

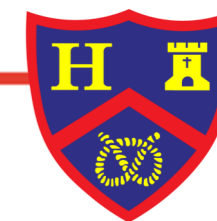
# Biology

**Concept: Biology**

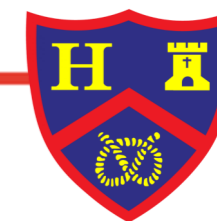
Biology is all about living things.



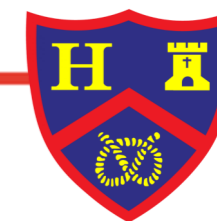
	Plants	Animals, including Humans	Living things and their habitats
Cubs	<ul style="list-style-type: none"> <li>Explore and respond to natural phenomena in their setting and on trips - regular welly walks expose children to different plants including trees—focus on Autumn leaves, grass, various flowers.</li> <li>Explore and respond to natural phenomena in their setting and on trips - carefully growing fruits and vegetables from seeds.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and respond to natural phenomena in their setting and on trips— looking for minibeasts and insects.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and respond to natural phenomena in their setting and on trips— focus on splashing in puddles, exploring the field to find resources to make nest boxes for animals,</li> </ul>
Nursery	<ul style="list-style-type: none"> <li>Plant seeds and care for growing plants.—focus on the concept of growth, change and decay (focus on apples).</li> <li>Understand the key features of the life cycle of a plant.</li> <li>Begin to understand the need to respect and care for the natural environment and all living things.</li> </ul>	<ul style="list-style-type: none"> <li>Understand the key features of the life cycle of an animal with support from an adult—focus on concept that animals are not always the same, changes take place. Focused on farm animals.</li> </ul>	<ul style="list-style-type: none"> <li>Understand the need to take care of the natural environment and respect living things.</li> <li>Understand that animals live in different places with a focus on the Arctic and animals that like/dislike cold weather (Spring term) and a focus on the sea habitat (Summer term).</li> </ul>
Reception	<ul style="list-style-type: none"> <li>Describe what they see, hear and feel whilst outside— explore the natural world and make observations and pictures of plants. Recognising familiar plants where possible.</li> </ul>	<ul style="list-style-type: none"> <li>Know and talk about the different factors that support their overall health and wellbeing and the health of humans:                             <ul style="list-style-type: none"> <li>regular physical activity</li> <li>healthy eating</li> <li>toothbrushing</li> <li>sensible amounts of ‘screen time’</li> <li>having a good sleep routine</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Recognise some environments that are different from the one in which they live and consider how they can care for different environments (focus on woodland animals in Autumn term).</li> <li>Recognise some environments that are different from the one in which they live—focus on hot/cold places in Spring term.</li> </ul>



Biology			
	Plants	Animals, including Humans	Living things and their habitats
<b>YEAR 1</b>	<ul style="list-style-type: none"> <li>Know and name a variety of common wild and garden plants</li> <li>Know and name the petals, stem, leaves and root of a plant</li> <li>Know and name the roots, trunk, branches and leaves of a tree</li> </ul>	<ul style="list-style-type: none"> <li>Know how to classify a range of animals by amphibian, reptile, mammal, fish and birds</li> <li>Know and classify animals by what they eat (carnivore, herbivore and omnivore)</li> <li>Know how to sort by living and non living things</li> <li>Know the name of parts of the human body that can be seen and which sense they are associated with.</li> </ul>	
<b>YEAR 2</b>	<ul style="list-style-type: none"> <li>Know and explain how seeds and bulbs grow into plants</li> <li>Know what plants need in order to grow and stay healthy (water, light &amp; suitable temperature)</li> </ul>	<ul style="list-style-type: none"> <li>Know the basic stages in a life cycle for animals, (including humans)</li> <li>Know the basic needs for survival for animals, including humans, (air, water and food)</li> <li>Know that animals, including humans, have offspring which grow into adults</li> <li>Know why exercise, a balanced diet and good hygiene are important for humans</li> </ul>	<ul style="list-style-type: none"> <li>Classify things by living, dead or never lived and compare the differences</li> <li>Know how a specific habitat provides for the basic needs of things living there (plants and animals)</li> <li>Match living things to their habitat</li> <li>Name some different sources of food for animals</li> <li>Know about and explain a simple food chain</li> </ul>
<b>YEAR 3</b>	<ul style="list-style-type: none"> <li>Know how water is transported within plants</li> <li>Know the plant life cycle, especially the importance of flowers including pollination, seed formation and seed dispersal</li> <li>Know the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</li> <li>Know that not all plants are the same and explore the requirements of plants for life and growth and how they vary from plant to plant.</li> </ul>	<ul style="list-style-type: none"> <li>Know about the importance of a nutritious, balanced diet</li> <li>Know about the skeletal and muscular system of a human</li> </ul>	



Biology			
	Plants	Animals, including Humans	Living things and their habitats
YEAR 4		<ul style="list-style-type: none"> <li>Identify and name the parts of the human digestive system</li> <li>Know the functions of the organs in the human digestive system</li> <li>Identify and know the different types of human teeth</li> <li>Know the functions of different human teeth</li> <li>Use and construct food chains to identify producers, predators and prey</li> </ul>	<ul style="list-style-type: none"> <li>Use classification keys to group, identify and name living things</li> <li>Know how changes to an environment could endanger living things</li> </ul>
YEAR 5		<ul style="list-style-type: none"> <li>Know about the changes as humans develop to old age including changes in puberty and old age..</li> </ul>	<ul style="list-style-type: none"> <li>Know the life cycle of different living things e.g. mammal, amphibian, insect and bird</li> <li>Know the differences between different life cycles</li> <li>Know the process of reproduction in plants</li> <li>Know the process of reproduction in animals</li> </ul>
YEAR 6		<ul style="list-style-type: none"> <li>Identify and name the main parts of the human circulatory system</li> <li>Know the function of the heart, blood vessels and blood</li> <li>Know the impact of diet, exercise, drugs and lifestyle on health</li> <li>Know the ways in which nutrients and water are transported in animals, including humans</li> </ul>	<ul style="list-style-type: none"> <li>Classify living things into broad groups according to observable characteristics and based on similarities and differences</li> <li>Know how living things have been classified</li> <li>Give reasons for classifying plants and animals in a specific way</li> </ul>
		<b>Evolution and Inheritance</b> <ul style="list-style-type: none"> <li>Know how the Earth and living things have changed over time</li> <li>Know how fossils can be used to find out about the past</li> <li>Know about reproduction and offspring (recognising that offspring normally vary and are not identical to their parents)</li> <li>Know how animals and plants are adapted to suit their environment</li> <li>Link adaptation over time to evolution</li> <li>Know about evolution and can explain what it is</li> </ul>	



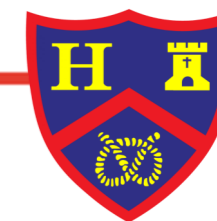
# Physics

## Concept: Physics

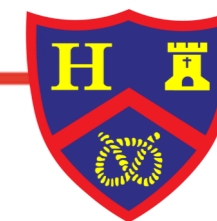
Physics is all about Earth and space and how they work.



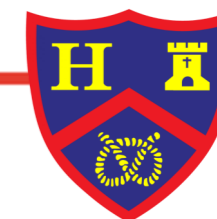
	Forces	Light	Sound	Seasonal Change
Cubs			<ul style="list-style-type: none"> <li>Making their own instruments—shake to make a sound.</li> </ul>	
Nursery	<ul style="list-style-type: none"> <li>Exploring how things work—what forces do we need to use? Do we twist? Push? Pull? Etc.</li> </ul>			<ul style="list-style-type: none"> <li>Introduction of weather/seasons linked vocabulary used verbally—what can we see on the field in Autumn...?</li> </ul>
Reception		<ul style="list-style-type: none"> <li>Interact with natural processes such as shadows.</li> </ul>		<ul style="list-style-type: none"> <li>How does forest school change in the different seasons? Collection of leaves, looking for animals and plants, drawing.</li> </ul>
Year 1				<ul style="list-style-type: none"> <li>observe changes across the four seasons</li> <li>observe and describe weather associated with the seasons and how day length varies.</li> </ul>
Year 2				



Physics				
	Forces	Light	Sound	Electricity
Year 3	<ul style="list-style-type: none"> <li>• Compare how things move on different surfaces</li> <li>• Notice that some forces need contact between two objects, but magnetic forces can act at a distance</li> <li>• Observe how magnets attract or repel each other and attract some materials and not others</li> <li>• 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</li> <li>• Describe magnets as having two poles</li> <li>• Predict whether two magnets will attract or repel each other, depending on which poles are facing.</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise that they need light in order to see things and that dark is the absence of light.</li> <li>• Notice that light is reflected from surfaces</li> <li>• Recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>• Recognise that shadows are formed when the light from a light source is blocked by an opaque object</li> <li>• Find patterns in the way that the size of shadows change</li> </ul>		
Year 4			<ul style="list-style-type: none"> <li>• Identify how sounds are made, associating some of them with something vibrating</li> <li>• Recognise that vibrations from sounds travel through a medium to the ear</li> <li>• Find patterns between the pitch of a sound and features of the object that produced it</li> <li>• Find patterns between the volume of a sound and the strength of the vibrations that produced it</li> <li>• Recognise that sounds get fainter as the distance from the sound source increases.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify common appliances that run on electricity</li> <li>• Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers</li> <li>• 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</li> <li>• Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit</li> <li>• Recognise some common conductors and insulators, and associate metals with being good conductors.</li> </ul>

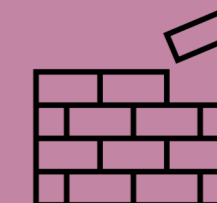


Physics				
	Forces	Light	Earth & Space	Electricity
Year 5	<ul style="list-style-type: none"> <li>• Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object</li> <li>• Identify the effects of air resistance, water resistance 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>		<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>	
Year 6		<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>		<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>

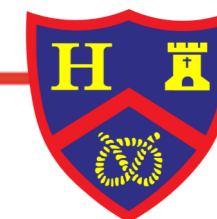


# Chemistry

**Concept: Chemistry**  
 Chemistry is all about materials  
 and how they change.

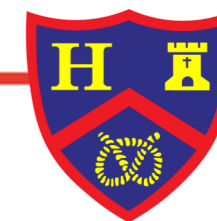


	Materials	States of Matter	Rocks and Minerals
Cubs	<ul style="list-style-type: none"> <li>Open ended play with different materials inside and outdoors. Exploring with different senses.</li> <li>Explore and respond to different natural phenomena in their setting and on trips—welly walks, tough spot opportunities.</li> </ul>		
Nursery	<ul style="list-style-type: none"> <li>Use all their senses in hands-on exploration of natural materials. Explore collections of materials with similar and/or different properties.</li> <li>Talk about the differences between materials and changes they notice.</li> </ul>		
Reception	<ul style="list-style-type: none"> <li>Explore the natural world around them</li> <li>Describe what they see, hear and feel whilst outside</li> </ul>		
Year1	<ul style="list-style-type: none"> <li>distinguish between an object and the material from which it is made</li> <li>identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>describe the simple physical properties of a variety of everyday materials</li> <li>compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>		

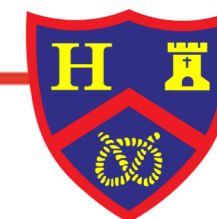


Chemistry			
	Materials	States of Matter	Rocks and Minerals
<b>YEAR 2</b>	<ul style="list-style-type: none"> <li>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</li> <li>Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>		
<b>YEAR 3</b>			<ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>Describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> <li>Recognise that soils are made from rocks and organic matter</li> </ul>
<b>YEAR 4</b>	<ul style="list-style-type: none"> <li>Compare and group materials together, according to whether they are solids, liquids or gases</li> <li>Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)</li> <li>Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.</li> </ul>		





Chemistry			
	Materials	States of Matter	Rocks and Minerals
YEAR 5	<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>		
YEAR 6			



# Working Scientifically

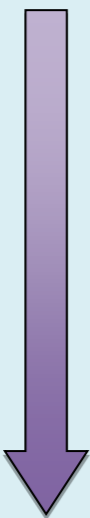
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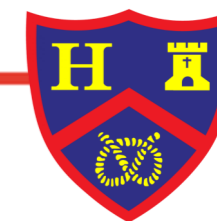
## Concept: Working Scientifically

Working scientifically is all about answering scientific questions.



### Understanding The World

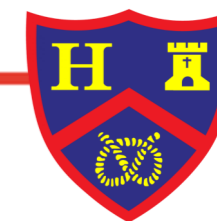
<p><b>Cubs (2-3 yrs)</b></p> <p><b>&amp;</b></p> <p><b>Nurseys (3-4 yrs)</b></p> <p>Increasing independence.</p> 	<p><b><u>Playing and Exploring</u></b></p> <ul style="list-style-type: none"> <li>Finding out and exploring</li> <li>Playing with what they know</li> <li>Being involved</li> <li>Enjoying what they do</li> <li>Shows care and concern for living things and the environment</li> </ul>	<p><b><u>Active Learning</u></b></p> <ul style="list-style-type: none"> <li>Being involved &amp; concentrating</li> <li>Keeping trying</li> <li>Enjoying and achieving what they do</li> <li>Be willing to have a go.</li> <li>Notices detailed features of objects in their environment.</li> <li>Learns that they have similarities and differences that connect them to and distinguish them from others.</li> <li>Operates mechanical toys e.g. turns the knob on a wind-up toy or pulls back on a friction car.</li> </ul>	<p><b><u>Creating and Thinking Critically</u></b></p> <ul style="list-style-type: none"> <li>Having their own ideas</li> <li>Making links</li> <li>Choosing how to do things</li> <li>Beginning to talk about some of the things he/she has observed such as plants, animals, natural and found objects</li> </ul>	<p><b><u>Creating and Thinking Critically</u></b></p> <ul style="list-style-type: none"> <li>Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.</li> <li>Starting to talk about why things happen and how things work</li> </ul>
	<b>Plan</b>	<b>Do</b>		<b>Review</b>
<p><b>Reception</b></p>	<ul style="list-style-type: none"> <li>Choose the resources they need for their chosen activities and say when they do or don't need help.</li> </ul>	<ul style="list-style-type: none"> <li>Know about similarities and differences in relation to places, objects, materials and living things.</li> <li>Make observations of animals and plants.</li> <li>Explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>Select and use technology for particular purposes</li> </ul>	<ul style="list-style-type: none"> <li>Represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories</li> <li>Being to explain and retell what they have found.</li> </ul>	<ul style="list-style-type: none"> <li>Talk about the features of their own immediate environment and how environments might vary from one another.</li> <li>Explain why some things occur and talk about changes</li> </ul>



## Working Scientifically Progression

(Equipment introduced)

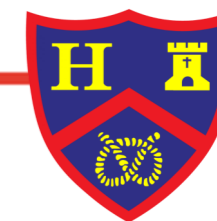
	Plan	Do		Review
<b>Year One</b>	<ul style="list-style-type: none"> <li>• Asking simple questions and recognising that they can be answered in different ways and using different types of scientific enquiries to answer them.</li> <li>- Children should be able to explore the world around them and ask simple questions. With help, they should begin to choose ways to try and answer them</li> <li>-Children should be able to make a few guided planning decisions</li> </ul>	<ul style="list-style-type: none"> <li>• Observe closely, using simple equipment</li> <li>• Perform simple tests</li> <li>- Children should be able to make observations related to the task or test. Children should be able to use hand lenses to observe.</li> <li>- Children should be able to use simple equipment such as <i>egg timers</i>.</li> <li>- Children should be able to measure using uniform non- standard units (e.g. straws or cubes)</li> </ul>	<ul style="list-style-type: none"> <li>• Gather and record data to help in answering questions</li> <li>- Children should be able to draw pictures of results/ take photos</li> <li>- Children should be able to help their teacher make a class table or chart</li> </ul>	<ul style="list-style-type: none"> <li>• Use their observations and ideas to suggest answers to questions</li> <li>- Children should be able to describe their observations</li> </ul>
<b>Year Two</b>	<ul style="list-style-type: none"> <li>• Asking simple questions and recognising that they can be answered in different ways and using different types of scientific enquiries to answer them.</li> <li>- Children should be able to recognise when a simple test is unfair</li> <li>-Children should be able to make their own suggestions on how to collect data once the data needed has been outlined</li> <li>-Children should be able to make a simple prediction if appropriate (based on something they have observed before but without an explanation)</li> </ul>	<ul style="list-style-type: none"> <li>• Observe closely, using simple equipment</li> <li>• Perform simple tests</li> <li>Children should be able to measure using simple standard units and <i>measuring equipment - meter stick, cm, kg masses, l, jugs &amp; second timer</i></li> <li>-Children should be able to compare 3 or more things</li> <li>-Children should be able to read scales to the nearest labelled division.</li> </ul>	<ul style="list-style-type: none"> <li>• Gather and record data to help in answering questions</li> <li>- Children should be able to complete a simple chart or two column table</li> <li>- Children should be able to make practical block graphs/pictograms</li> <li>- Children should be able to make/draw a block graph with a 1:1 scale</li> </ul>	<ul style="list-style-type: none"> <li>• Use their observations and ideas to suggest answers to questions</li> <li>- Children should be able to say what they have found out and say whether what happened was what they expected. Children should then be able to pose further questions to develop their investigation.</li> </ul>



## Working Scientifically Progression

(Equipment introduced)

	Plan	Do	Review	
<b>Year Three</b>	<ul style="list-style-type: none"> <li>• Ask relevant questions</li> <li>• Set up simple practical enquiries, comparative and fair tests</li> </ul> <p><i>-Children should be given a range of scientific experiences to enable them to raise their own questions.</i></p> <p><i>-Children should be able to put forward own ideas and make some planning decisions to find answers to their own questions.</i></p> <p><i>-Children should be able to choose appropriate criteria for grouping, sorting and classifying.</i></p> <p><i>- Children should be able to make simple predictions based on everyday experience and knowledge</i></p>	<ul style="list-style-type: none"> <li>• Making systematic and careful observations and where appropriate taking accurate measurements using standard units, using a range of equipment, <b>including thermometers and data loggers</b></li> </ul> <p><i>- Carry out a fair test or pattern seeking enquiry with help</i></p> <p><i>- Compare 3 or more things</i></p> <p><i>- Use simple standard measures; m, cm, mm, kg, g, minutes, seconds,</i></p> <p><i>- Measure to the nearest whole or mixed units.</i></p> <p><i>- Read scales to the nearest division labelled and unlabelled</i></p>	<ul style="list-style-type: none"> <li>• Gathering, recording, classifying and present data in a variety of ways to help in answering questions</li> <li>• Recording findings using simple scientific language, drawings, labelled diagrams, bar charts, and tables</li> </ul> <p><i>- Children should be able to construct a simple 2 column table</i></p>	<ul style="list-style-type: none"> <li>• Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions, making predictions for new values</li> <li>• Using results to draw simple conclusions and suggest improvements, and raise further questions new questions</li> <li>• Identifying differences, similarities or changes related to simple scientific ideas and processes</li> </ul> <p><i>- Children should be able to say what they have found out and give an explanation for observations and simple patterns based on everyday experience</i></p>
<b>Year Four</b>	<ul style="list-style-type: none"> <li>• Asking simple questions and recognising that they can be answered in different ways and using different types of scientific enquiries to answer them</li> </ul> <p><i>- Children should be able to suggest ways of making the test fair or if it can't be fair how they will answer it by looking for a pattern.</i></p> <p><i>- From a selection, children should be able to say what equipment is needed</i></p> <p><i>- Children should be able to suggest the type of data needed to be collected</i></p>	<ul style="list-style-type: none"> <li>• Observe closely, using simple equipment</li> <li>• Perform simple tests</li> </ul> <p><i>- Carry out a fair test or pattern seeking enquiry with help</i></p> <p><i>- Compare 3 or more things</i></p> <p><i>- Use simple standard measures; m, cm, mm, kg, g, minutes, seconds,</i></p> <p><i>- Measure to the nearest decimal place.</i></p> <p><i>- Read scales to the nearest division labelled and unlabelled</i></p>	<ul style="list-style-type: none"> <li>• Gather and record data to help in answering questions</li> </ul> <p><i>- Children should be able to draw bar charts 1:1, 1:2, 1:5 and 1:10 scale &amp; begin to plot time graphs</i></p>	<ul style="list-style-type: none"> <li>• Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions, making predictions for new values</li> <li>• Using results to draw simple conclusions and suggest improvements, and raise further questions new questions</li> <li>• Identifying differences, similarities or changes related to simple scientific ideas and processes</li> </ul> <p><i>- Children should be able to say what they have found out and predict further results based on their findings.</i></p> <p><i>- Children should be able to suggest improvements on their investigation.</i></p>



## Working Scientifically Progression

(Equipment introduced)

	Plan	Do	Review	
<b>Year Five</b>	<ul style="list-style-type: none"> <li>• Planning different types of scientific enquiries, including recognising and controlling variables where necessary to answer questions</li> </ul> <p><i>-Children should be able to ask a variety of types of scientific questions</i></p> <p><i>-Children should then be able to choose the most appropriate scientific enquiry method to answer a question and outline the method.</i></p> <p><i>-Children should be able to identify a range of different variables and begin to consider their impact on an investigation.</i></p> <p><i>- With support, children should be able to choose the most appropriate equipment to measure their desired data.</i></p>	<ul style="list-style-type: none"> <li>• Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> </ul> <p><i>- Children should be able to make a series of measurements adequate for the task</i></p> <p><i>- Children should be able to select appropriate measuring equipment</i></p> <p><i>- Children should be able to use standard measures including use of fractions and mixed units and decimals to one place.</i></p> <p><i>-Children should be able to read scales with increased accuracy</i></p>	<ul style="list-style-type: none"> <li>• Recording data and results of increasing complexity using scientific diagrams, labels, classification keys tables, scatter graphs, bar and line graphs, and models</li> </ul> <p><i>- Children should be able to present information clearly in tables including for repeat readings</i></p> <p><i>- Children should be able to record observations and measurements systematically</i></p> <p><i>-Children should be able to plot line graphs and independently use graphs developed in Year 4.</i></p>	<ul style="list-style-type: none"> <li>• Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, explanations of the degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>• Using test results to make predictions to set up further comparative &amp; fair tests</li> <li>• Identify scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p><i>- Children should be able to use graphs to spot and interpret patterns/trends in results</i></p> <p><i>- Children should be able to draw conclusions using these patterns and begin to relate conclusions to scientific knowledge and understanding consistent with the evidence</i></p> <p><i>- Children should be able to offer simple explanations for differences in repeated measurements/ observations</i></p>
<b>Year Six</b>	<ul style="list-style-type: none"> <li>• Planning different types of scientific enquiries, including recognising and controlling variables where necessary to answer questions</li> </ul> <p><i>-Children should be able to list all the equipment needed</i></p> <p><i>- Children should be able to consider alternative investigations using different variables and explain why they have chosen to complete their investigation</i></p> <p><i>-Children should be able to decide what data to collect and how much of it is needed</i></p> <p><i>- Children should be able to make predictions based on scientific knowledge</i></p>	<ul style="list-style-type: none"> <li>• Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate</li> </ul> <p><i>-Children should be able to compare 5 or more things</i></p> <p><i>- Children should be able to select apparatus and use with care</i></p> <p><i>-Children should be able to read scales with precision and accuracy appropriate to the task</i></p> <p><i>-Children should be able to identify when to repeat readings &amp; find averages</i></p>	<ul style="list-style-type: none"> <li>• Recording data and results of increasing complexity using scientific diagrams, labels, classification keys tables, scatter graphs, bar and line graphs, and models</li> </ul> <p><i>-Children should be able to draw bar graphs more complex scales possibly involving fractions or decimals e.g. 1:2.5</i></p> <p><i>- Children should be able to draw line graphs, possibly involving fractions and decimals</i></p>	<ul style="list-style-type: none"> <li>• Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of results, explanations of the degree of trust in results, in oral and written forms such as displays and other presentations</li> <li>• Using test results to make predictions to set up further comparative &amp; fair tests</li> <li>• Identify scientific evidence that has been used to support or refute ideas or arguments.</li> </ul> <p><i>- Children should be explain the validity of their results and suggest changes to increase the accuracy.</i></p> <p><i>-Children should be able to use relevant scientific language to justify their findings.</i></p> <p><i>-Children should be able to identify when further tests and observations might be needed.</i></p> <p><i>-Children should be able to recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact.</i></p>