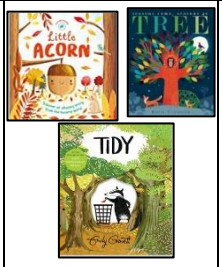
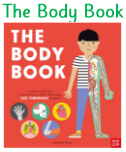
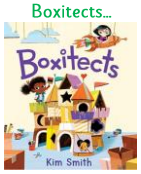
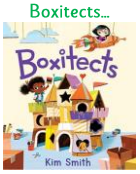
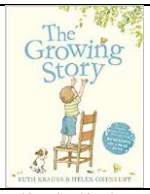
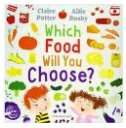
Science Long Term Plan- EYFS

	What makes me, me?	Is there a Rumble in the Jungle?	Who can help us?	Was it happily ever after?	What is lurking at the bottom of the garden?	Where can we travel?
Objectives	Understand the effect of changing seasons on the natural world around them. Describe what they see, hear and feel whilst outside. Develop an understanding of seasonal changes and Autumn. Develop an understanding of Harvest and what this means to farmers and our food industry.	Continue to discuss seasonal changes: Children go on an Autumn walk and collect signs of autumn which they have previously learnt Develop an understanding of how our actions as humans are threatening wildlife and how to look after the environment	Understand the effect of changing seasons on the natural world around them. Develop an understanding of seasonal changes involved in Winter. Participate in a winter walk and discus plants / evergreens and animals that children my see Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter Discus how ice changes and why this happens. Visit from the Teddy Bear Hospital	Understand the effect of changing seasons on the natural world around them. Develop an understanding of seasonal changes involved in spring. Participate in spring walk and collect evidence of new life!	Explore the natural world around them, making observations and drawing pictures of animals and plants. Discus mini beast life cycles and habitats. Make mini beats homes and discus why certain creatures need different environments.	Understand the effect of changing seasons on the natural world around them. Develop an understanding of seasonal changes involved in summer. What do children need to remember in order to look after their body? Keep themselves cool? Discus how to look after our environment and the sea.
End Points/ ELGs	I show care and concern for living things and the environment. I understand processes and changes in the natural world - seasons and changes in states and matter. ELG- 1) Explore the natural world around them, making observations and drawing pictures of animals and plants. 2) Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. 3) Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.					
Key Texts						
Enhancements	Autumn Walk	Introduce David Attenborough during story time and the theme of environmental change. Winter Walk	Influential community person (paramedic). Teddy Bear Hospital Spring Walk	The Green Moon Visit	Influential community person (local gardener) e.g Halton in Bloom. The Farm Tour/ Gruffalo Hunt Temple Newsam	Summer Walk
Working Scientifically	 Make observations of plants and animals and explain why some things occur. Seasonal change.	 Group objects by colour, size and shape.	 Look at similarities, differences in relation to places, objects, materials and living things.			
	 Look at similarities, differences, patterns and change in relation to places, objects, materials and living things.	 Use a range of age-appropriate non-fiction texts.				

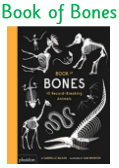
Science Long Term Plan- Year 1

	What is it like to live in Leeds?	How are our toys different to our grandparents?	Where in the world do we live?	Why did the Great Fire of London spread?	Can animals live in extreme climates?	What was life like in Temple Newsam House?
	Everyday Materials	Using Our Senses	Looking at Animals	Everyday Materials	Plant Detectives	Looking at Animals
Objectives	Lessons 1, 2, 3, 4 identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock	Lessons 1, 2, 3, 4, 5, 6 & E1 Identify, name, draw and label basic parts of the human body and say which part of the body is associated with each sense	Lessons 1, 2, 3, 4 & 7 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)	(Revisit): Lessons 5, 7, 6, 10 & E1 describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties distinguish between an object and the material from which it is made	Lessons 1, 2, 3, 4, 5 identify and name a variety of common wild and garden plants, including deciduous and evergreen trees identify and describe the basic structure of a variety of common flowering plants, including trees	(Revisit): Lessons 6, E1 & E4 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores
	OCW: Plants Lesson 1 & 2 observe changes across the 4 seasons OCW: Animal Antics Lesson 1 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals OCW: Sensing Seasons (Link with using our senses module) Lessons 2 & 3 observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies		OCW: Plants Lessons 3, 4 observe changes across the 4 seasons identify and describe the basic structure of a variety of common flowering plants, including trees OCW: Animal antics Lesson 2 identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals OCW: Sensing seasons Lesson 4 observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies		OCW: Plants Revisit Lessons 3 & 4, teach Lesson 5 observe changes across the 4 seasons identify and describe the basic structure of a variety of common flowering plants, including trees OCW: Sensing seasons Revisit Lessons 2 & 3 observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies	
End Points	I can compare and group together a variety of everyday materials on the basis of their simple physical properties.	I can Identify, name, draw and label basic parts of the human body and say which part of the body is associated with each sense	I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).	I can compare and group together a variety of everyday materials on the basis of their simple physical properties.	I can identify and describe the basic structure of a variety of common flowering plants, including trees.	I can describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).
Key Texts	Space Tortoise 	The Body Book 	Lots- The Diversity of Life on Earth 	Space Tortoise 	What did the tree see? 	Lots- The Diversity of Life on Earth 
Enhancement	Chales Mackintosh Standing on the Shoulders of Giants		Meet the Creature Workshop Dr Sandeun Lek Chailert		Tropical World, Roundhay	Maria Sibylla Merian
Working Scientifically	 • Use their own senses to describe. • Talk about what they have found out and how they found out. • Observe closely with support and scaffolding, using simple equipment. • Notice patterns and relationships in observations independently.		 • Describe how to identify and group familiar objects, biological beings or physical/chemical states.		 • Notice patterns and relationships in their observations. • Make predictions around 'what might happen next.'	
	 • Ask simple questions and recognise that they can be answered in different ways. • With help, record in a range of ways and begin to use simple scientific language.		 • Use observations to compare and contrast at first hand or through videos and photographs. • Suggest answers to questions from own knowledge.			

Science Long Term Plan- Year 2

	What makes our local area special?	Would I have had fun growing up in Leeds?	What will we discover on our African adventure?	What can we learn from Anning and Attenborough?	What makes Yorkshire unique?	What makes Leeds' West Indian Carnival so special?
	The Apprentice Gardener	Materials: Good Choices	Materials: Shaping Up	What is in your habitat?	Growing up	Take Care The Apprentice Gardener
Objectives	Lessons 1, 2, 3, 4, 5, 6, 7, 8 Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	Lessons 1, 3, 4, 5, 6, 7 Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard, for particular uses.	Lessons 1, 2, 3, 4 Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard, for particular uses.	Lessons 1, 2, 3 Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. To explore and compare the differences between things that are living, things that are dead and things that have never been alive. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.	Lessons 1, 2, 3, 4 Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). Notice that animals, including humans, have offspring which grow into adults.	**Take care** Lessons 1, 2, 3, 4 Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. **The Apprentice Gardener** Lessons 9 & 10 Observe and describe how seeds and bulbs grow into mature plants. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.
	OCW: Lessons 1, 2, 3 Identify and name a variety of plants and animals in their habitats, including microhabitats. Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.		OCW: (teach with **What is in your habitat?**) Lessons 5 & 6 Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. Observe and describe how seeds and bulbs grow into mature plants.		OCW: Lessons 6 & 7 Observe and describe how seeds and bulbs grow into mature plants. OCW: (teach with **Growing up**) Lesson 4 Notice that animals, including humans, have offspring which grow into adults.	
End Points	I can find out, and describe, how plants need water, light and a suitable temperature to grow and stay healthy.	I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	I can identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.	I can identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.	I can find out about, and describe, the basic needs of animals, including humans, for survival (water, food and air).	I can find out, and describe, how plants need water, light and a suitable temperature to grow and stay healthy.
Key Texts	From tiny seeds… 	Boxitects… 	Boxitects… 	I am the seed that grew the tree.. 		Which food will you choose? 
Enhancements	Marie Clark Taylor	**John Dunlop** Standing on the Shoulders of Giants		**Yorkshire Wildlife Park Visit**	Katalin Kariko	**Visit from a community nurse**
Working Scientifically		Observe closely, using simple equipment. Record in a range of ways and begin to use simple scientific language. Notice patterns and relationships in their observations independently and use these to create a new enquiry.		Identifying and classifying groups of biological/ chemical/physical materials independently.		Undertake simple tests where they have been given the opportunity to select factors to change. Answer questions using data. Communicate what they have found out and how they found out. Evaluate their enquiry- do they know the answer?
		Make tables and charts to help display data. Secondary sources.		Gather and record data to suggest answers to their questions. Research simple secondary sources to find answers. Take measurements.		

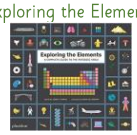
Science Long Term Plan- Year 3/4 Cycle 2

	What makes the UK unique?	Who were the first people in Britain?	Why does Italy shake and roar?	What was the greatest achievement of Ancient Egypt?	What's it like to live beside the seaside?	Who lived it Whitby Abbey?
	Amazing Bodies	The Power of Forces	Rock Detectives	Can you see me?	How does your garden grow?	How does your garden grow?
Objectives	Lessons 2, 3, 4, 6, 7, 8 Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Identify that humans and some animals have skeletons and muscles for support, protection and movement.	Lessons 1, 2, 3, 4, 5, 6, 7 Notice that some forces need contact between two objects, but magnetic forces can act at a distance. Compare how things move on different surfaces. 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. Observe how magnets attract or repel each other and attract some materials and not others. Describe magnets as having two poles. Predict whether two magnets will attract or repel each other, depending on which poles are facing.	Lessons 1, 2, 3, 6, 7, 9, 10 Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. Recognise that soils are made from rocks and organic material. Describe in simple terms how fossils are formed when things that have lived are trapped within rock.	Lessons 1, 2, 3, 5, 6, 7, EL2 Recognise that we need light in order to see things and that dark is the absence of light. Notice that light is reflected from surfaces. Recognise that shadows are formed when the light from a light source is blocked by a solid (opaque) object. Find patterns in the way that the size of shadows change. Recognise that light from the sun can be dangerous and that there are ways to protect their eyes	Lessons 1, 2, 3, 4, 5, 6 Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Investigate the way in which water is transported within plants. explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant	(Revisit) Lessons 7, 8, 9, 10, 11, 12 Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers.
	OCW: Lessons 1, 2 and 3 twice this term all together in one lesson Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. OCW: Lesson 4 once this term Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. OCW: Lesson 5 in early September Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.		OCW: Lessons 1, 2 and 3 twice this term all together in one lesson Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. OCW: Lesson 4 once this term Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. OCW: Lesson 5 in early Spring Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.		OCW: Lessons 1, 2 and 3 twice this term all together in one lesson Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. OCW: Lesson 4 once this term Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. OCW: Lesson 5 twice in Summer Explore the part flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	
End Points	I can identify that humans and some other animals have skeletons and muscles for support, protection and movement.	I can 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.	I can compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.	I recognise that shadows are formed when the light from a light source is blocked by an opaque object.	I can identify and describe the functions of different parts of plants; roots, stem, leaves and flowers.	I can identify and describe the functions of different parts of plants; roots, stem, leaves and flowers.
Key Texts	Book of Bones 	Oscar and the Cricket 	Under your feet 	The King who banned the dark 	Everything you need for a treehouse 	
Enhancements		John McAdam Standing on the Shoulders of Giants	Mary Anning Standing on the Shoulders of Giants		Jagadish Chandra Bose	
Working Scientifically	 Write about what has been found out. Form decisions about what observations to make and how long to make them for.  Ask unprompted questions about what is observed Decide which types of scientific enquiry are likely to be the best ways of answering questions posed		 Discuss the criteria for grouping, sorting and classifying.  Identify how these properties make a scientific concept useful, Testing and develop ideas about everyday phenomena and the relationships between living things and familiar environments with the use of secondary resources.		 Use standard units in testing to keep outcomes in the same measure. Explore the strengths of their own enquiry. Identify how a scientific concept's properties could be used creatively.	

Science Long Term Plan- Year 3/4 Cycle 1

	What will we discover on our European adventure?	How did the Romans change Britain?	Is water a friend or foe?	What is the legacy of the Ancient Greeks?	Is a mountain a good place to live?	Did the Ancient Civilisations settle in Leeds?
	Where does all that food go?	Good Vibrations	In a State	Switched On	Where does all that food go? Who am I?	Human Impact In a State
Objectives	Lessons 2, 8, 9, 3, 4 Describe the simple functions of the basic parts of the digestive system in humans. Identify the different types of teeth in humans and their simple functions.	Lessons 1, 2, 3, 4, 5, 6, 7 Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the volume of a sound and the strength of the vibrations that produced it. Recognise that sounds get fainter as the distance from the sound source increases.	Lessons 1, 2, 3, 4, 5, 7, 8 (teach 7 & 8 together) 9 Compare and group materials together according to whether they are solids, liquids or gases. 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. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Lessons 1, 2, 3, 4, 5, 6 Identify common appliances that run on electricity. Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wire, bulbs, switches and buzzers. Identify whether or not a lamp will light in a simple series circuit, based on whether a lamp is part of a complete loop with a battery. Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators and associate metals with being good conductors.	**Where does all that food go?** (Revisit) (Teach with **Who am I?**) Lessons 6, 7 Construct and interpret a variety of food chains, identifying producers, predators and prey. **Who am I?** Lessons 1, 2, 3, 4 Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment. Recognise that living things can be grouped in a variety of ways.	**Human impact** Lessons 1, 2, 3, 4, 5 Recognise that environments can change and that these changes can sometimes pose dangers to living things. **In a state** (Revisit) (teach with **Human impact**) Lessons 10, 11 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. Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
	OCW: Lesson 1 Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.		OCW: Lesson 2 Do in early January Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.		OCW: Lesson 3 Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	
End Points	I can describe the simple functions of the basic parts of the digestive system in humans.	I recognise that vibrations from sounds travel through a medium to the ear.	I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	I can construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.	I can explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	I can identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
Key Texts	Gut Garden 	Clang 	Rhythm of the Rain 		Gut Garden  What's for dinner? 	Rhythm of the Rain 
Enhancements		James West	River Study, Nell Bank Canal River Trust Visitor Spencer Silver Standing on the Shoulders of Giants			Dr Jane Goodall Standing on the Shoulders of Giants
Working Scientifically	 Help to make decisions about the type of simple equipment that might be used. Learn how to use new equipment appropriately.			Use and design simple keys.		Recognise when a simple fair test is necessary. Collect data from their own observations and measurements and consider whether it is useful or right. Identify new questions arising from the data, making predictions for new values within or beyond the data collected. Find ways of improving what they have already done to solve an enquiry.
	 Raise questions independently Record in notes, drawings, labelled diagrams, bar charts and simple tables so that patterns are clear.			Recognise when and how secondary sources might help to answer questions that cannot be answered through practical investigations.		

Science Long Term Plan- Year 5

	What does Earth look like from space?	What did the Anglo-Saxons and Vikings leave behind?	What are the biomes of the world?	How did the Industrial Revolution change Leeds?	What is life like in the Amazon rainforest?	How has equality changed in the last 100 years?
	The Earth and Beyond	Get Sorted Everyday Materials	Feel the Force	Circle of Life Reproduction in Plants and Animals	Reproduction in Plants and Animals	Marvellous Mixtures Materials: All Change!
Objectives	Lessons 1, 2, 3, 6, 8 Describe the movement of the Earth, and other planets, relative to the Sun in the Solar System. Use the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. Describe the movement of the Moon relative to the Earth.	**Get sorted** Lessons 1, 2, 3, 4, 5 Compare and group together everyday materials based on evidence from comparative and fair tests, including hardness, solubility, transparency, conductivity (electrical and thermal) and response to magnets. **Everyday materials** (teach with **Get sorted** as Materials Topic 1) Lessons 1, 2, 4, 5, 6 Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic.	Lessons 1, 2, 4, 5, 7, 8, 9, 10 Identify the effects of air resistance, water resistance and friction, which act between moving surfaces. Give reasons, based on evidence from comparative and fair tests, for specific uses of everyday materials, including metals, wood and plastic. Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.	**Circle of life** Lessons 1, 3, 4, 5, 6, 7 Explain the differences in the life cycles of a mammal, an amphibian, an insect and a bird. **Reproduction in plants and animals** (teach with **Circle of life**) Lessons 4, 5 Describe the life process of reproduction in some plants and animals.	Lessons 1, 2, 3, 6, 7, 8 Describe the life process of reproduction in some plants and animals. Describe the changes as humans develop to old age.	**Marvellous mixtures** Lessons 1, 2, 3, 4 Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. **Materials: All change!** (teach with **Marvellous mixtures** as Materials Topic 2) Lessons 1, 2, 3, 4, 5 Demonstrate that dissolving, mixing and changes of state are reversible changes. 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. 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.
					OCW: Lesson 1 Describe the life process of reproduction in some plants and animals	
End Points	I use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.	I can 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.	I can identify the effects of air resistance, water resistance and friction, that act between moving surfaces.	I can describe the changes as humans develop to old age.	I can describe the life process of reproduction in some plants and animals.	I can 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.
Key Texts	This rock, that rock 	Exploring the Elements 	Marvellous Machines 	Life Cycles- Everything from start to finish 	Heartbeat 	Exploring the Elements 
Enhancements	**Planetarium (Wonder Dome)** Maggie Aderin-Pocock		Galileo Galilei Standing on the Shoulders of Giants		Sarah Fowler OBE	
Working Scientifically		Use a range of scientific equipment with increasing accuracy and precision. Make decisions about what observations to make, what measurements to use, and how long make them for.		Use simple models to describe scientific ideas.		Draw conclusions based on data and observations. Plan different types of enquiry to answer questions. Use scientific knowledge and understanding to explain any findings. Recognise and control variables where necessary. Report and present findings from enquires, including conclusions, causal relationships and explanations of results.
		Independently suggest reasons for similarities and differences.		Use a wide range of secondary sources of information Recognise when secondary sources will be most useful to research ideas.		

Science Long Term Plan- Year 6

	What will we discover in the Americas?	What was life really like in World War 2?	What makes the Galapagos Islands so special?	How has our attitude to crime and punishment changed over the ages?	How has Yorkshire changed over time?	What can art tell us about the Early Islamic Civilisation?
	Body Pump	**Body Health**	**Everything Changes**	**Nature Library**	**Light up Your World**	**Danger! Low Voltage**
Objectives	Lessons 1, 2, 4, 5 Identify and name the main parts of the human circulatory system and describe the functions of the heart, blood vessels and blood.	Lessons 1, 2, 4, 5, 7 Recognise the impact of diet, exercise, drugs and lifestyle on the way bodies function.	Lessons 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 Recognise that living things produce offspring of the same kind, but that offspring normally vary and are not identical to their parents. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago.	Lessons 1, 2, 3, 4, 5, 6, 7 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. Give reasons for classifying plants and animals based on specific characteristics.	Lessons 1, 2, 3, 4, 5 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. 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. Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	Lessons 1, 2, 3, 4, 5, 6 Use recognised symbols when representing a simple circuit in a diagram. Compare the functions of different components, giving reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off positions of switches. Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit, compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches, and use recognised symbols when representing a simple circuit in a diagram.
	OCW: Lessons 1 and 2 (more than once) Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.		OCW: Lesson 4 (more than once) Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.		OCW: Lesson 5 (more than once) 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. Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	
End Points	I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.	I can identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood.	I can identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.	I can give reasons for classifying plants and animals based on specific characteristics.	I can use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.	I can 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.
Key Texts	Anatomy- A cutaway look inside the human body 	Anatomy- A cutaway look inside the human body 	Darwin's Dragons 	The Beetle Collectors Handbook 	The bluest of Blues 	
Enhancements	Heart Start Santorio Santorio Standing on the Shoulders of Giants			Charles Darwin Standing on the Shoulders of Giants		Michael Faraday Standing on the Shoulders of Giants
Working Scientifically	 Record data and results of increasing complexity using scientific diagrams and labels, tables and bar and line graphs.		 Use and design classification keys.			Recognise that scientific ideas change and develop over time Begin to separate opinion from fact.
	 Recognise how abstract ideas help them to understand and predict how the world operates.		 Use evidence to justify ideas. Use test results to make predictions to set up further comparative and fair test. Analyse functions, relationships and interactions.			