

# Phase 5 & 6 Curriculum Map

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle A	Year 5	Invaders & Settlers	Out Of This World	Raging Rivers & Marvellous Mountains	The Greeks	Adventureland	
	Year 6					Science Academy	Mini Enterprise
Cycle B	Year 5	Wayne Enterprises	Prehistoric People	Extreme Earth	WW2	Adventureland	
	Year 6					Science Academy	Mini Enterprise

## Art Objectives

	Learning	Drawing	Colour	Texture	Form	Printing & Pattern
Year 5	<ul style="list-style-type: none"> <li>Develop different ideas which can be used and explain their choice for the materials and techniques.</li> <li>Confidently and systematically investigate the potential of new and unfamiliar materials and use these learnt techniques in their work</li> <li>Evaluate their work against their intended outcome.</li> <li>Research and discuss various artists, architects and designers and discuss their processes and explain how these were used in the finished product.</li> </ul>	<ul style="list-style-type: none"> <li>Use a variety of techniques to interpret the texture of a surface e.g. mark making, different textured paint.</li> <li>Produce increasingly detailed preparatory sketches for painting and other work.</li> <li>Introduce the concept of perspective.</li> <li>Work on a variety of scales and collaboratively.</li> <li>Observe and use a variety of techniques to show the effect of light on objects and people e.g. use rubbers to lighten, use pencil to show tone, use tones of the same colour.</li> </ul>	<ul style="list-style-type: none"> <li>Explore the use of texture in colour (link to texture unit) with sawdust, glue, shavings, sand and on different surfaces.</li> <li>Considering colour for purposes</li> <li>Explore the texture of paint - very wet and thin or thick and heavy - add PVA to the paint.</li> <li>Encourage individual identification of suitable equipment for a particular purpose e.g. size of paintbrush or paper needed.</li> </ul>	<ul style="list-style-type: none"> <li>Look at fabrics from other countries and discuss. Compare with own. Discuss different types of fabric. Interpret stories, music, poems and use environment and townscapes as stimuli.</li> <li>Select and use materials to achieve a specific outcome.</li> <li>Embellish work, using a variety of techniques, including drawing, painting and printing on top of textural work.</li> </ul>	<ul style="list-style-type: none"> <li>Plan a sculpture through drawing and other preparatory work</li> <li>Shape, form, model and construct from observation</li> <li>Develop skills in using clay inc. slabs, coils, slips, etc</li> <li>Use observations to produce intricate patterns and textures in a malleable media</li> </ul>	<ul style="list-style-type: none"> <li>Create printing blocks by simplifying an initial sketch book idea</li> <li>Use relief or impressed method</li> <li>Create prints with two/three overlays</li> </ul>
Year 6	<ul style="list-style-type: none"> <li>Select ideas based on first hand observations, experience or imagination and develop these through open ended research.</li> <li>Refine their skills using learnt techniques</li> <li>Adapt their work following feedback or discussion based on their preparatory ideas.</li> <li>Describe the work and ideas of various artists, architects and designers, using appropriate vocabulary and referring to historical and cultural contexts</li> <li>Explain and justify preferences towards different styles and artists</li> </ul>	<ul style="list-style-type: none"> <li>Observe and use a variety of techniques to show the effect of light on objects and people e.g. use rubbers to lighten, use pencil to show tone, use tones of the same colour</li> <li>Look at the effect of light on an object from different directions.</li> <li>Produce increasingly accurate drawings of people.</li> <li>Produce increasingly detailed preparatory sketches for painting and other work.</li> <li>Independently selects materials and techniques to use to create a specific outcome.</li> </ul>	<ul style="list-style-type: none"> <li>Controlling and experimenting particular qualities of tone, shades, hue and mood.</li> <li>Use colour to express moods and feelings.</li> <li>Consider artists use of colour and application of it</li> </ul>	<ul style="list-style-type: none"> <li>Develops experience in embellishing, pooling together experiences in texture to complete a piece - applique, drawing, sticking, cutting, paint, weaving, layering etc.</li> <li>Applies knowledge of different techniques to express feelings.</li> <li>Use found and constructed materials.</li> <li>Work collaboratively on a larger scale.</li> </ul>	<ul style="list-style-type: none"> <li>Plan a sculpture through drawing and other preparatory work</li> <li>Shape, form, model and construct from observation and adapt using imagination</li> <li>Use recycled, natural and man-made materials to create sculptures (mod rock)</li> <li>Use observations and imagination to design intricate patterns and textures in a malleable media</li> </ul>	<ul style="list-style-type: none"> <li>Create printing blocks by simplifying an initial sketch book idea</li> <li>Use relief or impressed method</li> <li>Create prints with three overlays</li> <li>Work into prints with a range of media e.g. pens, colour pens and paints</li> </ul>
	<b>All Art Units</b>	<b>Optical Illusions</b>	<b>Alien Landscape &amp; Pop Art</b>	<b>Whole School Projects</b>	<b>Alien Landscape</b>	<b>Pop Art</b>

# Computing Objectives

	e-Safety	Programming	Handling Data	Multimedia	Technology in our Lives
Year 5	<ul style="list-style-type: none"> <li>I can choose a secure password and screen name.</li> <li>I protect my password and other personal information.</li> <li>I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns</li> <li>I know that anything I post online can be seen, used and may affect others.</li> <li>I can talk about the dangers of spending too long online or playing a game.</li> <li>I can explain the importance of communicating kindly and respectfully.</li> <li>I can discuss the importance of choosing an age-appropriate website, app or game.</li> <li>I can explain why I need to protect my computer or device from harm.</li> </ul>	<ul style="list-style-type: none"> <li>I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.</li> <li>I can refine a procedure using repeat commands to improve a program.</li> <li>I can use a variable to increase programming possibilities.</li> <li>I can change an input to a program to achieve a different output.</li> <li>I can use 'if' and 'then' commands to select an action.</li> <li>I can talk about how a computer model can provide information about a physical system.</li> <li>I can use logical reasoning to detect and debug mistakes in a program.</li> <li>I use logical thinking, imagination and creativity to extend a program.</li> </ul>	<ul style="list-style-type: none"> <li>I can use a spreadsheet and database to collect and record data.</li> <li>I can choose an appropriate tool to help me collect data..</li> <li>I can present data in an appropriate way.</li> <li>I can search a database using different operators to refine my search.</li> <li>I can talk about mistakes in data and suggest how it could be checked.</li> </ul>	<ul style="list-style-type: none"> <li>I can use text, photo, sound and video editing tools to refine my work.</li> <li>I can use the skills I have already developed to create content using unfamiliar technology.</li> <li>I can select, use and combine the appropriate technology tools to create effects that will have an impact on others.</li> <li>I can select an appropriate online or offline tool to create and share ideas.</li> <li>I can review and improve my own work and support others to improve their work.</li> </ul>	<ul style="list-style-type: none"> <li>I can describe different parts of the Internet.</li> <li>I can use different online communication tools for different purposes.</li> <li>I can use a search engine to find appropriate information and check its reliability.</li> <li>I can recognise and evaluate different types of information I find on the World Wide Web.</li> <li>I can describe the different parts of a webpage.</li> <li>I can find out who the information on a webpage belongs to</li> <li>I know which resources on the Internet I can download and use.</li> <li>I can describe the ways in which websites advertise their products to me.</li> </ul>
Year 6	<ul style="list-style-type: none"> <li>I protect my password and other personal information.</li> <li>I can explain the consequences of sharing too much about myself online.</li> <li>I support my friends to protect themselves and make good choices online, including reporting concerns to an adult.</li> <li>I can explain the consequences of spending too much time online or on a game.</li> <li>I can explain the consequences to myself and others of not communicating kindly and respectfully.</li> <li>I protect my computer or device from harm on the Internet.</li> </ul>	<ul style="list-style-type: none"> <li>I can deconstruct a problem into smaller steps, recognising similarities to solutions used before.</li> <li>I can explain and program each of the steps in my algorithm.</li> <li>I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.</li> <li>I can recognise when I need to use a variable to achieve a required output.</li> <li>I can use a variable and operators to stop a program.</li> <li>I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen.</li> <li>I can use logical reasoning to detect and correct errors in a algorithms and programs.</li> </ul>	<ul style="list-style-type: none"> <li>I can plan the process needed to investigate the world around me.</li> <li>I can select the most effective tool to collect data for my investigation.</li> <li>I can check the data I collect for accuracy and plausibility.</li> <li>I can interpret the data I collect.</li> <li>I can present the data I collect in an appropriate way.</li> <li>I use the skills I have developed to interrogate a database.</li> </ul>	<ul style="list-style-type: none"> <li>I can talk about audience, atmosphere and structure when planning a particular outcome.</li> <li>I can confidently identify the potential of unfamiliar technology to increase my creativity.</li> <li>I can combine a range of media, recognising the contribution of each to achieve a particular outcome.</li> <li>I can tell you why I select a particular online tool for a specific purpose.</li> <li>I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.</li> </ul>	<ul style="list-style-type: none"> <li>I can tell you the Internet services I need to use for different purposes.</li> <li>I can describe how information is transported on the Internet.</li> <li>I can select an appropriate tool to communicate and collaborate online.</li> <li>I can talk about the way search results are selected and ranked.</li> <li>I can check the reliability of a website.</li> <li>I can tell you about copyright and acknowledge the sources of information that I find online.</li> <li>I know that websites can use my data to make money and target their advertising</li> </ul>
Cycle A	Ongoing Prehistoric People	Wayne Enterprises - Scratch Story Adventureland - Flowol Mini Enterprise - Web Design	WW2 - Rationing SpreadSheets	Extreme Earth News Report	Science Academy
Cycle B	Ongoing The Greeks	Invaders & Settlers - Scratch Game Adventureland - Flowol Mini Enterprise - Web Design	Raging Rivers & Marvellous Mountains - Database	Out of this World Interactive Story	Science Academy

# Design Technology Objectives

	Design	Making	Evaluating	Technical knowledge	Cooking and nutrition
Year 5	<ul style="list-style-type: none"> <li>to generate ideas through brainstorming and identify a purpose for their product</li> <li>to draw up a specification for their design</li> <li>to develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail</li> <li>to use results of investigations, information sources, including ICT when developing design ideas</li> </ul>	<ul style="list-style-type: none"> <li>to select appropriate materials, tools and techniques</li> <li>to measure and mark out accurately</li> <li>to use skills in using different tools and equipment safely and accurately</li> <li>to cut and join with accuracy to ensure a good-quality finish to the product</li> </ul>	<ul style="list-style-type: none"> <li>to evaluate a product against the original design specification</li> <li>to evaluate it personally and seek evaluation from others</li> </ul>	<p>Materials:</p> <ul style="list-style-type: none"> <li>Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</li> </ul> <p>Textiles:</p> <ul style="list-style-type: none"> <li>Create objects (such as a cushion) that employ a seam allowance.</li> <li>Join textiles with a combination of stitching techniques (e.g. back stitch for seams and running stitch to attach decoration).</li> </ul> <p>Electricals and electronics:</p> <ul style="list-style-type: none"> <li>Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).</li> </ul> <p>Computing:</p> <p>Write code to control and monitor models or products.</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>Develop a range of practical skills to create products (e.g. cutting, drilling and screwing, nailing, gluing, filling and sanding).</li> </ul> <p>Mechanics:</p> <ul style="list-style-type: none"> <li>Convert rotary motion to linear using cams.</li> </ul>	<ul style="list-style-type: none"> <li>to weigh and measure accurately (time, dry ingredients, liquids)</li> <li>to apply the rules for basic food hygiene and other safe practices <i>e.g. hazards relating to the use of ovens</i></li> <li>Understand the importance of correct storage and handling of ingredients (knowledge of micro-organisms).</li> <li>Demonstrate a range of baking and cooking techniques.</li> </ul>
Year 6	<ul style="list-style-type: none"> <li>to communicate their ideas through detailed labelled drawings</li> <li>to develop a design specification</li> <li>to explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways</li> <li>to plan the order of their work, choosing appropriate materials, tools and techniques</li> </ul>	<ul style="list-style-type: none"> <li>to select appropriate tools, materials, components and techniques</li> <li>to assemble components to make working models</li> <li>to use tools safely and accurately</li> <li>to construct products using permanent joining techniques</li> <li>to make modifications as they go along</li> <li>to pin, sew and stitch materials together to create a product</li> <li>to achieve a quality product</li> </ul>	<ul style="list-style-type: none"> <li>to evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests</li> <li>to record their evaluations using drawings with labels</li> <li>to evaluate against their original criteria and suggest ways that their product could be improved</li> </ul>	<p>Materials:</p> <ul style="list-style-type: none"> <li>Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (e.g. the nature of fabric may require sharper scissors than would be used to cut paper).</li> </ul> <p>Textiles:</p> <ul style="list-style-type: none"> <li>Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).</li> </ul> <p>Electricals and electronics:</p> <ul style="list-style-type: none"> <li>Create circuits using electronics kits that employ a number of components with increasing confidence.</li> </ul> <p>Computing:</p> <p>Write code to control and monitor models or products.</p> <p>Construction:</p> <ul style="list-style-type: none"> <li>Develop a range of practical skills to create products.</li> </ul> <p>Mechanics:</p> <ul style="list-style-type: none"> <li>Use innovative combinations of electronics (or computing) and mechanics in product designs</li> </ul>	<ul style="list-style-type: none"> <li>Measure accurately and calculate ratios of ingredients to scale up or down from recipe.</li> <li>Create and refine recipes, including ingredients, methods, cooking times and temperatures.</li> </ul>
	Adventureland Mini Enterprise	Adventureland Mini Enterprise	Adventureland Mini Enterprise	Adventureland	Mini Enterprise

# History Objectives

Pupils should be taught about:

<ul style="list-style-type: none"> <li>changes in Britain from the Stone Age to the Iron Age</li> <li>a local history study</li> </ul>	Prehistoric People
<ul style="list-style-type: none"> <li>Britain's settlement by Anglo-Saxons and Scots</li> <li>the Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor</li> </ul>	Invaders & Settlers
<ul style="list-style-type: none"> <li>a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066</li> </ul>	WW2
<ul style="list-style-type: none"> <li>Ancient Greece - a study of Greek life and achievements and their influence on the western world</li> </ul>	The Greeks
<ul style="list-style-type: none"> <li>a non-European society that provides contrasts with British history - one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300.</li> </ul>	Year 3 & 4 Topics
<ul style="list-style-type: none"> <li>the achievements of the earliest civilizations - an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty of Ancient China</li> </ul>	
<ul style="list-style-type: none"> <li>the Roman Empire and its impact on Britain</li> </ul>	

	Chronology	Range and depth of historical knowledge	Interpretation of history	Historical Enquiry
Year 5	<ul style="list-style-type: none"> <li>know and sequence key events of time studied</li> <li>use relevant terms and periods labels</li> <li>relate current studies to previous studies</li> <li>make comparisons between different times in history</li> </ul>	<ul style="list-style-type: none"> <li>study different aspects of life of different people in the period studied ( eg. differences between men and women)</li> <li>examine causes and results of great events and the impact on people</li> <li>compare life in early and late times within the period studied</li> <li>compare an aspect of life with the same aspect in another period (eg. education, work, travel)</li> </ul>	<ul style="list-style-type: none"> <li>compare accounts of events from different sources. Fact or fiction</li> <li>can offer some reasons for different versions of events</li> </ul>	<ul style="list-style-type: none"> <li><b>begin to identify</b> primary and secondary sources</li> <li>use evidence to build up a picture of life in time studied</li> <li>select <b>appropriate</b> sections of information (3 or 4) and summarise (link to Year 5 reading objective)</li> <li>begin to ask a variety of synthesis and evaluation questions (refer to Bloom's taxonomy) and suggest how they might find the answer</li> </ul>
Year 6	<ul style="list-style-type: none"> <li>place current study on time line in relation to other studies</li> <li>use relevant dates and terms</li> <li>sequence at least ten events on a time line</li> </ul>	<ul style="list-style-type: none"> <li>find about beliefs, behaviour and characteristics of people, recognising that not everyone shares the same views and feelings</li> <li>compare beliefs and behaviour with another period studied</li> <li>write another explanation of a past event in terms of cause and effect using evidence to support and illustrate their explanation</li> </ul>	<ul style="list-style-type: none"> <li>link sources and work out how conclusions were arrived at</li> <li>consider ways of checking the accuracy of interpretations - fact or fiction and opinion</li> <li>be aware that different evidence will lead to different conclusions</li> </ul>	<ul style="list-style-type: none"> <li><b>recognise</b> primary and secondary sources</li> <li>Suggest omissions within a source and the means of finding out the answer</li> <li>bring knowledge gathering from several sources together in a fluent account</li> <li>confidently select and use appropriate sources for research</li> <li>confidently ask a variety of synthesis and evaluation questions (refer to Bloom's taxonomy) and suggest how they might find the answer</li> </ul>

**All objectives are covered within each History Topic.**

# History Objectives

Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.

Pupils should be taught to:

	Year 3/4 Topic	Year 5/6 Topic
<b>Locational knowledge</b> <ul style="list-style-type: none"> <li>locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities</li> </ul>		Extreme Earth
<ul style="list-style-type: none"> <li>name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time</li> </ul>	✓	
<ul style="list-style-type: none"> <li>identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night)</li> </ul>		Extreme Earth
<b>Place knowledge</b> <ul style="list-style-type: none"> <li>understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America</li> </ul>	✓	
<b>Human and physical geography</b> <ul style="list-style-type: none"> <li>describe and understand key aspects of:               <ul style="list-style-type: none"> <li>physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle</li> </ul> </li> </ul>		Extreme Earth
		Raging Rivers & Marvellous Mountains
<ul style="list-style-type: none"> <li>human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water</li> </ul>		Mini Enterprise
<b>Geographical skills and fieldwork</b> <ul style="list-style-type: none"> <li>use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied</li> </ul>		Extreme Earth
		Raging Rivers & Marvellous Mountains
<ul style="list-style-type: none"> <li>use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world</li> </ul>		Extreme Earth
		Raging Rivers & Marvellous Mountains
<ul style="list-style-type: none"> <li>use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.</li> </ul>		Raging Rivers & Marvellous Mountains

	<b>Locational Knowledge</b>	<b>Place Knowledge</b>	<b>Human &amp; Physical</b>	<b>Skills &amp; Fieldwork</b>
<b>Year 5</b>	<ul style="list-style-type: none"> <li>I can recognise the different shapes of countries.</li> </ul>	<ul style="list-style-type: none"> <li>I can identify and describe the significance of the Prime/Greenwich Meridian and the time zones including DAY and NIGHT.</li> <li>I can show I know the location of capital cities of the countries of the British Isles and UK, seas around the UK, EU countries with high populations and large areas and the largest cities in each continent.</li> </ul>	<ul style="list-style-type: none"> <li>I can show that I know about the wider context of places, county, region and country.</li> <li>I can describe where a variety of places are in relation to physical and human features.</li> <li>I can understand weather patterns around the world and relate these to climate zones.</li> <li>I can explain how rivers erode, transport and deposit materials.</li> <li>I can explain about the physical features of coasts and begin to understand erosion and deposition.</li> <li>I can understand how humans affect the environment.</li> <li>I can explain about changes to the world environment.</li> <li>I can understand why people seek to manage and sustain their environment.</li> </ul>	<ul style="list-style-type: none"> <li>I can understand and use a widening range of terms such as climate zones, biomes, vegetation belt, rivers, mountains, volcanoes, earthquakes, and the water cycle, meander, floodplain, erosion, deposition, transportation, valley.</li> <li>I can explore features on OS Maps using 6 figure grid references.</li> </ul>
<b>Year 6</b>	<ul style="list-style-type: none"> <li>I can locate the world's continents using maps, concentrating on their environmental regions, key physical and human characteristics, countries and major cities.</li> </ul>	<ul style="list-style-type: none"> <li>I can name and locate countries and cities of the UK, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers) and land use patterns. I can understand how some of these aspects have changed over time.</li> <li>I can identify the position and significance of latitude, longitude, the Equator, Northern Hemisphere and Southern Hemisphere, Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, Prime/Greenwich Meridian and time zones, including day and night.</li> <li>I can use maps and charts to support a decision about the location of places e.g new bypass.</li> </ul>	<ul style="list-style-type: none"> <li>I can understand and describe key aspects of human geography including types of settlements and land use, economic activity including trade links and the distribution of natural resources including energy, food, minerals and water.</li> <li>I can identify and describe the significance of longitude, latitude, Equator, Northern Hemisphere, Southern Hemisphere, Tropics of Capricorn and Cancer, Arctic and Antarctic Circle.</li> <li>I can compare the physical and human features of a region of the UK and a region of South America, identifying similarities and differences.</li> </ul>	<ul style="list-style-type: none"> <li>I can understand and use a widening range of terms such as contour, earthquakes.</li> <li>I can use maps, atlases and globes and digital/computer mapping to locate countries and describe features studied.</li> <li>I can use the 8 points of a compass, 4 and 6 digit grid reference, symbols and key (including the use of OS maps) to build my knowledge of the UK and the wider world.</li> <li>I can use fieldwork to observe, measure, record and present the human and physical features in a local area using a range of methods, including sketch maps, plans and graphs and digital technologies.</li> <li>I can understand and use a widening range of geographical terms such as urban, rural, land use, sustainability, tributary, trade link</li> </ul>
	<b>Extreme Earth</b>	<b>Extreme Earth</b>	<b>Extreme Earth</b>	<b>Extreme Earth</b>
		<b>Raging Rivers &amp; Marvellous Mountains</b>	<b>Raging Rivers &amp; Marvellous Mountains</b>	
			<b>Mini Enterprise</b>	
				<b>Raging Rivers &amp; Marvellous Mountains</b>

# Science Objectives

<p><b>Working scientifically</b></p>	<ul style="list-style-type: none"> <li>planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary</li> <li>taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> <li>recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs</li> <li>using test results to make predictions to set up further comparative and fair tests</li> <li>reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>identifying scientific evidence that has been used to support or refute ideas or arguments.</li> </ul>	<p><b>All Science Topics</b></p>
<p><b>Living things and their habitats</b></p>	<ul style="list-style-type: none"> <li>describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird</li> <li>describe the life process of reproduction in some plants and animals.</li> </ul>	<p>Science Academy</p>
<p><b>Animals, including humans</b></p>	<ul style="list-style-type: none"> <li>describe the changes as humans develop to old age.</li> </ul>	<p>Science Academy</p>
<p><b>Properties and changes of materials</b></p>	<ul style="list-style-type: none"> <li>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</li> <li>know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution</li> <li>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating</li> <li>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic</li> <li>demonstrate that dissolving, mixing and changes of state are reversible changes</li> <li>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.</li> </ul>	<p>Wayne Enterprise</p>
<p><b>Earth and space</b></p>	<ul style="list-style-type: none"> <li>describe the movement of the Earth, and other planets, relative to the Sun in the solar system</li> <li>describe the movement of the Moon relative to the Earth</li> <li>describe the Sun, Earth and Moon as approximately spherical bodies</li> <li>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.</li> </ul>	<p>Out Of This World</p>
<p><b>Forces</b></p>	<ul style="list-style-type: none"> <li>explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>identify the effects of air resistance, water resistance and friction, that act between moving surfaces</li> <li>recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</li> </ul>	<p>Adventureland</p>
<p><b>Living things and their habitats</b></p>	<ul style="list-style-type: none"> <li>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</li> <li>give reasons for classifying plants and animals based on specific characteristics.</li> </ul>	<p>Science Academy</p>
<p><b>Animals including humans</b></p>	<ul style="list-style-type: none"> <li>identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood</li> <li>recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function</li> <li>describe the ways in which nutrients and water are transported within animals, including humans.</li> </ul>	<p>Prehistoric People</p>
<p><b>Evolution and inheritance</b></p>	<ul style="list-style-type: none"> <li>recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago</li> <li>recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents</li> <li>identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.</li> </ul>	<p>Prehistoric People</p>
<p><b>Light</b></p>	<ul style="list-style-type: none"> <li>recognise that light appears to travel in straight lines</li> <li>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</li> <li>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</li> <li>use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.</li> </ul>	<p>Adventureland</p>
<p><b>Electricity</b></p>	<ul style="list-style-type: none"> <li>associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit</li> <li>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</li> <li>use recognised symbols when representing a simple circuit in a diagram.</li> </ul>	<p>Adventureland</p>