

Science Curriculum Map

		Autumn 1	Autumn 2	Spring	Summer
YEAR 2	Materials	Animals Including Humans	All Living Things and Habitats		Plants
	Identify and compare everyday materials, for different uses	Notice that animals, including humans, have offspring which grow into adults	Life and death	Habitats	Observe and describe how seeds and bulbs grow into mature plants How plants need water, light and a suitable temperature to grow and stay healthy.
	Compare how things move on different surfaces	The basic needs of animals, including humans, for survival (water, food and air)	Identify and name a variety of plants and animals in their habitats, including microhabitats.		
	Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching	The importance of exercise, eating the right amounts of different types of food, and hygiene.	How animals obtain their food from plants and other animals		
Extra Events: Butterfly Life Cycle live exhibition (Spring term) Visit to and from the Garden Museum (Summer term)		Identify and name different sources of food.			

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		Autumn 1	Autumn 2	Spring 1 and 2	Summer 1	Summer 2
		Rocks and Soils Rock Detectives	Light Can you see me?	Forces and Magnets The Power of Forces	Animals Including Humans- nutrition, muscles and skeletons Amazing Bodies	Plants & Growth How does your garden grow?
YEAR 3	<p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p> <p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Identifying differences, similarities or changes related to</p>	<p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p>	<p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p> <p>Notice that some forces need contact between two objects, but magnetic forces can act at a distance.</p> <p>Compare how things move on different surfaces.</p>	<p>Asking relevant questions and using different types of scientific enquiries to answer them.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Using straightforward scientific evidence to answer questions or to support their findings.</p>	<p>Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.</p>	

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	<p>simple scientific ideas and processes.</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.</p> <p>Recognise that soils are made from rocks and organic material.</p> <p>Describe in simple terms how fossils are formed when things that have lived are trapped within rock.</p>	<p>Using straightforward scientific evidence to answer questions or to support their findings.</p> <p>Identifying differences, similarities or changes related to simple scientific ideas and processes.</p> <p>Setting up simple practical enquiries, comparative and fair tests; making accurate measurements using standard units, using a range of equipment, for example thermometers and data loggers.</p> <p>Making systematic and careful observations and, where appropriate, taking accurate</p>	<p>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.</p> <p>Observe how magnets attract or repel each other and attract some materials and not others.</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>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Asking relevant questions and using different types of scientific enquiries to answer them.</p> <p>Setting up simple practical enquiries, comparative and fair tests.</p> <p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.</p> <p>Identify that animals, including humans, need the right types and amount of</p>	<p>Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further</p> <p>Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p> <p>Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.</p> <p>Investigate the way in which water is transported within plants.</p> <p>Explore the part flowers play in the life cycle of flowering plants, including pollination, seed</p>
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		<p>measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> <p>Recognise that we 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 shadows are formed when the light from a light source is blocked by a solid (opaque) object.</p> <p>Find patterns in the way that the size of shadows change.</p> <p>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.</p>		<p>nutrition, and that they cannot make their own food; they get nutrition from what they eat.</p> <p>Identify that humans and some animals have skeletons and muscles for support, protection and movement.</p>	<p>formation and seed dispersal.</p>
<p>Extra Events: Visit to Kew Gardens (Summer Term)</p>					

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YEAR 4	Autumn 1	Autumn 2	Spring	Summer 1	Summer 2
	States of Matter and the Water Cycle	Sound	Electricity	Living Things and their Habitats	Animals Including Humans - Food Chains
	Solids, liquids or gases	How sounds are made	Identify common appliances that run on electricity	Recognise that living things can be grouped in a variety of ways	The basic function of the digestive system in humans
	Changing states	How sounds travels	Simple series electrical circuit,	Classification keys	Teeth in humans and their simple functions
The water cycle (evaporation, condensation, precipitation and collection)	How we hear sound, pitch and volume	Switches Electrical conductors and insulators,	Environmental factors affecting survival	Food chains, (identifying producers, predators and prey).	
Extra Events: Science Museum trip (Spring term) Fairley House Pet: Frogs, lizards, beetles, etc... (Summer term)					

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YEAR 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	NC: Materials & Changes in Properties	NC: Materials & Changes in Properties	NC: Forces	NC: Earth and Space	NC: Living Things and their Habitats -Life Cycles	NC: Animals Including Humans - Body Changes
<u>Snap Science Unit – Get Sorted</u> 1. How can we compare and group materials? 2. Is a solid always hard? 3. Is a liquid always runny? 4. Are all metals the same? 5. Are all plastics the same?	<u>Snap Science Unit – Marvellous Mixtures</u> 1. How can we separate mixtures? 2. What happens when we mix liquids and solids? 3. What makes a difference to how fast sugar or salt dissolves? 4. How can we get drinkable water from seawater?	<u>Snap Science Unit – Feel the Force</u> 1. How can we measure forces? 2. Why does an object fall? 3. What makes thing move? 4. How can we slow down falling objects? 5. Does the shape of an object affect its movement in liquid? 6. Do all heavy things sink? 7. How far can you stretch? 8. How can we use levers to help us? 9. How can we lift a heavy load? 10. Can a wheel with teeth	<u>Snap Science Unit – The Earth and Beyond</u> 1. What’s in space? 2. What is a year? 3. What is a day? 4. How does the sun help us to measure time? 5. What time is it around the world? 6. Why do we have seasons? 7. What are our conclusions about sunrise and sunset times? 8. Why does the moon change shape?	<u>Snap Science Unit – Circle of Life</u> 1. What is a life cycle? 2. What do we know about the life cycles of mammals? 3. What do we know about the life cycles of amphibians? 4. What do we know about the life cycles of insects? 5. What do we know about the life cycles of birds? 6. What makes a successful life cycle? 7. How are humans helping endangered	<u>Snap Science Unit – Reproduction in Plants and Animals</u> 1. How do flowering plants reproduce? 2. Are all flowers on all plants the same? 3. Do all plants reproduce by producing seeds? 4. How do amphibians and insects reproduce? 5. How do mammals and birds reproduce? 6. How does the human lifecycle compare with that of other mammals?	
<u>Snap Science Unit – Everyday Materials</u> 1. Weighty problem: which is the best carrier bag? 2. Cool box conundrum: can the same container keep cold things cold and hot things hot?	<u>Snap Science Unit – All Change</u> 1. Are the changes that happen around us reversible or irreversible? 2. How much gas can be produced by an					

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YEAR 6		<p>irreversible change?</p> <p>3. How long does it take for iron nails to rust?</p> <p>4. What happens when a candle burns?</p> <p>How long does it take for things to rust?</p>	<p>make work easier?</p>		<p>animals to complete their life cycles?</p>	<p>How do girls become women and boys become men (puberty).</p>
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YEAR 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Living Things	Light	Evolution and Inheritance	Human Circulatory System	Electricity
	Grouping organisms by characteristics	How we see things the structure of the eye	Looking at the characteristics of living things and how we may inherit these	The basic structure of the human body	How to draw and interpret circuit diagrams	The concept of a balanced diet including food groups
	Classifying plants and animals into groups	The reflection of light in plane convex and concave mirrors	How living things are adapted for survival	The basic structure of the human body including some organs	Testing the effects of altering the components in circuits	A healthy diet and food choices
	Learning about micro-organisms and their effects	The formation of shadows and how they change	The theory of evolution and the work of Darwin	The basic structure and function of the heart	Identifying errors in circuits	Exercise and pulse rate investigation
	Using keys to identify organisms	The construction and use of periscopes	How the fossil record explains support the theory of evolution	The circulatory system	Understanding the dangers of electricity	Drugs and their effect on the human body

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Cells Body Systems	Reproduction	Particles Atoms and Elements	Elements and compounds Acids and alkalis	Space Light	Light Sound
YEAR 7	Plant and animal cell structure and function observing cells with a microscope looking at body systems the skeleton, muscles and movement	puberty and changes during adolescence the human reproductive system the menstrual cycle foetal development and birth	particle model theory of solids liquids and gases investigating melting freezing and boiling the concept of an element basic chemical reactions	how elements combine to form compounds to know examples of acids and alkalis the pH scale and how to use indicators neutralisation reactions and how these may be useful	our Solar System observing the Earth and the Moon the nature of light including light ray diagrams reflection and the behaviour of reflected light	mammalian eye structure and simple cameras sound waves and their nature the detection of sound including the ear how to measure loudness and pitch

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
YEAR 8	Health and lifestyle	Ecosystems Adaptation and inheritance	The Periodic Table Separation Techniques	Separation Techniques Metals and acids	Electricity Energy	Energy, Motion and pressure
	Nutrients and food groups including food tests	Observation of ecosystems and habitats	Looking at the properties of metals and non-metals	Further exploring separation techniques including filtration distillation and chromatography	Extending knowledge about electrical circuits and current	Looking at energy resources, including renewables and fossil fuels
	The effects of an unhealthy diet	Food chains and webs including looking at photosynthesis	Learning about trends in the Periodic Table with a focus on Group 1 elements	Investigating the reactions of metals with acids, oxygen and water	Looking at series and parallel circuits and electrical resistance	Understanding the concepts of work and machines
	The digestive system including the function of enzymes	Competition and adaptation of a range of species	Learning more about solutions and mixtures	Learning more about extracting metals	Looking at energy and temperature	Exploring pressure in gases and liquids
	The effects of drugs, alcohol and smoking on the body	Looking at variation and inheritance Developing our knowledge about Natural selection, selective breeding and man's impact on population	Investigating dissolving	Looking at polymers	Developing knowledge about energy transfer conduction convection and radiation	Looking at pressure on a range of solids

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YEAR 9	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	P2: Energy C2: Chemical patterns	B2: Health & Disease	C1: Air & Water	P3: Electric circuits	B3: Living together	C4: Material choices
	1. Our use of energy 2. Generating electricity 1. The development of atoms 2. Trends in the Periodic Table 3. Metals and non-metals compounds 4. Chemical equations	1. Causes of disease 2. Immune system 3. Preventing disease 4. Impact of lifestyle, genes & environment on health 5. Antibiotics & disease	1. The Earth's atmosphere. 2. Exothermic & endothermic. 3. Evidence for climate change 4. Potable water	1. Electric current 2. Series and parallel circuits 3. Energy transfer in a circuit 4. Magnetic fields	1. Photosynthesis 2. Plants as producers 3. Interdependence of organisms in an ecosystem 4. Impact of conditions on a population	1. Types of materials and their properties. 2. Bonding and structure affecting properties. 3. Nanotechnology 4. Products at the end of their useful life.

YEAR 10	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	B3 Living together (part ii) P4: Motion	B1: Your Genes B4: Food & growth	C5: Chemical analysis	P1: Radiation and Waves	B5: Human body	C3: Chemicals in the natural environment
	1. Forces 2. Motion 3. Newton's laws of motion 4. Energy and motion	1. Role of the genome. 2. Genes and inheritance. 3. Gene technology. 1. Cellular respiration 2. Cell structures 3. Cell growth &	1. Separation techniques 2. Comparing yield 3. Calculating amounts of substances	1. Risks/benefits of radiation 2. Radiation & climate change 3. Properties & behaviour of waves	1. Respiration and the circulatory system 2. Nervous system 3. Endocrine system 4. Homeostasis 5. Role of hormones	1. Atomic structure of metals 2. Metal extraction 3. Electrolysis 4. Crude oil

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		development 4. Stem cells			
Extra Events: Mock Exams Spring 2.					

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
YEAR 11	C4: Material Choices (part ii)	P4: Motion	C5: Chemical analysis	C6: Useful chemicals	Revision	Revision
	B5: Human Body	B6: Life on Earth	B4: Food & growth	P6: Matter – models	Exams	Exams
	P5: Radioactive materials					
	1. Respiration and the circulatory system 2. Nervous system 3. Endocrine system 4. Homeostasis 5. Role of hormones	1. Forces 2. Motion 3. Newton's laws of motion 4. Energy and motion	1. Separation techniques 2. Comparing yield 3. Calculating amounts of substances	1. Energy and matter 2. The particle model and heat 3. Materials under stress		
	1. Radioactivity and the types of radioactive materials. 2. Safe use of radioactive materials.	1. The theory of evolution 2. DNA & classification of organisms 3. Biodiversity	1. Cellular respiration 2. Cell structures 3. Cell growth & development 4. Stem cells	1. Products made from acids 2. Controlling reaction rate 3. Industrial processes		
Extra Events: Mock Exams Autumn 2.						