation and
	Pose questions pose	information analyses	dentify situations where	assumptions made,	uprolated context to another	design a course of action
	interpret information and	condense and combine	work challenge existing	consider reasonable	identify now meaning	corutinico idoac or
	probe further to discover	relevant information	ideas and generate	thinking if pocossary		concents test conclusions
	probe further to discover	from multiple sources	alternative solutions	thinking it necessary	Apply logic and reasoning	and modify actions when
	causes and consequences	from multiple sources	alternative solutions		assess whether there is	and modify actions when



Identify and clarify	Imagine possibilities	Seek solutions and put	Reflect on processes	adequate reasoning and	designing a course of
information and ideas	and connect ideas	ideas into action assess and	identify and justify the	evidence to justify a claim,	action
identify and clarify	combine ideas in a	test options to identify the	thinking behind choices	conclusion, or outcome	
relevant information and	variety of ways and	most effective solution and	they have made		Evaluate procedures and
prioritise ideas	from a range of sources	put ideas into action			outcomes evaluate the
	to create new				effectiveness of ideas,
	possibilities				products, performances,
					methods, and courses of
					action against given
					criteria