

Year	Autumn		Spring		Spring 1		Spring 2		Summer 1		Summer 2	
EYFS	By the end of EYFS children at the expected level of development will: - Explore the natural world around them, making observations and drawing pictures of animals and plants; - 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; - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. FOR MORE DETAILS, PLEASE VISIT THE EARLY YEARS CURRICULUM MAPS ON THE WEBSITE HERE											
Nursery	Autumn		Spring		Summer							
	Autumn Walk (RE Link: God Made the World) Curiosity Cube (Egg and Dinosaur // Autumn // Nativity) Songs with actions (E.G Head, Shoulders, Knees and Toes) Observational drawings of flowers (Poppy)		Winter Walk Science Week Experiment Curiosity cube (RE Link: Kings Crowns) Making an Easter Garden (RE Link) Curiosity cube (Signs of spring) Growing Cress Seeds (RE) Observational drawings of flowers (Daffodil)		Summer Walk Observational drawing of flowers (Lilacs) Living caterpillars Life cycle of a butterfly Planting a seed (UW)							
Reception	Autumn walk (RE link God made the world, collecting natural materials and making insects) Growing up (RE link with Baptism) Hibernating (Literacy Link - "It was cold, dark night")	Learn about the seasons and know it is Autumn. Talk about the seasons and have some understanding about the changes that happen in the world. Talk confidently about range of animals and where they live (habitats).	Winter Walk, Spring Walk Lifecycles (RE link - Living eggs) Space (Literacy link - "Whatever next!") Body parts (PSHE link - "Me, my body, my health") Planting vegetables in the garden	Learn about the seasons and know it is Winter/Spring. Show care for and look after animals and encourage others to do so. Compare animals and observe their changes (lifecycles). Naming body parts and how to keep ourselves healthy.	Summer walk Materials (Literacy link - "The Three Little Pigs") Recycling (Literacy link - "The tale of the toothbrush") Plant parts - stem, leaf, root, flower (observational drawing and labelling of the plants planted in spring)	Talk about plant parts and what they need to grow. Looking after plants and taking responsibility for watering and weeding. Describing animals and plants using scientific vocabulary. Identifying and naming a variety of everyday materials, including wood, plastic, glass. Beginning to understand what recycle means and why we should do it.						
1	All About Me		Seasonal changes - Autumn and Winter		Marvellous Materials		Seasonal changes - Spring and Summer		Plants (Autumn and Summer terms)		Amazing Animals	
	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Skills	Knowledge	Working Scientifically
	To identify, name, draw and label the basic parts of the human body (including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth) through games, actions, songs and rhymes Say which part of the body is associated with each sense.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Observe changes across the four seasons, focusing on autumn and winter Observe and describe weather associated with the seasons and how day length varies	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Distinguish between an object and the material from which it is made Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, rock, brick, paper, fabrics, elastic and foil Describe the simple physical properties of a variety of everyday materials including hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy (flexible); waterproof/not waterproof; absorbent/not absorbent; opaque/transparent Compare and group together a variety of everyday materials on the basis of their simple physical properties.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Observe changes across the four seasons, focusing on spring and summer. Observe and describe weather associated with the seasons and how day length varies	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Identify and name a variety of common wild and garden plants, including deciduous and evergreen leaves Identify and describe the basic structure of a variety of common flowering plants, including trees using the words leaves, flowers, blossom, petals, fruit, roots, bulb, seed, trunk, branches, stem	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	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. Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets)	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.
		Using their senses to compare different textures, sounds and smells	Know that it is not safe to look directly at the Sun, even when wearing dark glasses	Make tables and charts about the weather Make displays of what happens in the world around them, including day length as the seasons change.		Perform simple tests to explore questions for example 'What is the best material for a dog's basket?'		Make tables and charts about the weather Make displays of what happens in the world around them, including day length as the seasons change.	Use the local environment throughout the year to explore and answer questions about plants growing in their habitat. Observe the growth of flowers and vegetables that they have planted.	Observing closely, perhaps using magnifying glasses, and comparing and contrasting familiar plants Describing how they were able to identify and group plants Drawing diagrams showing the parts of different plants, including trees Keeping records of how plants have changed over time, for example the leaves falling off trees and buds opening Comparing and contrasting what they have found out about different plants	Use the local environment throughout the year to explore and answer questions about animals in their habitat. Understand how to take care of animals taken from their local environment and the need to return them safely after study.	Using their observations to compare and contrast animals at first hand or through videos and photographs, describing how they identify and group them Grouping animals according to what they eat
	Plants harvesting seeds and planting bulbs		Marvellous Materials		Healthy Me (Animals including Humans)		Plants spring bulbs		Living things and their habitats		Plants sowing seeds	
2	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Working Scientifically	Knowledge	Working Scientifically
	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.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Notice that animals, including humans, have offspring which grow into adults Find out about and describe the basic needs of animals, including humans, for survival (water, food and air) Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	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.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Explore and compare the differences between things that are living, dead, and things that have never been alive. 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. Identify and name a variety of plants and animals in their habitats, including micro-habitats. 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.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	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.	• Asking simple questions and recognising that they can be answered in different ways • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.
	Use the local environment throughout the year to observe how different plants grow. Learn the requirements of plants for germination, growth and survival, as well as to the processes of reproduction and growth in plants. i.e. Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.	Observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.	Identify and discuss the uses of different everyday materials so that they become familiar with how some materials are used for more than one thing (metal can be used for coins, cans, cars and table legs; wood can be used for matches, floors, and telegraph poles) or different materials are used for the same thing (spoons can be made from plastic, wood, metal, but not normally from glass). Think about the properties of materials that make them suitable or unsuitable for particular purposes Think about unusual and creative uses for everyday materials. Find out about people who have developed useful new materials, for example John Dunlop, Charles Macintosh or John McAdam.	Comparing the uses of everyday materials in and around the school with materials found in other places (at home, the journey to school, on visits, and in stories, rhymes and songs) Observing closely, identifying and classifying the uses of different materials, and recording their observations.	Pupils are introduced to the basic needs of animals for survival, as well as the importance of exercise and nutrition for humans. Pupils are introduced to the processes of reproduction and growth in animals. (The focus at this stage is on questions that help pupils to recognise growth, not on how reproduction occurs). The following examples might be used: egg, chick, chicken; egg, caterpillar, pupa, butterfly; spawn, tadpole, frog; lamb, sheep Growing into adults can include reference to baby, toddler, child, teenager, adult.	Observing, through video or first-hand observation and measurement, how different animals, including humans, grow Asking questions about what things animals need for survival and what humans need to stay healthy Suggesting ways to find answers to their questions.	Use the local environment throughout the year to observe how different plants grow. Learn the requirements of plants for germination, growth and survival, as well as to the processes of reproduction and growth in plants. i.e. Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.	Observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.	Understand that that all living things have certain characteristics that are essential for keeping them alive and healthy. Raise and answer questions that help them to become familiar with the life processes that are common to all living things. Learn the terms 'habitat' (a natural environment or home of a variety of plants and animals) and 'micro-habitat' (a very small habitat, for example for woodlice under stones, logs or leaf litter). Raise and answer questions about the local environment that help them to identify and study a variety of plants and animals within their habitat and observe how living things depend on each other, for example, plants serving as a source of food and shelter for animals. Compare animals in familiar habitats with animals found in less familiar habitats, for example, on the seashore, in woodland, in the ocean, in the rainforest.	Sort and classify things according to whether they are living, dead or were never alive, giving reasons for their choices and recording their findings using charts. Construct a simple food chain that includes humans. Describe the conditions in different habitats and microhabitats (under log, on stony path, under bushes) Find out how the conditions affect the number and types of plants and animals that live there.	Use the local environment throughout the year to observe how different plants grow. Learn the requirements of plants for germination, growth and survival, as well as to the processes of reproduction and growth in plants. i.e. Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.	Observing and recording, with some accuracy, the growth of a variety of plants as they change over time from a seed or bulb, or observing similar plants at different stages of growth; setting up a comparative test to show that plants need light and water to stay healthy.
	Rocks		Animals including Humans		Forces and Magnets		Plants		Light			
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge		Skills	
	Explore how different types of rock are formed by using simple scientific language and diagrams	Record finding using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables	Identify that Humas need the right type and amount of nutrition	Use straightforward scientific evidence to answer questions or to support their findings.	Forces need contact between objects	Asking relevant questions and using different types of scientific enquiries to answer them	Identify and describe the functions of different parts f a flowing plant using simple scientific language	Gathering , recording, classifying and presenting data in a variety of ways to help in answering questions	Name sources of light that allow us to see things		Identify differences, similarities of =r changes related to simple scientific ideas and processes	

3	Compare and group together different types of rock based on their simple physical properties	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Identify the right types and amounts of nutrition for animals and humans	Report on funds from enquiries, oral, written, displays and presentation of results and conclusions	compare how things move on surfaces	set up simple enquiries, comparative and fair tests	Explore the requirements of plants for life and growth	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment	Recognise that light from the sun can be dangerous		Use straightforward scientific evidence to to answer questions or to support their findings.	
	Describe how fossils are formed	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Name the basic parts of a skeleton using labelled diagrams	Record findings using simple scientific language, drawings, labels, bar charts, tables and keys	Notice that magnetic forces act at a distance	Record findings using simple scientific language , drawings, diagrams, keys bar charts and tables	Record observations on an investigation - height of plants, comparisons	Using straightforward scientific evidence to answer questions or to support their findings	Understand how light is reflected from Surfaces		Record findings using simple scientific language, drawings, labelled diagrams. keys, bar chart and tables	
			Observe how skeletons grow as we grow, using accurate measuring	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment	Compare and group together a variety of everyday materials on the basis of whether they are attracted by a magnet and identify some magnetic materials	Identifying differences, similarities or changes related to simple scientific ideas and processes	Explain the function of the flower in the life cycle of a plant	Using straightforward scientific evidence to answer questions or to support their findings.	Understand how shadows are formed		Using straightforward scientific evidence to answer questions or to support their findings.	
	Recognise what soil is made from	Gathering recording classifying and presenting data in a variety of ways to help to answer questions.	Sort animals according to their skeleton	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Describe magnets as having two poles and to predict and observe whether two magnets will attract or repel each other, depending on which poles are facing	Use straightforward scientific evidence to answer question or to support their findings.	Plan and carry out an investigation based on how water is transported in flowers	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment	Plan and carry out an investigation based on how water is transported in flowers		Setting up simple scientific enquiries, comparative and fair tests	
	Set up a simple practical enquiry based on the permeability of soil	Set up a simple practical enquiry based on the permeability of soil							set up a simple practical enquiry to find patterns in the ways the size of shadows change		Identifying differences, similarities or changes related to simple scientific ideas and processes	
			Understand how muscles help us to move	Identifying differences, similarities or changes related to simple scientific ideas and processes			Order and describe the stages in the life –cycle of a plant	Identifying differences, similarities or changes related to simple scientific ideas and processes				
4	Electricity		States of Matter		Sound		Animals including Humans		Living things and their Habitats		Notable Scientists	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	Explain that there are different types of electricity	Using straightforward scientific evidence to answer questions or to support their findings.	Sort and describe materials	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Describe and explain sound sources	Using straightforward scientific evidence to answer questions or to support their findings.	Identify and name parts of the human digestive system	Identifying differences, similarities or changes related to simple scientific ideas and processes	Group living things in a range of ways	Identifying differences, similarities or changes related to simple scientific ideas and processes	Who is Katharine Johnson? Katharine Johnson's life story and contributions to science Investigating trajectories of flight NASA	Research, describe, prior knowledge
	Identify electrical appliances and the types of electricity they use	Identifying differences, similarities or changes related to simple scientific ideas and processes	Investigate gases and explain their properties	Asking relevant questions and using different types of scientific enquiries to answer them	Explain how different sounds travel	Identifying differences, similarities or changes related to simple scientific ideas and processes	Explain the functions of the digestive system	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Identify vertebrates by observing their similarities and differences	Using straightforward scientific evidence to answer questions or to support their findings.	Who is Alexander Graham Bell? Life story and contributions to science Invention of the telephone Deafness Links with Hearing topic earlier in year	Research, present findings, revisit learning
	Identify complete and incomplete circuits	Setting up simple practical enquiries, comparative and fair tests	Investigate materials as they change state	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Explore ways to change the pitch of a sound	Setting up simple practical enquiries, comparative and fair tests	Identify the types and functions of teeth	Identifying differences, similarities or changes related to simple scientific ideas and processes	Use evidence to identify an invertebrate	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	Who is Marie Curie? Life story and contributions to science radiation	Research, present findings
	Identify and sort materials into electrical conductors or insulators	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Explore how water changes state	Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions	Explain how different sounds travel	Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables	Ask scientific questions and choose a scientific enquiry to answer them	Setting up simple practical enquiries, comparative and fair tests	Create a classification key; show the characteristics of living things in a table and a key	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Who is Michael Faraday? Life story and contributions to science links with Electricity topic earlier in the year	Research, present findings
	Explain how a switch works and why they are needed	Using straightforward scientific evidence to answer questions or to support their findings.	Investigate how water evaporates	Setting up simple practical enquiries, comparative and fair tests	Explain how different sounds travel; investigate ways to absorb sound	Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions	Careful observations, appropriately record my results and use them to develop further investigations	Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers	Recognise positive and negative changes to the local environment	Asking relevant questions and using different types of scientific enquiries to answer them	Who is Marianne North? Biologist Links with Art and Kew Gardens	Research, present findings TEACH BEFORE TRIP TO KEW
	Record on an investigation in the context of switches	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Identify and describe the different stages of the water cycle	Using straightforward scientific evidence to answer questions or to support their findings.	Make a musical instrument to play different sounds	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Construct and interpret food chains	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions	Describe environmental dangers to endangered species	Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions		
5	Properties and changes of materials				Forces		Earth and Space		Living things and their Habitats		Animals including Humans	
	Knowledge		Skills		Knowledge		Knowledge		Knowledge		Knowledge	
	I can compare and group together materials based on their simple properties: rigidity, transparency, electric conductivity and magnetism.		Identifying scientific evidence that has been used to support or refute ideas or arguments.		Understand basic facts about forces.		Recall basic facts about the Earth, Moon and Sun.		Sequence the life cycle of a plant and to understand the parts of a flower		Describe changes as humans develop to old age	
	I can use test results to explain some uses of everyday materials		Using test results to make predictions to set up further comparative and fair tests		Explore the effects of gravity.		Understand how the planets in our Solar System are organised.		Understand how asexual reproduction occurs in plants		Identifying ways in which we change as we get older	
	I can plan to investigate the physical property of thermal insulation		Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary		Understand air resistance.		Understand key facts about our Solar System.		Understand how plants can reproduce from cuttings		Describe the changes in humans as they develop as babies and through childhood	
	I can carry out a comparative test and explain which cup is most suitable for keeping warm water warm		Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate		Observe a variety of forces that slow things down.		Understand the geocentric and heliocentric models of our solar system.		Describe the difference in the life cycles of different animals (mammals and birds)		Understand puberty and the changes that happen during adolescence	
	I can compare materials based on whether they are soluble or not		Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs		Understand water resistance.		Describe the movement of the Moon relative to the Earth.		Understand the life cycle of amphibians and insects		Describe the changes as humans develop through adulthood and to old age	

	I can describe how to separate an insoluble solid from a liquid	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	Explain how levers, pulleys, springs and gears transfer force and motion.	Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations	Understand the relationship between the Earth, the Sun and the Moon.	Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs	Understand and predict different gestation periods	Identifying scientific evidence that has been used to support or refute ideas or arguments.	Plan relevant questions to ask humans about changes as they grow	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary		
	I can describe how to separate a soluble solid from a solution	Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary	Explore how mixtures can be separated through filtering.	Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations								
	I know that changes of state are reversible changes	Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations										
	I can demonstrate that dissolving, mixing and changes of state are reversible changes	Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations										
	Describe an irreversible change where a new material is formed	Identifying scientific evidence that has been used to support or refute ideas or arguments.										
6	Living things and their habitats: Why we group and classify living things		Animals, including humans: The human circulatory system		Light: Light and how it travels		Electricity: Changing circuits		Evolution and Inheritance		Keeping Healthy - links to RSHE - Transition to Year 7 effects of drugs and alcohol	
	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills	Knowledge	Skills
	1 Comparing characteristics of living things I can compare the characteristics of living things and describe their similarities and differences.	• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals • Give reasons for classifying plants and animals based on specific characteristics	1 Function of the heart I can describe what the human heart is and what it does.	• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments • Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • Describe the ways in which nutrients and water are transported within animals, including humans	1 How light travels I can explain that light travels in straight lines.	• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Using test results to make predictions to set up further comparative and fair tests • Recognise that light appears to travel in straight lines • 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 • 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 why shadows have the same shape as the objects that cast them	1 Components and simple circuits I can build and test a range of simple circuits using common components.	• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • Using test results to make predictions to set up further comparative and fair tests • 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 • Use recognised symbols when representing a simple circuit in a diagram	1 Where fossils are found (non-statutory) I can describe where fossils are likely to be found.	• Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and a degree of trust in results, in oral and written forms such as displays and other presentations • Identifying scientific evidence that has been used to support or refute ideas or arguments • Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago • Recognise that living things produce offspring of the same kind, but normally offspring 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	1. The impact of a balanced diet. I can describe the impact of diet on the human body	• Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function
	2 How and why we group animals I can explain how animals can be grouped using observable characteristics.		2 Function of blood I can describe what blood is and what it does.		2 Light sources and light reflectors (non-statutory) I can describe the difference between light sources and light reflectors.		2 Circuit symbols and diagrams I can use circuit symbols to represent components in a simple circuit diagram.		2 What fossils can tell us about the past I can describe what fossils can tell us about things that lived in the past.			
	3 How and why we group plants I can explain how plants can be grouped using observable characteristics.		3 Function of blood vessels I can describe what blood vessels are and what they do.		3 Light enters our eyes I can explain that we see things when light travels into the eye.		3 Electrical discoveries and inventions (non-statutory) I can research some important electrical inventions from the past to the present day.		3 How living things have changed over time I can use fossil evidence to describe how living things have changed over time.			
	4 Microorganisms are living things I can describe what microorganisms are, and know that they are living things.		4 How nutrients and water are transported within humans I can describe how water and nutrients from food travel through the body.		4 Reflected light I can explain that we see things when light is reflected from an object into the eye.		4 Investigating voltage: plan I can plan to investigate how voltage affects the brightness of a lamp in a circuit.		4 Human skulls: using evidence from the past (non-statutory) I can describe how human skulls have changed over time and use fossil evidence to suggest reasons why.			
	5 Grouping micro-organisms I can group microorganisms based on similarities and differences.		5 The circulatory system in humans: plan I can draft information about the circulatory system in humans and plan how to present it to others.		5 Changing the direction of light I can explain how mirrors are reflective materials that are used to change the direction in which light travels.		5 Investigating voltage: do and review I can investigate and explain how voltage affects the brightness of a bulb in a circuit.		5 Offspring: similar but not identical I can describe how offspring of different animals are similar but not identical to their parents.			
	6 Micro-organisms living on food: plan and do (non-statutory) I can predict what happens when food is left to decompose over time.		6 Circulatory system: do and review I can use a plan to present information about the circulatory system in humans to other people.		6 Measuring reflected light: plan I can plan an investigation to see how changing the angle of a mirror affects the angle of reflected light.		6 Variables in electric circuits: plan I can plan to investigate variables that may affect the brightness of a bulb in an electric circuit.		6 Family trees (non-statutory) I can identify similarities and differences in humans within a family tree.			
	7 The 5 Rs (non-statutory Climate Change & Sustainability) I can describe the 5Rs and how foods decompose (rot) to form useful nutrients for crops.		7 The use of animal hearts in humans (non-statutory) I can consider arguments for and against the use of animal hearts to repair or replace human hearts.		7 Measuring reflected light: do and review I can investigate how changing the angle of a mirror affects the angle of reflected light.		7 Variables in electric circuits: do and review I can investigate variables that may affect the brightness of a bulb in an electric circuit.		7 Inherited characteristics I can identify inherited and environmental characteristics of different offspring.			
	8 Microorganisms that help us (non-statutory) I can explain how microorganisms can be used to improve our health.				8 How shadows form I can explore the size, colour and features of a shadow, and compare shadows to reflections of objects.		8 Changing the volume of buzzers I can predict and test how to change the volume of buzzers in a circuit.		8 Animal adaptations I can describe some adaptations in a range of animals.			
	9 Growing yeast: plan (non-statutory) I can plan an investigation to find out about food sources for microorganisms.				9 Shadow shapes investigation I can use the idea of light travelling in straight lines to explain shadow shape.		9 The position of switches: open and closed I can explain how a switch is used in a simple circuit.		9 Charles Darwin and finches I can model how different shaped beaks are adapted to suit different food sources.			
	10 Growing yeast: do and review (non-statutory) I can carry out and evaluate an investigation to find out about food sources for microorganisms.				10 The position of shadows (non-statutory) I can predict where a shadow will be cast in relation to the light source and the object.		10 Choosing and using conductors and insulators (non-statutory) I can explain the difference between electrical conductors and insulators and can identify where each type of material should be used.		10 Plant adaptations I can describe some adaptations in a range of plants.			
	11 Micro-organisms living on food: review (non-statutory) I can observe and describe what happens when food is left to decompose over time.				11 Multiple shadows I can investigate the number of shadows that can be cast by an object.		11 How electrical insulators keep us safe (non-statutory) I can identify how electrical insulators keep us safe.		11 More about plant adaptations I can describe the key features of a plant adapted to suit its habitat.			
	12 Carl Linnaeus and classification I can describe the work of Carl Linnaeus and his contribution to how we classify living things.						12 Electrical careers I can identify different careers involving electricity and research these further using secondary sources of information.		12 The survival of the fittest I can explain the meaning of 'survival of the fittest' and give examples in animals or plants.			
	13 Discovering and naming new species I can describe how scientists group, identify and name new species of living things.						13 Electrical sensors: design (non-statutory) I can design a simple electrical circuit to detect water levels.		13 Evolution: evidence I can research a living thing that has evolved over time.			
							14 Electrical sensors: make and review (non-statutory) I can make and review a simple electrical system to detect water levels.		14 Evolution: presentation I can present information about a living thing that has evolved over time.			
							15 Debating the use of electric cars (non-stat Climate Change & Sustainability) I can debate the use of electric vehicles and their impact on the environment.					
				16 Sustainable sources of electricity (non-stat Climate Change & Sustainability) I can identify sustainable sources of electricity and describe their benefits to the environment.								