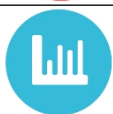


Medium Term Plan – SCIENCE – Year 6 Autumn 1 – **ANIMALS INCLUDING HUMANS**

Overarching Enquiry Question: How do our choices affect how our bodies work?

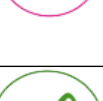
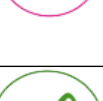
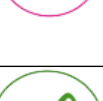
Length of unit - 6 Sessions

	Disciplinary and Substantive Knowledge	Suggested Vocabulary	Learning Sequence
Pre-learning	• The basic needs of animals for survival (water, food, air) • The importance of exercise, hygiene and a balanced diet. • Animals get nutrition from what they eat. • The skeletal and digestive systems of animals including humans.	Organ Heart Blood.	Use a model to explain the function of the human heart.
Learning in this unit	<u>To know that</u> • There are main parts of the human circulatory system and the function of the heart, blood vessels and blood. (L1, L2, L3) • There are ways in which nutrients and water are transported within animals including humans. (L4) • There is an impact of diet, exercise, drugs and lifestyle on the way bodies function. (L5, L6) <u>Working Scientifically</u> <u>To know how to</u>		<u>Learning</u> <i>The heart is an organ located to the left of your breastbone. The average heart is approximately the size of a human fist. The function of the heart is to pump blood to all parts of your body.</i>
			
			
	 <u>Setting Up Tests (L5)</u> Plan scientific enquiries, independently deciding which variable needs to be controlled.	Blood White blood cells Red blood cells Platelets Plasma	Identify and explain the structure of the blood by using a labelled diagram of a model.
	 <u>Observing and Measuring (L6)</u> Take precise measurements using a range of equipment, taking repeat readings to enhance the reliability and consistency of their measurements.		<u>Learning</u> <i>Blood transports oxygen and nutrients to all the parts of the body so they can keep working. White blood cells defend the body against infection. Red blood cells carry carbon dioxide away from tissues and back to the lungs. Platelets help blood to clot. Plasma replenishes water and absorbs excess water.</i>
	 <u>Recording Data (L2, L3)</u> Recording and present data in a wide range of formats, showing an understanding of data representation and graphical communication in a scientific context.		<u>Activities</u> WS: Use labelled diagrams to support explanation about the structure of blood. SE: Identify parts of blood and create a model to explain learning
	 <u>Interpreting and Communicating Results (L1, L4)</u> Use oral and written forms such as displays to report conclusions, casual relationships and explain the degree of trust in their results. Present their findings with a clear connection to scientific evidence, reinforcing the validity of their discoveries.	Blood vessels Arteries. Veins Oxygen	Use a scientific diagram to explain how blood vessels work.
		<u>Learning</u> <i>Blood vessels transport blood all around the body, to and from your heart. Arteries are blood vessels. Most arteries deliver blood rich in oxygen to all the parts of the body. Veins are blood vessels. Most veins return blood low in oxygen to the heart.</i>	
<u>Scientific Enquiry</u>			<u>Activities</u> WS: Use scientific diagrams to label the main blood vessels around the heart.. SE: Use a model to explore how blood vessels work.
	<u>Comparative/Fair Testing (L5)</u> Changing one variable to see its effect on another, whilst keeping all others the same.		

		<u>Research (L1, L3, L4, L6)</u> Using secondary sources of information to answer scientific questions.	Nutrients Digest Intestine Bloodstream	Use research and scientific vocabulary to explain how nutrients and water is transported around the body. Learning <i>Nutrients have different purposes and come from different foods. During digestion, your small intestine absorbs the nutrients from your food and passes them into the bloodstream.</i> Water and nutrients from food are transported in blood around the body to where they are needed.
				
				
		<u>Identifying, grouping and classifying (L2)</u> Making observations to name, sort and organise items.		
Book/ Science Capital	Santorio Santorio Dr Kat Dibb Biomedical Scientist Dwain Chambers			Activities <i>WS: Explain how and why nutrients and water pass through the body. SE: Use research and scientific vocabulary to support my explanations.</i>
			Heart rate Exercise. Circulation.	Plan a comparative test and record my results to calculate my heart recovery rate. Learning <i>Heart recovery rate is the time it takes for your pulse to return to normal rates after exercise. Your heart rate is how many times your heart beats each minute. During exercise, your heart beats faster so that more blood circulates around your body delivering oxygen.</i> Exercise strengthens your heart and improves your circulation.
Resources	• Jars • 2 x straws per group • Balloons • Water • Red food colouring • Post it notes • String, blu tac/plasticine, metre ruler, long strips of paper, elastic band, thread. • Marshmallows of different sizes, honey hoops/cheerios, fizzy balls, fluffy balls, raisins, water, red food colouring, oil, (optional) mints yellow food colouring. (Other items you may find useful), bottle or zip lock bag. • White plate, skittles, water (jelly sweets) optional. • Golden syrup, water, corn flour, red food colouring, tissue, coco powder. • Jar/beaker, card with hole in, red, white and blue hole punched paper, cotton wool. • Stethoscopes (optional) • Stopwatch Pulse metres or data loggers if you have them.			Activities <i>WS: Record results of a heart recovery rate investigation. SE: Plan a comparative test to investigate heart recovery rate.</i>
			Nicotine Addictive Drug Lungs	Research and observe what happens to your heart when a person smokes and present my findings. Learning <i>Nicotine is a highly addictive drug found in tobacco.</i> Smoking can make it more difficult for blood to move around the body and deliver oxygen to the muscles. <i>Smoking can lead to a number of diseases, including heart and lung disease.</i> <i>Vaping is considered to be less harmful than smoking, but still not safe.</i> Activities <i>WS: Observe what happens when you smoke using a model. SE: Use research into what happens to your heart when you smoke to support the presentation of my ideas.</i>

Overarching Enquiry Question: How and why have living things changed over time?

Length of unit - 6 Sessions

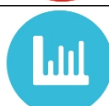
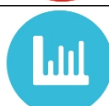
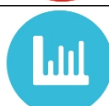
	Disciplinary and Substantive Knowledge	Suggested Vocabulary	Learning Sequence														
Pre-learning	• Classification of animals (vertebrate and invertebrate groups) • Animals have offspring which grow into adults. • Living things breed to produce offspring which grow into adults. • The role of Mary Anning in palaeontology and the discovery of fossils.	Fossils	Explain how fossils provide scientific evidence about things that lived on Earth in the past. Learning <i>Fossils are imprints of long dead plants and animals found in rocks. They are important because they were formed many millions of years ago. This means they can tell us how plants and animals on earth used to look. Fossils are good evidence for evolution because they show that living things have changed over time.</i> Activities <i>WS: Use ideas from secondary sources to support my explanations of the process of fossilisation.</i> <i>SE: Research how fossils are formed using secondary sources.</i>														
Learning in this unit	<u>To know that</u> • Living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago (L1) • Living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents (L2, L5) • Animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. (L3, L4) <u>Working Scientifically</u> <u>To know how to</u> <table><tr><td></td><td><u>Asking Questions (L2)</u> Raise questions to further prove or disprove a scientific enquiry.</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td><u>Recording Data (L3, L4)</u> Recording and present data in a wide range of formats, showing an understanding of data representation and graphical communication in a scientific context.</td></tr><tr><td></td><td><u>Interpreting and Communicating Results (L1, L5, L6)</u> Use oral and written forms such as displays to report conclusions, casual relationships and explain the degree of trust in their results. Present their findings with a clear connection to scientific evidence, reinforcing the validity of their discoveries.</td></tr><tr><td></td><td></td></tr></table>		<u>Asking Questions (L2)</u> Raise questions to further prove or disprove a scientific enquiry.								<u>Recording Data (L3, L4)</u> Recording and present data in a wide range of formats, showing an understanding of data representation and graphical communication in a scientific context.		<u>Interpreting and Communicating Results (L1, L5, L6)</u> Use oral and written forms such as displays to report conclusions, casual relationships and explain the degree of trust in their results. Present their findings with a clear connection to scientific evidence, reinforcing the validity of their discoveries.			Charles Darwin Natural Selection Adaptation Offspring Survive Reproduce Charles Darwin Ask questions and research answers related to Darwin's theory of natural selection. Learning <i>Charles Darwin proposed the theory of natural selection. Natural selection refers to the way nature 'selects' the animals or plants with traits that make them better suited to their environment. These organisms have a better chance of staying alive and reproducing, therefore passing on their traits to the next generation. Over time, natural selection results in evolution</i> Activities <i>WS: Raise questions about Darwin's theory of natural selection.</i> <i>SE: Research answers to my questions and explain findings using scientific knowledge and understanding.</i>	Research and present a living thing that has evolved over time Learning <i>Evolution is the process by which living things can gradually change over time.</i> The huge variety of living things in the world today is the result of evolution over time. The theory of evolution has been proven through evidence from fossils as well as living animals and plants. Activities
		<u>Asking Questions (L2)</u> Raise questions to further prove or disprove a scientific enquiry.															
																	
																	
																	
		<u>Recording Data (L3, L4)</u> Recording and present data in a wide range of formats, showing an understanding of data representation and graphical communication in a scientific context.															
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	Research (L1, L2, L4, L6) Using secondary sources of information to answer scientific questions.												
													
	Pattern-seeking (L5) Identifying patterns and looking for relationships in enquiries where variables are difficult to control.												
	Identifying, grouping and classifying (L3) Making observations to name, sort and organise items.												
		Adapted Environment Habitat	Classify different types of adaptations and explain how and why a plant has adapted to its environment. Learning <i>Plants have special features, or adaptations, that help them to survive, live and grow in their habitats. Adaptations are passed from one generation of a species to another. Many plants have adaptations to help them successfully reproduce. Some plants have adaptations that protect them from being eaten.</i> Activities WS: Identify and label a plant and its adaptations. SE: Classify plant adaptations into either adaptations of structure, function or behaviour.										
Book/ Science Capital	Charles Darwin Palaeontologist The Molliebird	Predator Adaptation	Use scientific diagrams and explanations to explain how an animal has adapted to its environment. Learning <i>Animals have special features, or adaptations, that help them to survive in their habitats. Adaptations are passed from one generation of a species to another. Many different animals have adaptations that protect them from predators.</i> Activities WS: Use scientific diagrams and labels to explain how an animal has adapted to its environment SE: Present findings from research on how an animal has adapted to its environment.										
Resources	• Trundle wheel, Metre stick, Selection of fossils., Magnifying glasses, Tupperware container, Plasticine, Shells, Plaster of Paris, Water • Bread, shells, sweets, Chopsticks, Tweezers, Raisons, Sunflower seeds, Two bowls, Stopwatch • Molliebird Book by Jules Pottle • Raisons and Smarties mixed in a bowl. • Large paper, Coloured pens • iPad / tablet or camera for stop motion and computer software • Coloured wool. Post it notes.												
		Inherited Characteristics	Spot patterns in inheritance by interpreting a family tree of genetics. Learning <i>When living things reproduce, they pass on characteristics to their offspring. This is known as inheritance. All living things produce offspring of the same kind, but normally offspring are not identical to their parents; there are variations that make them different.</i> Activities WS: Observe similarities and differences in parents and offspring to identify inheritance and variation. SE: Look for patterns and differences in parents and offspring when identifying inheritance and variation.										

Overarching Enquiry Question: In what ways can we sort living things?

Length of unit - 6 Sessions

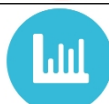
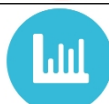
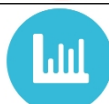
	Disciplinary and Substantive Knowledge	Suggested Vocabulary	Learning Sequence
Pre-learning	- Group animals according to what they eat - Explore and compare the differences between things that are living, dead, and things that have never been alive - Living things can be grouped in a variety of ways - Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment	Observable Characteristic	Classify animals based on their observable characteristics and record this in a table. Learning Anything can be observed and compared to another thing, based on similarities and differences. Observable characteristics are properties about things that we can describe using five senses. Comparing and grouping living things can help us identify them. Activities WS: Record observed characteristics in a table SE: Sort animals based on their observable characteristics.
Learning in this unit	<u>To know that</u> - Living things are classified into broad groups according to common observable characteristics and based on similarities and differences including micro-organisms, plants and animals. (L1, L2, L3, L4) - There are reasons for classifying plants and animals based on specific characteristics. (L1, L2, L3, L4, L5, L6) <u>Working Scientifically</u> <u>To know how to</u>		
	 Asking Questions (L2, L3) Raise questions to further prove or disprove a scientific enquiry.		
	 Making Predictions (L6) Make informed predictions for subsequent experiments by analysing data from initial tests and identifying trends.	Classify Identify Vertebrate Invertebrate Classification key	Create my own classification key based on the characteristics of animals. Learning Scientists group animals to make it easier to identify, name and learn about them. Animals can be divided into groups or 'classified' by looking at the similarities and differences between them. Animals are divided into two main groups: vertebrates and invertebrates. Activities WS: Produce a classification key by posing questions. SE: Classify and sort minibeasts using classification keys.
			
			
	 Recording Data (L1, L4) Recording and present data in a wide range of formats, showing an understanding of data representation and graphical communication in a scientific context.		
			
		Classify Flowering Non-flowering Seeds Spores Classification key	Create my own classification key based on the characteristics of plants. Learning Scientists group plants to make it easier to identify, name and learn about them. Plants can be divided into groups or 'classified' by looking at the similarities and differences between them. Generally, plant life can be broken up into flowering plants and non-flowering plants. Activities WS: Produce a classification key by posing questions.

	Scientific Enquiry		SE: Classify and sort plants using classification keys.										
	<table><tr><td></td><td></td></tr><tr><td></td><td>Research (L4, L5, L6) Using secondary sources of information to answer scientific questions.</td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td>Identifying, grouping and classifying (L1, L2, L3) Making observations to name, sort and organise items.</td></tr></table>				Research (L4, L5, L6) Using secondary sources of information to answer scientific questions.						Identifying, grouping and classifying (L1, L2, L3) Making observations to name, sort and organise items.	Micro-organism Bacteria. Virus Fungi	Research uses of microorganisms and decide whether they are helpful or harmful. Learning Scientists group micro-organisms to make it easier to identify, name and learn about them. There are different groups of micro-organisms such as viruses, bacteria and fungi, with different structures and shapes. Micro-organisms can be harmful or helpful. Activities WS: Record ways in which microorganisms can be helpful or harmful. SE: Research the uses of different microorganisms.
													
	Research (L4, L5, L6) Using secondary sources of information to answer scientific questions.												
													
													
	Identifying, grouping and classifying (L1, L2, L3) Making observations to name, sort and organise items.												
Book/ Science Capital	Steve Irwin, Aristotle Carl Linnaeus Edward Jenner Alexander Fleming	Organism Taxonomy Carl Linnaeus	Ask questions and complete my own research to classify animals using the Linnaeus system. Learning <i>Taxonomy is the science of naming, describing and grouping all living things. Scientists have improved classification of organisms over time as they've been able to make more accurate observations.</i> Carl Linnaeus is famous for creating a system of naming living things. Activities WS: Raise questions about animals to classify them. SE: Research the specific classifications of animals using the Linnaeus system.										
Resources	• Range of leaves or leaf pictures in resources. • Whiteboards and pens • IT • Range of foods which decay quickly e.g., Bread, bananas, tomatoes, oranges, mushroom, peach. (1 piece per group) • Zip lock bags. • 1 ½ packets active dry yeast • 1 cup cold water, 1 cup warm water (40-45°C), 1 cup boiling water • 12 teaspoons sugar • 3 balloons • 3 test tubes • Bread making ingredients: 100g strong white bread flour, ½ tsp dried, fast acting yeast, Pinch of salt, Pinch of sugar, 60ml lukewarm water	Taxonomist Species	Predict the correct name for an organism by researching binomial names. Learning <i>New species must be described in detail, including which features make it similar and different to close relatives.</i> Species are always identified by both a generic name and a species name. <i>Species names are written in Latin, but many species names are based on words from other languages and are Latinized.</i> Activities WS: Predict which binominal names could be given to an organism. SE: Research the binomial names for different species										

Overarching Enquiry Question: How are we able to see?

Length of unit - 6 Sessions

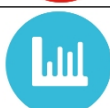
	Disciplinary and Substantive Knowledge	Suggested Vocabulary	Learning Sequence	
Pre-learning	• Certain things produce light, usually by burning (e.g., The Sun) or electricity (e.g., Street lights) • Shiny materials do not make light but do reflect it. • Shadows are caused when certain materials block light. • Light travels in straight lines. When light is blocked by an opaque object, a dark shadow is formed. • The further away the light source is, the smaller the shadow is. The closer the source of the light, the bigger the shadow	Light Source Straight line	Use a scientific model with labels to explain how light reflects from surfaces in straight lines. Learning We need light to be able to see things. Light travels out from a source of light in all directions. Light travels in straight lines. Scientists use diagrams to show light travelling in straight lines. Activities WS: Use scientific diagrams and models to demonstrate how light travels SE: Look for patterns in how light travels.	
Learning in this unit	To know that			
	• Light appears to travel in straight lines. (L1) • Objects are seen because they give out or reflect light into the eye, using the idea that light travels in straight lines. (L2, L3) • We see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. (L2, L3) • Shadows have the same shape as the objects that cast them, using the idea that light travels in straight lines to explain why. (L4, L5, L6)			
	Working Scientifically			
	To know how to			
				
		Making Predictions (L4, L6) Make informed predictions for subsequent experiments by analysing data from initial tests and identifying trends.	Pupil	Use scientific diagrams and models to demonstrate how we see. Learning We need light to see things. We see things when light enters the eye. The pupil of the eye is an opening that allows light to enter the eye. Activities WS: Use scientific diagrams to demonstrate how we see SE: Use a model to explain how we see things.
		Setting Up Tests (L5) Plan scientific enquiries, independently deciding which variable needs to be controlled.		
				
	Recording Data (L5) Recording and present data in a wide range of formats, showing an understanding of data representation and graphical communication in a scientific context.	Light source Reflect Surface Light ray	Research and make a periscope model to change the direction of light. Learning Reflection is when light travels towards a surface and bounces off it. When light is reflected off the surface of an object, it changes direction. Mirrors are sometimes used to deliberately change the direction of a beam of light. Activities WS: Evaluate my periscope. SE: Use subject knowledge and research of how light travels to make a periscope	
	Interpreting and Communicating Results (L1 L2) Use oral and written forms such as displays to report conclusions, casual relationships and explain the degree of trust in their results. Present their findings with a clear connection to scientific evidence, reinforcing the validity of their discoveries.			
	Evaluating (L3) Evaluate their choice of method, the control of variables, the precision and accuracy of measurements and the credibility of secondary sources.	Shadow Opaque	Predict the size, shape and colour of a shadow by seeking patterns in the features of objects.	

	<u>Scientific Enquiry</u> <table><tr><td></td><td></td></tr><tr><td></td><td><u>Research (L2, L3, L5)</u> Using secondary sources of information to answer scientific questions.</td></tr><tr><td></td><td></td></tr><tr><td></td><td><u>Pattern-seeking (L1, L4, L6)</u> Identifying patterns and looking for relationships in enquiries where variables are difficult to control.</td></tr><tr><td></td><td><u>Identifying, grouping and classifying (L)</u> Making observations to name, sort and organise items.</td></tr></table>				<u>Research (L2, L3, L5)</u> Using secondary sources of information to answer scientific questions.				<u>Pattern-seeking (L1, L4, L6)</u> Identifying patterns and looking for relationships in enquiries where variables are difficult to control.		<u>Identifying, grouping and classifying (L)</u> Making observations to name, sort and organise items.	Learning <i>A shadow is a dark shape formed when light is stopped or blocked by an object.</i> <i>Opaque objects do not allow light to travel through them.</i> <i>Translucent objects let some light through.</i> <i>A shadow can be different sizes depending on the distance of the object from the light source.</i> <i>Shadows of objects are not the same as reflections of them.</i> Activities WS: Predict the size, shape, colour and features of shadows. SE: Look for patterns in the features of an object and the shadow it creates.
												
	<u>Research (L2, L3, L5)</u> Using secondary sources of information to answer scientific questions.											
												
	<u>Pattern-seeking (L1, L4, L6)</u> Identifying patterns and looking for relationships in enquiries where variables are difficult to control.											
	<u>Identifying, grouping and classifying (L)</u> Making observations to name, sort and organise items.											
		Shadow Opaque Light rays Outline Research and record the shapes of shadows Learning <i>A shadow is formed when an object blocks light travelling from a light source.</i> <i>Scientific diagrams can help us to understand shadows.</i> <i>The shape of a shadow depends on the shape of the object blocking the light.</i> <i>Because light travels in straight lines, the shape of the shadow will be the same as the outline shape of the object.</i> Activities WS: Record the shapes of shadows. SE: Research the shapes of shadows.										
		Light source Cast Investigate the number of shadows that can be cast by an object. Learning <i>When more than one light is used, more than one shadow can be cast by one object.</i> Activities WS: Predict how many shadows a different number of light sources can cast. SE: Look for patterns in the number of light sources and the number of shadows.										
Book/ Science Capital	Optician											
Resources	• Shoe box covered in black paper or dark cupboard/room. • A timer of some kind – egg timer or stopwatch • Torches, mirrors and reflective materials. • Card for periscopes. • Mirrors • Toy, string, torch per group. • Cardboard • Scissors • Masking tape. • Acetate. • Blue light, red light, green light, pencil, whiteboard/wall. • Cup, pencil, water per pair/group. • Paper, pens, cup, water. • 1p coin, glass, water • Plastic bottles, pens, scissors, water. • Prisms, torches. • Container, mirror, blutack, water, torch. • Spray bottle or hose pipe											

Overarching Enquiry Question: Can we control and vary the effects of electricity?

Length of unit - 4 Sessions

	Disciplinary and Substantive Knowledge	Suggested Vocabulary	Learning Sequence	
Pre-learning	- Electricity is a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices. - Sources of light and sound may need electricity to work. - Where electricity comes from - Which appliances need electricity - What a circuit is, the components of a circuit and how it works. - What electrical conductors and insulators are. - What happens when a switch is added to a circuit.	Circuit Component Cell . Battery	Build and test a range of simple circuits using common components. Learning The basic elements of an electrical circuit are called components. A complete electrical circuit is made when all components are connected together correctly. The flow of electricity is pushed by the cell or battery, through the wires to the other components in the circuit. Activities WS: Raise questions to investigate. SE: Research answers to questions raised.	
Learning in this unit	To know that			
	- The reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. (L2, L3, L4) - The brightness of a lamp or the volume of a buzzer is associated with the number and voltage of cells used in the circuit. (L2, L3, L4) - There are recognised symbols when representing a simple circuit in a diagram. (L1, L2)			
	Working Scientifically			
	To know how to			
		Asking Questions (L1) Raise questions to further prove or disprove a scientific enquiry.	Circuit symbol Circuit diagram	Use the correct scientific symbols in a circuit drawing. Learning Circuit symbols are small images that represent different electrical components. Circuit diagrams show how the components in a circuit are connected together. Activities WS: Use scientific diagrams and labels accurately. SE: Identify different electrical components.
		Making Predictions (L3) Make informed predictions for subsequent experiments by analysing data from initial tests and identifying trends.		
		Setting Up Tests (L4, L5) Plan scientific enquiries, independently deciding which variable needs to be controlled.		
				
				
	Interpreting and Communicating Results (L2) Use oral and written forms such as displays to report conclusions, casual relationships and explain the degree of trust in their results. Present their findings with a clear connection to scientific evidence, reinforcing the validity of their discoveries.	Decibel Voltage	Predict and test how to change the volume of buzzers in a circuit. Learning Increasing the number and voltage of batteries increases the electrical push they provide. Sensors and data loggers can be used to make and record accurate measurements of light and sound. Scientists evaluate results to compare what was expected to what actually happened.	
	Evaluating (L6) Evaluate their choice of method, the control of variables, the precision and accuracy of measurements and the credibility of secondary sources.		Activities WS: Predict how to change the volume of a buzzer. SE: Test predictions	
	Scientific Enquiry			

		<u>Comparative/Fair Testing (L3, L4, L5)</u> Changing one variable to see its effect on another, whilst keeping all others the same.	Circuit Brightness Variable	Plan an enquiry to investigate and explain how voltage affects the brightness of a bulb in a circuit (over two sessions) Learning Adding other components to the circuit may affect the brightness of a bulb. Equipment such as a light sensor and data logger can be used to measure bulb brightness Adding bulbs means that voltage is equally distributed among them all, so bulbs will be dimmer. A bulb will be the same brightness wherever you place it in a circuit.. Activities WS: Predict, measure and communicate results in an enquiry. SE: Carry out a fair test and understand which variables are being changed.
		<u>Research (L1, L6)</u> Using secondary sources of information to answer scientific questions.		
				
				
		<u>Identifying, grouping and classifying (L2)</u> Making observations to name, sort and organise items.		
				Research and design a functioning electronic game and use a labelled diagram to explain my choices. Learning Children to apply their learning from this topic. Activities WS: Evaluate the effectiveness of my game. SE: Research different ways to apply our electronic knowledge.
Book/ Science Capital	The Boy Who Invented TV Alessandro Volta Michael Faraday Henri Becquerel			
Resources	- Batteries, Bulbs, Bulb holder, wires, Switch, motors. - Energy stick or energy ball. (Optional) - Batteries, Wires, Switch, lamps, Data logger/light sensor/iPad with lux app or equivalent, Ruler - Digital clock, 2 lemons per group, wires, things to try as electrodes e.g., Nails, paperclips, pennies. (You can use an LED light instead of a clock) - Other fruits/veg e.g., Potatoes, limes, oranges etc to test. - Batteries, buzzers, switch, wires. - Craft materials e.g., card, paper, pens.			