

Malmesbury C of E Primary School Curriculum Map for Science

This curriculum map details how and when each element of the science National Curriculum is taught.

[Jump to EYFS](#)

[Jump to Year 1](#)

[Jump to Year 2](#)

[Jump to Lower Key Stage 2](#)

[Jump to Upper Key Stage 2](#)



Early Years Foundation Stage (Reception Class)

The Foundation Stage does not identify Science as a separate curriculum subject. Instead it is contained within the key area Understanding of the World.

Understanding of the World (linked to Early Learning Goal)

Malmesbury Key Learning

- Understand some important processes and changes in the natural world around them including the seasons and changing states of matter (Throughout the year as the seasons change plus Term 5 - Growth)
- Explore collections of materials with similar and/or different properties. (Throughout the year – linked to physical development – threading, cutting, weaving, playdough etc).

- Begin to make sense of their own life-story and family’s history. (Term 1 – All About Me)
- Describe their immediate environment (Term 1 – All About Me)

- Understand the importance of healthy food choices. (Term 2 – Let’s Celebrate)

- Identify basic parts of the body. (Term 3 – Real Life Superheroes)

- Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. (Term 4 – Ticket to Ride; Term 5 – Growth & Term 6 – Under the Sea)
- Explore how things work. (Term 4 – Ticket to Ride – transport)
- Explore and talk about different forces they can feel. (Term 4 – Ticket to Ride – transport, Space & Term 6 – Under the Sea – floating and sinking)

- Explore the natural world around them, making observations and drawing pictures of animals and plants. (Term 5 – Growth)
- Plant seeds and care for growing plants. (Term 5 – Growth)
- Understand the key features of the life cycle of a plant and an animal. (Term 5 – Growth – life cycles of animals – butterfly, frog, bird and flower)
- Begin to understand the need to respect and care for the natural environment and all living things. (Term 5 – Growth)

- Talk about the difference between materials and changes they notice. (Term 6 – Under the Sea)
- Use all their senses in hands-on exploration of natural materials. (Term 6 – Under The Sea – natural and man-made)

Vocabulary

Seasons (autumn, winter, spring, summer), materials, environment, skeleton, forces, gravity, natural material, man-made material

YEAR 1

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	National Curriculum							
YEAR 1		<p>Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</p> <p>Identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds, mammals, including pets).</p> <p>Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>Identify and describe the basic structure of a variety of common flowering plants including trees.</p>	<p>Distinguish between an object and the material from which it is made.</p> <p>Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock.</p> <p>Describe the simple physical properties of a variety of everyday materials.</p> <p>Compare and group together a variety of everyday materials based on the basis of their simple physical properties.</p>		<p>Observe changes across the four seasons.</p> <p>Observe and describe weather associated with the seasons and how day length varies.</p>		<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>
	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically

		Biology	Chemistry	Physics			
		Malmesbury Key Learning					
YEAR 1, TERM 1 – WE ARE WHAT WE EAT		<p>Identify, name and label basic parts of the human body.</p> <p>Identify and name main bones in the human body.</p> <p>Identify which part of the body is associated with the sense of sight.</p> <p>Identify which part of the body is associated with the sense of taste.</p> <p>Identify and name a variety of common animals that are herbivores and omnivores – humans and farm animals.</p>					
	Vocabulary				Prior Learning		
		Human senses (sight, hearing, touch, taste, smell); Parts of the body (body, head, neck, shoulder, arms, elbows, legs, knees, face, ears, eyes, nose, hair, mouth, teeth, hands, fingers, feet, toes); Human bones (spine, skull, leg bone, hip, ribcage); Animal diets (carnivore, herbivore, omnivore).			Our bodies – EYFS Explore the natural world around us – observe animals and plants - EYFS		

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 1, TERM 2 – TOYS		<p>Hibernating animals.</p> <p>Learn that squirrels start to store nuts for the winter.</p> <p>Learn that hedgehogs hibernate.</p>		<p>Identify a variety of materials. Sort toys.</p> <p>Investigate the properties of transparent and opaque materials.</p> <p>Investigate properties of waterproof materials.</p> <p>Investigate properties of flexible materials.</p>		<p>Understand that in autumn the weather starts to get cooler.</p> <p>Understand that in autumn the days get shorter and the nights get longer.</p> <p>See that leaves on some trees start to turn brown and fall to the ground.</p> <p>See that conkers and pinecones can be found on the ground.</p>			
	Vocabulary				Prior Learning				
	Materials (old, new, waterproof, flexible, bendy, opaque, transparent, plastic, wood, metal, water, glass, rock, paper, cardboard, rubber, fabric); Animals (hibernate, store food); Seasons (autumn, weather, colder, days grow shorter, nights grow longer, colder).				Seasonal changes – EYFS Explore the natural world around us – observe animals and plants - EYFS				

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 1, TERM 3 – FANTASTIC FAIRY TALES		<p>Understand that there are different types of animals.</p> <p>Identify, name and sort polar animals.</p> <p>Identify and name polar carnivores and herbivores.</p> <p>Identify the key parts of a polar bear.</p> <p>Understand how animals keep warm and use camouflage.</p>		<p>Investigate insulators to keep warm.</p> <p>Investigate how materials can change – ice investigation.</p>		<p>Understand that winter is the coldest season of the year.</p> <p>Understand that winter has the shortest day and longest night.</p> <p>Understand that there may be frost or snow.</p>			
	Vocabulary				Prior Learning				
	Animals (polar, carnivore, herbivore, fur, camouflage); Materials (insulator, change, ice); Seasons (winter, cold, shortest day, shortest night, frost, snow)				Seasonal changes – EYFS Life cycles of creatures - EYFS				

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 1, TERM 4 – PIRATES/CIRCUS		<p>Identify different types of animals.</p> <p>Identify the different parts of a mammal.</p> <p>Identify the different parts of a bird.</p> <p>Identify the different parts of a fish.</p> <p>Understand that animals eat different foods.</p>		<p>Investigate different materials.</p> <p>Explore the meaning of waterproof.</p> <p>Identify which materials float.</p> <p>Design a boat using different materials.</p>					
	Vocabulary				Prior Learning				
	Animals (mammal, bird, tail, wings, feathers, fish, fins, gills); Materials (rough, smooth, waterproof, float, absorbent, transparent, opaque, bendy, natural, man-made)								

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 1, TERM 5 – CAVES TO CASTLES			<p>Identify how plants fit into a food chain.</p> <p>Identify and describe the basic structure of a plant.</p> <p>Identify the role and structure of a tree.</p> <p>Investigate how plants grow.</p> <p>Investigate how plants reproduce.</p> <p>Name some national flowers.</p> <p>Recognise and name some common flowers and trees.</p>			<p>Understand seasonal changes: spring</p> <p>Understand that the weather gets warmer.</p> <p>Understand that daytimes start to get longer.</p> <p>Understand that baby animals are seen.</p>			
	Vocabulary					Prior Learning			
	Plants (wild plants, garden plants, weed, deciduous, evergreen, roots, stem, leaves, flowers, petals, fruit, seeds, bulb); Seasons (spring, warmer, daytimes start to get longer, baby animals).					Spotting signs of spring – EYFS Life cycles of plants – EYFS			

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 1, TERM 6 – GOING ON HOLIDAY		<p>Identify different types of animals.</p> <p>Identify the different parts of an amphibian.</p> <p>Identify the different parts of a reptile.</p> <p>Understand that animals eat different foods.</p> <p>Compare the structure of a bird and a fish.</p>		<p>Investigate different materials that keep us cool.</p>		<p>Understand seasonal changes: summer.</p> <p>Understand that summer is the hottest season of the year.</p> <p>Understand that we get more daylight hours in the summer.</p>			
	Vocabulary				Prior Learning				
	Animals (reptile, fish, bird, mammal, amphibian); Materials (rough, smooth, waterproof, float, absorbent, transparent, opaque, bendy, natural, man-made); (Seasons (summer, hotter, daylight hours)).				Seasonal changes – EYFS Life cycles of creatures - EYFS				

YEAR 2



	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
	National Curriculum								
YEAR 2	<p>Explore and compare the differences between things that are living, dead and things that have never been alive.</p> <p>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.</p>	<p>Notice that animals, including humans, have offspring which grow into adults.</p> <p>Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</p>	<p>Observe and describe how seeds and bulbs grow into mature plants.</p> <p>Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</p> <p>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>					<p>Ask simple questions and recognise that they can be answered in different ways.</p> <p>Observe closely, using simple equipment.</p> <p>Perform simple tests.</p> <p>Identify and classify.</p> <p>Use observations and ideas to suggest answers to questions.</p> <p>Gather and record data to help in answering questions.</p>

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	National Curriculum							
YEAR 2	<p>Identify and name a variety of plants and animals in their habitats, including micro-organisms.</p> <p>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.</p>							

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	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 2, TERM 1 – THE VICTORIANS				<p>Identify uses of different materials.</p> <p>Explore materials out and about.</p> <p>Compare the suitability of different everyday materials.</p> <p>Explore objects that change shape.</p> <p>Explore the discovery of new materials.</p>					
	Vocabulary				Prior Learning				
	Materials (wood, metal, plastic, glass, brick, rock, paper and cardboard, strong, flexible, light, hard-wearing, elastic, suitability, recycle); Change shape (squash, bend, twist, stretch)				<p>Identify a variety of materials – YEAR 1</p> <p>Investigate the properties of transparent and opaque materials – YEAR 1</p> <p>Investigate properties of waterproof materials – YEAR 1</p> <p>Investigate properties of flexible materials – YEAR 1</p>				

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	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 2, TERM 4 – PIRATES/CIRCUS		<p>Understand animals and their offspring.</p> <p>Find out how animals change as they grow into adults.</p> <p>Compare the stages of the human life cycle.</p> <p>Understand survival.</p> <p>Understand about exercise.</p> <p>Investigate the importance of healthy eating and hygiene.</p>							
	Vocabulary				Prior Learning				
	Animals (young, offspring, live young, grow, develop, change hatch, lay, fly, crawl, talk, lamb and sheep, kitten and cat, duckling and duck); Life cycles (baby, toddler, child, adult; frogspawn, tadpole, froglet, frog); Survival (basic needs, survive, food, water, air); Staying healthy (exercise, diet, nutrition, balanced diet, hygiene, germs); Food groups (fruit, vegetables, proteins, dairy, carbohydrates, fats, salt, sugar)				<p>Life cycles of creatures - EYFS</p> <p>Identify different types of animals – YEAR 1</p> <p>Understand that animals eat different foods – YEAR 1</p> <p>Identify and name a variety of common animals that are herbivores and omnivores – humans and farm animals – YEAR 1</p>				

	Living Things & their Habitats	Animals Including Humans	Plants	Everyday Materials	Forces	Seasonal Changes	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 2, TERM 5 – BUGS FEAST	<p>To explore and compare the differences between things that are living, dead, and things that have never been alive.</p> <p>Identify and name a variety of plants and animals in their habitats.</p> <p>Identify and name a variety of plants and animals in their habitats, including microhabitats.</p> <p>To identify that most living things live in habitats to which they are suited.</p> <p>Investigate food chains.</p>	<p>Investigate the life cycle of a butterfly.</p>	<p>What plants need to grow.</p> <p>Identify what’s inside a plant.</p> <p>Investigate the life cycle of a plant.</p> <p>Understand what plants need to survive.</p> <p>How plants grow in hot, dry and cold places.</p>						
	Vocabulary				Prior Learning				
	<p>Living things (life processes, move, breathe, sense, grow, make babies, get rid of waste, alive, dead, never living, healthy); Habitats (depend, shelter, safety, survive, mini beast, woodland, urban, coastal, rainforest, arctic, desert, microhabitat, flowers, inside rotting wood, under leaves, in and on soil); Plants (germination, shoot, seed dispersal, sunlight, water, temperature, nutrition); Food chains (food source, food, producer, consumer, predator, prey).</p>				<p>Life cycles of creatures – EYFS</p> <p>Identify and name polar carnivores and herbivores – YEAR 1</p> <p>Understand that animals eat different foods – YEAR 1</p> <p>Investigate how plants grow – YEAR 1</p> <p>Identify how plants fit into a food chain – YEAR 1</p>				

LOWER KEY STAGE 2 – YEARS 3 AND 4

In years 3 and 4 children study science on a 2-year cycle, with both year groups addressing the same content at the same time. The pathway through the units of study is as follows:

Year A,B	Y3 T2	Y3 T3	Y3 T4	Y3 T5	Y4 T2	Y4 T3	Y4 T4	Y4 T5
Current Y4 & 6	Active Planet	Rainforests		Footprints from the Past	Light, Sound & Electricity	Forces (Explorers & Adventurers)	How Humans Work	Homes and Habitats
Year B,A	Y3 T2	Y3 T3	Y3 T4	Y3 T5	Y4 T2	Y4 T3	Y4 T4	Y4 T5
Current Y3 & 5	Light, Sound & Electricity	Forces (Explorers & Adventurers)	How Humans Work	Homes and Habitats	Active Planet	Rainforests		Footprints from the Past

2023-24 is Year B of the cycle.

Click the hyperlinks in the table above to jump to the detail on each unit of study.

Summary of content for Years 3 and 4 – the National Curriculum

Summary of content for Years 3 and 4 – the National Curriculum								
	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	National Curriculum							
YEARS 3 & 4	<p>Recognise that living things can be grouped in a variety of ways.</p> <p>Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.</p> <p>Recognise that environments can change and that this can sometimes pose dangers to living things.</p>	<p>Identify that animals, including humans, need the right types and amounts of nutrition from what they eat.</p> <p>Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p> <p>Describe the simple functions of the basic parts of the digestive system in humans.</p> <p>Identify the different types of teeth in humans and their simple functions.</p>	<p>Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</p> <p>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.</p> <p>Investigate the way in which water is transported in plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</p>	<p><u>Rocks:</u></p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p> <p>Recognise that soils are made from rocks and organic matter.</p> <p><u>States of matter:</u></p> <p>Compare and group materials together, according to whether they are solids, liquids or gases.</p>	<p>Compare how things move on different surfaces.</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</p> <p>Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and some magnetic materials.</p>	<p><u>Light:</u></p> <p>Recognise that they need light in order to see things and that dark is the absence of light.</p> <p>Notice that light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p> <p>Recognise that shadows are formed when the light from a light source is blocked by an opaque object.</p> <p>Find patterns in the way that the size of shadows change.</p>	<p>Identify common appliances that run on electricity.</p> <p>Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.</p> <p>Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.</p> <p>Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.</p>	<p>Ask relevant questions and using different types of scientific enquiries to answer them.</p> <p>Set up simple practical enquiries, comparative and fair tests.</p> <p>Make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment including thermometers and data loggers.</p>

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	National Curriculum							
YEARS 3 & 4		Construct and interpret a variety of food chains, identifying producers, predators and prey.		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 (oC). Identify the part played by evaporation in the water cycle and associate the rate of evaporation with temperature.	Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.	<u>Sound:</u> 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 some common conductors and insulators, and associate metals with good conductors.	Gather, record, classify and present data in a variety of ways to help in answering questions. Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	National Curriculum							
YEARS 3 & 4						<p><u>Sound (cont'd):</u></p> <p>Recognise that sounds get fainter as the distance from the sound source increases.</p>		<p>Use results to draw simple conclusions. Make predictions for new values, suggest improvements and raise further questions.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Use straightforward scientific evidence to answer questions or to support their findings.</p>

YEAR A

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	Malmesbury Key Learning							
YEARS 3 & 4, TERM 2 – ACTIVE PLANET				<p>Compare states of matter (solids, liquids and gases).</p> <p>Group materials by their properties.</p> <p>Observe change of state when materials are heated and cooled.</p> <p>Understand that water freezes below 0 degrees and boils above 100 degrees.</p> <p>Use a thermometer to measure temperature.</p> <p>Investigate reversible change in water and be able to explain the process.</p> <p>(Cont'd below)</p>				

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 3 & 4, TERM 2 – ACTIVE PLANET				(Cont'd) Investigate and compare the properties of rocks based on their properties.				
	Vocabulary				Prior Learning			
	Sedimentary rock, igneous rock, metamorphic rock, properties of rock (permeable, impermeable), magma, lava, molten rock, names of rocks (granite, marble, chalk, sandstone, slate etc.) States of matter (solids, liquids and gases); Change of state (evaporate, condense, melt, freeze, heat, cool, melting point, freezing point, boiling point, water vapour, reversible change)				Properties of materials – YEAR 1 and YEAR 2			

YEAR A

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 3 & 4, TERMS 3 & 4 – RAINFORESTS	<p>Be able to classify animals according to their features.</p> <p>Classify vertebrates and invertebrates.</p> <p>Classify reptile, bird, fish, amphibian and mammal.</p> <p>Explain how animals are suited to the rainforest habitat.</p> <p>Know about processes and conditions that have an effect on living things.</p> <p>(Cont'd overleaf)</p>	<p>Construct and interpret a variety of food chains.</p>	<p>Identify and describe the functions of different parts of flowering plants.</p> <p>Explore the requirements of plants for life and growth and how they vary from plant to plant.</p> <p>Investigate the way in which water is transported in plants.</p> <p>Explore the part that flowers play in the life cycle of flowering plants.</p>	<p>Recognise that soil is made from a mixture of rock particles and organic matter.</p>				

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEARS 3 & 4, TERMS 3 & 4 – RAINFORESTS	Know about ways in which animals and plants are suited to different environments.								
	Know about the living things that are supported by different environments.								
	Vocabulary				Prior Learning				
	Living things (organisms, species, classify, classification, features, vertebrate, invertebrate, environment, endangered, extinct, climate change, bird, fish, mammal, amphibian) Plants (air, water, transport, nutrients, makes its own food (photosynthesis), air (oxygen, carbon dioxide) , germination, flowering, seed formation, seed dispersal, reproduction) ;Parts of a plant (flower, stem, leaves, roots, support)				Hibernating animals – YEAR 1 Polar animals and carnivores and herbivores – YEAR 1 Basic structures of a plant – YEAR 1 Key parts of animals (amphibian, reptile, bird and fish) – YEAR 1 Bugs Feast (Living and not living things; different plants and animals, different habitats, investigate food chains) – YEAR 2				

YEAR A

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 3 & 4, TERM 5 – FOOTPRINTS FROM THE PAST	Be able to classify animals according to their features (group and classify dinosaurs). Know about ways in which animals are suited to different environments.			<u>Rocks:</u> Describe in simple terms how fossils are formed.				
	Vocabulary				Prior Learning			
	Classify, classification, dinosaur, environment, extinct, carnivore, herbivore, omnivore, environment Rocks (sediment, layers, erosion, bones, fossil, fossilisation)				Bugs Feast (Different animals, different habitats) – YEAR 2			

YEAR B

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	Malmesbury Key Learning							
YEARS 3 & 4, TERM 2 – LIGHT, SOUND AND ELECTRICITY						<p><u>Light:</u> Recognise that we need light in order to see.</p> <p>Understand that dark is the absence of light.</p> <p>Understand that light is reflected from surfaces.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect our eyes.</p> <p>Identify how shadows are formed and find patterns in the way that the size of shadows change.</p>	<p>Identify common appliances that run on electricity.</p> <p>Construct electrical circuits to make devices work.</p> <p>Identify the basic parts of an electrical circuit.</p> <p>Change the type or number of components in a circuit to have a different effect.</p> <p>Recognise that a switch opens and closes an electrical circuit.</p> <p>Know that some materials conduct electricity.</p>	

YEAR B

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
	Malmesbury Key Learning								
YEARS 3 & 4, TERM 2 – LIGHT, SOUND AND ELECTRICITY						<p><u>Sound:</u> Know that sounds are made when objects vibrate.</p> <p>Be able to create sounds with a variety of objects.</p> <p>Be able to change sounds by altering variables.</p>			
	Vocabulary					Prior Learning			
	Light (light, light source, dark, reflection, reflect, reflective, ray) Sound (vibration, sound, volume, amplitude, pitch, vacuum, ear drum, particles) Electricity: (electricity, appliances, battery, circuit, mains electricity, electrical conductor, electrical insulator); components (cell, bulb, buzzer, wires, motor, switch, complete circuit, incomplete circuit, series circuit)								

YEAR B

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 3 & 4, TERM 3 – EXPLORERS & ADVENTURERS					<p>Notice that some forces need contact between two objects but magnetic force can act at a distance.</p> <p>Observe how magnets attract and repel each other and attract some materials and not others.</p> <p>Compare and group together a variety of everyday materials of whether they are attracted to a magnet.</p>			
	Vocabulary				Prior Learning			
	Magnets, magnetic pole, force, repel, attract, magnetic field							

YEAR B

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 3 & 4, TERM 4 – HOW HUMANS WORK		<p>Understand the principles of nutrition, growth, movement and reproduction.</p> <p>Understand the effect of diet on the human body.</p> <p>Understand the function of the skeleton and muscles in humans and other animals.</p> <p>Describe the simple functions of the digestive system in humans.</p> <p>Understand the function and care of teeth in humans and other animals.</p>						

Vocabulary	Prior Learning
<p>Function, system, nutrition</p> <p>Skeleton and muscles (bones, muscles, joint, ball, sliding, hinge, socket) Names of human bones (skull, backbone, ribs, hip, pelvis etc.)</p> <p>Digestive system (digest, tongue, teeth, saliva, oesophagus, small intestine, large intestine, rectum)</p> <p>Teeth (molar, premolar, canine, incisor, baby teeth, tooth decay)</p>	<p>Basic parts of the human body – YEAR 1</p>

YEAR B

	Living Things & their Habitats	Animals Including Humans	Plants	States of Matter/Rocks	Forces/Magnets	Light/Sound	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 3 & 4, TERM 5 – HOMES AND HABITATS	Be able to put animals into groups.	Identify that a producer is the first organism in a food chain.						
	Be able to classify animals according to their features.	Understand that predators are animals that naturally prey on others.						
	Investigate an endangered habitat (Coral reefs). Identify the frequently occurring animals and plants that are supported by the environment around the school.	Understand that prey are animals that are caught and eaten by others for food.						
	Vocabulary				Prior Learning			
	Classification, classification key, organism, predators, prey, food chain/web, environment, habitat, invertebrates, vertebrates, endangered				Bugs Feast (Different animals, different habitats) – YEAR 2			

UPPER KEY STAGE 2 – YEARS 5 AND 6

In Years 5 and 6 children study science on a partial 2-year cycle, with both year groups addressing the same content at the same time. The pathway through the units of study is as follows:

Year A,B Current Y4 & 6	Y5 T1 Space Explorers	Y5 T3 Snap, Crackle & Splash	Y5 T5 Spotlight on Design	Y5 T6 Meanders & Mountains	Y6 T2 Magical Materials	Y6 T3 Our Unique World	Y6 T4 Fit for Life	Y6 T5&6 Out of Africa
Year B,A Current Y3 & 5	Y5 T2 Magical Materials	Y5 T3 Our Unique World	Y5 T4 Fit for Life	Y5 T5 Spotlight on Design	Y5 T6 Meanders & Mountains	Y6 T1 Space Explorers	Y6 T3 Snap, Crackle & Splash	Y6 T5&6 Out of Africa

2023-24 is Year B of the cycle.

Click the hyperlinks in the table above to jump to the detail on each unit of study.

Summary of content for Years 5 and 6 – the National Curriculum

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
National Curriculum								
YEAR 5 & 6	Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	Describe the changes as humans develop old age. Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function.	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. Demonstrate that dissolving, mixing and changes of state are reversible changes.	Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Identify the effects of air resistance, water resistance and friction that act between moving surfaces. Recognise that some mechanisms, including levers, pulley and gears, allow a smaller force to have a greater effect.	<u>Earth and Space:</u> 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.	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit.	Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Take measurements, using a range of scientific equipment with increasing accuracy and precision, taking repeat readings when appropriate. (Cont'd on next page)
		Describe the life process of reproduction in some plants and animals.	Describe the ways in which nutrients and water are transported within animals, including humans.					
	Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals.							
	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			

National Curriculum

YEAR 5 & 6	Give reasons for classifying plants and animals based on specific characteristics.			<p>Use knowledge of solids, liquids and gases to decide how mixtures might be separated through filtering, sieving and evaporating.</p> <p>Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.</p> <p>Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.</p> <p>(Cont'd overleaf)</p>	<p>Describe magnets as having two poles.</p> <p>Predict whether two magnets will attract or repel each other, depending on which poles are facing.</p>	<p><u>Light:</u></p> <p>Recognise that light appears to travel in straight lines.</p> <p>Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes.</p> <p>(Cont'd overleaf)</p>	<p>Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>Use test results to make predictions to set up further comparative and fair tests.</p> <p>(Cont'd on next page)</p>

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	National Curriculum							
YEAR 5 & 6				(LKS2 Objective) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.		<u>Light (cont'd):</u> Use the idea that light travels in straight lines to explain why shadows have the same shape as the object that cast them.		Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations. Identify scientific evidence that has been used to support or refute ideas or arguments.

YEAR A

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 5 & 6, TERM 1 – SPACE EXPLORERS						<p>Describe the movement of the Earth and other planets relative to the Sun.</p> <p>Explain how planets move in our solar system.</p> <p>Investigate the movement of the Moon in relation to the Earth.</p> <p>Explain night and day.</p> <p>Understand why we have seasons.</p> <p>Investigate why we have different time zones.</p>		

	Vocabulary	Prior Learning
	Solar system, planet, spherical body, orbit, Earth, Sun, star, Moon, waxing, waning, gravitational, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, asteroid, geocentric, heliocentric, seasons, time zones, sunrise, sunset, midday, tilt, rotate, axis, northern hemisphere, southern hemisphere, equator, North Pole, South Pole	

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
	Malmesbury Key Learning								
YEARS 5 & 6, TERM 3 – SNAP, CRACKLE, SPLASH					<p>Explain that unsupported objects fall towards the Earth because of the force of gravity.</p> <p>Identify the effects of friction that act between moving surfaces.</p> <p>Explain the effects of air resistance.</p> <p>Explain the effects of water resistance.</p>		<p>Investigate electrical circuits.</p> <p>Investigate how to vary an electrical circuit to change its effect.</p> <p>Use recognised symbols in an electrical circuit.</p> <p>Be able to construct circuits on the basis of drawings using conventional symbols and predict whether the circuits would work.</p>		
	Vocabulary				Prior Learning				
	Force, gravity, gravitational pull, weight, mass, friction, air resistance, streamlined, water resistance, buoyancy, upthrust, electrical circuit, circuit diagram, electrical symbols, electrons, current, positive, negative, dimmer, brighter, dependent variable, independent variable, controlled variable				Explorers & Adventurers – YEAR 3 & 4 Light, Sound and Electricity – YEAR 3 & 4				

YEAR A & B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEAR 5, TERM 5 – SPOTLIGHT ON DESIGN						<p>Understand that light travels in a straight line.</p> <p>Investigate how objects are seen because they reflect light into the eye.</p> <p>Investigate how refraction changes the direction in which light travels.</p> <p>Investigate how we see colours.</p> <p>Understand how shadows have the same shape as the object that casts them.</p>		
	Vocabulary				Prior Learning			
	Light, light source, light waves, opaque, prism, reflection, refraction, shadow, translucent, transparent, visible spectrum				Light, Sound and Electricity – YEAR 3 & 4			

YEAR A & B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEAR 5, TERM 6 – MEANDERS AND MOUNTAINS				Identify and explain the processes involved in the water cycle.				
	Vocabulary				Prior Learning			
	Precipitation, evaporation, water vapour, condensation, ground run-off, bodies of water, water droplets, cloud, hail, snow, rain							

YEAR A & B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically	
	Biology			Chemistry	Physics				
Malmesbury Key Learning									
YEAR 6, TERMS 5 & 6 – OUT OF AFRICA	<p>Compare the life cycles of living things, mammals, amphibians, insects, reptiles, birds (finding similarities and differences).</p> <p>Investigate the structure of a flower (tulip).</p> <p>Learn how plants reproduce (including pollination, seed dispersal and germination).</p> <p>Human reproduction covered annually in series of PSHRE lessons - Term 6.</p>		<p>Understand the evolutionary timeline.</p> <p>Explain that life came from the sea.</p> <p>Investigate the era of the dinosaurs.</p> <p>Investigate how fossils tell us about living things from the past (including the life of Mary Anning).</p> <p>Understand the evolution of the human species.</p> <p>Understand how we inherit characteristics.</p> <p>Understand natural selection.</p>		<p>Recognise that some mechanisms allow a smaller force to have a greater effect.</p>				
	Vocabulary				Prior Learning				
	<p>Evolutionary timeline, dinosaurs, fossil, evolution, characteristics, inherited traits, genes, DNA, natural selection, adaptation, life cycle, mammal, amphibian, insect, reptile, bird, reproduce, pollination, seed dispersal, germination, structure of a plant (petal, filament, anther, stamen, pollen, stigma, ovary, ovule) mechanisms, lever, pulley, gears/cogs</p>				<p>Rainforests – YEAR 3 & 4</p> <p>Footprints from the Past – YEAR 3 & 4</p>				

YEAR B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	Malmesbury Key Learning							
YEARS 5 & 6, TERM 2 – MAGICAL MATERIALS				<p>Recognise and test the properties of different materials (including hardness, solubility, transparency plus response to magnets).</p> <p>Investigate electrical and thermal conductors.</p> <p>Investigate which materials will dissolve in a liquid and which will form a solution.</p> <p>Investigate how to recover a substance a subject from a solution (sieving and filtering)</p> <p>(Cont'd overleaf)</p>				

YEAR B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 5 & 6, TERM 2 – MAGICAL MATERIALS				(Cont'd) Investigate how to recover a substance a subject from a solution (evaporation). Plan an experiment to show which materials conduct heat. Identify reversible and irreversible changes.				
	Vocabulary				Prior Learning			
	Condensation, conductor, dissolve, evaporation, freezing, gases, insoluble, insulator, irreversible, liquids, magnet, materials, melting, opaque, reversible, solids, soluble, solution, translucent, transparent, sieving, filtering, particles, states of matter				Active Planet – YEAR 3 & 4			

YEAR B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 5 & 6, TERM 3 – OUR UNIQUE WORLD	Classify living things: giving reasons for classifying things based on specific characteristics.							
	Understand how to classify living things into broad groups (Linnean System).							
	Classify living things and their habitats.							
	Classify living things and their habitats (fungi).							
	Classify living things and their habitats (micro-organisms).							
	Vocabulary				Prior Learning			
	Characteristics, classification, key, taxonomist, Linnean System, micro-organisms, microscopic, species, habitat, fungi				Rainforests – YEAR 3 & 4 Footprints from the Past – YEAR 3 & 4 Homes and Habitats – YEAR 3 & 4			

YEAR B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
	Malmesbury Key Learning							
YEARS 5 & 6, TERM 4 – FIT FOR LIFE		<p>Describe the changes as humans develop old age.</p> <p>Identify and name the main parts of the human circulatory system.</p> <p>Describe the functions of the heart, blood and blood vessels (Curoscope – link to computing).</p> <p>Recognise the impact of exercise on the human body.</p> <p>Investigate a model of the human digestive system.</p> <p>Describe the ways in which nutrients and water are transported in animals).</p> <p>(Cont'd overleaf)</p>						

YEAR B

	Living Things & their Habitats	Animals Including Humans	Evolution and Inheritance	Properties and Changes of Materials	Forces	Light/Earth & Space	Electricity	Working Scientifically
	Biology			Chemistry	Physics			
Malmesbury Key Learning								
YEARS 5 & 6, TERM 4 – FIT FOR LIFE		(Cont'd) Impact of drugs and lifestyle covered annually in a series of PSHRE lessons – Term 3.						
	Vocabulary				Prior Learning			
	Circulatory system, arteries, blood vessels, capillaries, heart, heart rate, lungs, oxygenated blood, deoxygenated blood, veins, digestive system, salivary glands, oesophagus, stomach, small intestine, large intestine, rectum, diet, carbohydrates, dairy, exercise, fats, fibre, nutrients, , proteins				How Humans Work – YEAR 3 & 4			