

Woodside Primary School
Science – Long Term Planning – Cycle B

Early Years

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas.

The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for science.

The most relevant statements for science are taken from the following areas of learning:

- Communication and Language
- Personal, Social and Emotional Development
- Understanding the World

	Areas of Learning	Objective
Three and Four-Year-Olds	Communication and Language	<ul style="list-style-type: none"> • Understand ‘why’ questions, like: “Why do you think the caterpillar got so fat?”
	Personal, Social and Emotional Development	<ul style="list-style-type: none"> • Make healthy choices about food, drink, activity and toothbrushing.
	Understanding the World	<ul style="list-style-type: none"> • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary. • Begin to make sense of their own life-story and family’s history. • Explore how things work. • Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things. • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice.
Reception	Communication and Language	<ul style="list-style-type: none"> • Learn new vocabulary. • Ask questions to find out more and to check what has been said to them. • Articulate their ideas and thoughts in well-formed sentences. • Describe events in some detail. • Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen. • Use new vocabulary in different contexts

Reception continued	Personal, Social and Emotional Development		<ul style="list-style-type: none"> • Know and talk about the different factors that support their overall health and wellbeing: - regular physical activity - healthy eating - toothbrushing - sensible amounts of 'screen time' - having a good sleep routine - being a safe pedestrian
	Understanding the World		<ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel while they are outside. • Recognise some environments that are different to the one in which they live. • Understand the effect of changing seasons on the natural world around them.
ELG	Communication and Language	Listening, Attention and Understanding	<ul style="list-style-type: none"> • Make comments about what they have heard and ask questions to clarify their understanding.
	Personal, Social and Emotional Development	Managing Self	<ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices
	Understanding the World	The Natural World	<ul style="list-style-type: none"> • 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

KS1 Content

Working Scientifically

- 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.

Year 1

Plants

- 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.

Animals, including humans

- 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)
- identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.

Everyday Materials

- 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, and rock
- 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.

Seasonal Changes

- observe changes across the four seasons
- observe and describe weather associated with the seasons and how day length varies

Year 2

Living Things and their Habitats

- 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 microhabitats
- 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.

Plants

- 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.

Animals including Humans

- 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.

Use of Everyday Materials

- 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.

	Autumn	Spring	Summer		
Year 1 / 2	<p>Living Things and their Habitats</p> <ul style="list-style-type: none"> • 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 microhabitats • 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 <p>• I can compare the differences between things that are living, dead and have never been alive.</p> <p>• I can map a habitat and identify what is in it.</p> <p>• I can classify objects as those that are living, dead and those that have never been alive.</p> <p>• I can identify animals in their habitats.</p> <p>• I can use information I have gathered to answer a question.</p> <p>• I can describe a habitat and identify animals live in it.</p> <p>• I can identify how an animal is suited to its habitat</p> <p>• I can explain how living things in a habitat depend on each other.</p> <p>• I can describe how animals get their food.</p>	<p>Seasonal Change</p> <ul style="list-style-type: none"> • observe changes across the four seasons • observe and describe weather associated with the seasons and how day length varies <p>• I can describe how the weather changes across the seasons</p> <p>• I can describe day length in autumn.</p> <p>• I can identify signs of autumn.</p> <p>• I can describe how day length varies from autumn to winter.</p> <p>• I can identify changes in the trees and in clothes that we wear from autumn to winter.</p> <p>• I can observe and describe the weather in winter.</p> <p>• I can collect and record data about the weather in winter.</p> <p>• I can explain how some animals adapt in winter.</p>	<p>Animals, including Humans</p> <ul style="list-style-type: none"> • 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. <p>• I can match, sort and group young animals and their adults.</p> <p>• I can find out how animals change as they grow into adults.</p> <p>• I can compare the stages of the human life cycle.</p> <p>• I can research and describe what animals, including humans, need to survive.</p> <p>• I can test the effects of exercise on the human body</p> <p>• I can investigate the importance of healthy eating and hygiene.</p>	<p>Use of Everyday Materials</p> <ul style="list-style-type: none"> • 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. <p>• I can identify uses of different everyday materials.</p> <p>• I can identify and group the uses of everyday materials.</p> <p>• I can record my observations.</p> <p>• I can compare the suitability of different everyday materials.</p> <p>• I can explain how the shapes of objects made from some materials can be changed.</p> <p>• I can explain the process of recycling.</p> <p>• I can tell you about the inventor John McAdam.</p>	<p>Plants</p> <ul style="list-style-type: none"> • 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. <p>• I can design and set up a test to find out what plants need to stay healthy</p> <p>• I can look closely at the parts of a seed that will grow into a plant and explain how it will germinate.</p> <p>• I can describe the life cycle of a plant.</p> <p>• I can explain what plants need to grow and stay healthy.</p> <p>• I can describe what happens if plants don't get all the things they need.</p> <p>• I can explain how plants are suited to their habitats.</p>

KS2 Content

Scientific Enquiry

During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Year 3

Plants

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, 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
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.

Animals, including Humans

- 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 other animals have skeletons and muscles for support, protection and movement.

Rocks

- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognise that soils are made from rocks and organic matter.

Light

- recognise that they need light in order to see things and that dark is the absence of light
- notice that light is reflected from surfaces
- recognise that light from the sun can be dangerous and that there are ways to protect their eyes
- recognise that shadows are formed when the light from a light source is blocked by an opaque object
- find patterns in the way that the size of shadows change

Forces and Magnets

- compare how things move on different surfaces
- notice that some forces need contact between two objects, but magnetic forces can act at a distance
- observe how magnets attract or repel each other and attract some materials and not others
- 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
- describe magnets as having two poles
- predict whether two magnets will attract or repel each other, depending on which poles are facing

Year 4

Living Things and their Habitats

- recognise that 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
- recognise that environments can change and that this can sometimes pose dangers to living things.

Animals, including Humans

- 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
- construct and interpret a variety of food chains, identifying producers, predators and prey

States of Matter

- 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

Sound

- 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 pitch of a sound and features of the object that produced it
- 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

Electricity

- identify common appliances that run on electricity
- construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
- identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
- 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

	Autumn		Spring		Summer	
Year 3/4	<p>States of Matter</p> <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> I can sort and describe materials. I can investigate gases and explain their properties. I can investigate materials as they change state. I can explore how water changes state. I can investigate how water evaporates. I can identify and describe the different stages of the water cycle. 	<p>Animals, including Humans</p> <ul style="list-style-type: none"> 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 construct and interpret a variety of food chains, identifying producers, predators and prey <ul style="list-style-type: none"> I can identify and name parts of the human digestive system. I can explain the functions of the digestive system. I can use scientific evidence to answer questions. I can identify the types and functions of teeth. I can identify similarities and differences related to scientific ideas. I can ask scientific questions and choose a scientific enquiry to answer them. I can create an enquiry or test. I can make careful observations, appropriately record my results and use them to develop further investigations. I can construct and interpret food chains. 	<p>Sound</p> <ul style="list-style-type: none"> 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 pitch of a sound and features of the object that produced it 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 <ul style="list-style-type: none"> I can describe and explain sound sources I can explain how different sounds travel I can explore ways to change the pitch of a sound. I can investigate ways to absorb sound. I can make a musical instrument to play different sounds 	<p>Electricity</p> <ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery 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 <ul style="list-style-type: none"> I can classify and present data, identifying common appliances that run on electricity. I can identify circuit components and build working circuits. I can investigate whether circuits are complete or incomplete. I can investigate which materials are electrical conductors or insulators. I can explain how a switch works in a circuit, build switches and report my findings. I can discuss and solve problems about electricity using reasoning skills. 	<p>Living things and habitats</p> <ul style="list-style-type: none"> recognise that 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 recognise that environments can change and that this can sometimes pose dangers to living things. <ul style="list-style-type: none"> I can group living things in a range of ways I can use a range of methods to sort living things I can generate questions to use in a classification key. I can identify vertebrates by observing their similarities and differences. I can use a key to identify invertebrates. I can create a classification key. I can show the characteristics of living things in a table and a key. I can recognise positive and negative changes to the local environment. I can describe environmental dangers to endangered species I can present my findings orally and in writing 	<p>Forces and Magnets</p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 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 describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing <ul style="list-style-type: none"> I can identify the forces acting on objects. I can investigate how a toy car moves over different surfaces. I can sort magnetic and non-magnetic materials I can investigate the strength of magnets. I can explore magnetic poles I can observe how magnets attract some materials.

	Autumn		Spring		Summer	
Year 4/5	<p>States of Matter</p> <ul style="list-style-type: none"> 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 <p>I can sort and describe materials.</p> <p>I can investigate gases and explain their properties.</p> <p>I can investigate materials as they change state.</p> <p>I can explore how water changes state.</p> <p>I can investigate how water evaporates.</p> <p>I can identify and describe the different stages of the water cycle.</p>	<p>Sound</p> <ul style="list-style-type: none"> 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 pitch of a sound and features of the object that produced it 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 <p>I can describe and explain sound sources</p> <p>I can explain how different sounds travel</p> <p>I can explore ways to change the pitch of a sound.</p> <p>I can investigate ways to absorb sound.</p> <p>I can make a musical instrument to play different sounds</p>	<p>Animals, including Humans</p> <ul style="list-style-type: none"> 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 construct and interpret a variety of food chains, identifying producers, predators and prey <p>I can identify and name parts of the human digestive system.</p> <p>I can explain the functions of the digestive system.</p> <p>I can use scientific evidence to answer questions.</p> <p>I can identify the types and functions of teeth.</p> <p>I can identify similarities and differences related to scientific ideas.</p> <p>I can ask scientific questions and choose a scientific enquiry to answer them.</p> <p>I can create an enquiry or test.</p> <p>I can make careful observations, appropriately record my results and use them to develop further investigations.</p> <p>I can construct and interpret food chains.</p>	<p>Living things and habitats</p> <ul style="list-style-type: none"> recognise that 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 recognise that environments can change and that this can sometimes pose dangers to living things. <p>I can group living things in a range of ways</p> <p>I can use a range of methods to sort living things</p> <p>I can generate questions to use in a classification key.</p> <p>I can identify vertebrates by observing their similarities and differences.</p> <p>I can use a key to identify invertebrates.</p> <p>I can create a classification key.</p> <p>I can show the characteristics of living things in a table and a key.</p> <p>I can recognise positive and negative changes to the local environment.</p> <p>I can describe environmental dangers to endangered species</p> <p>I can present my findings orally and in writing</p>	<p>Electricity</p> <ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery 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 <p>I can classify and present data, identifying common appliances that run on electricity.</p> <p>I can identify circuit components and build working circuits.</p> <p>I can investigate whether circuits are complete or incomplete.</p> <p>I can investigate which materials are electrical conductors or insulators.</p> <p>I can explain how a switch works in a circuit, build switches and report my findings.</p> <p>I can discuss and solve problems about electricity using reasoning skills.</p>	<p>Forces and Magnets</p> <ul style="list-style-type: none"> compare how things move on different surfaces notice that some forces need contact between two objects, but magnetic forces can act at a distance observe how magnets attract or repel each other and attract some materials and not others 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 describe magnets as having two poles predict whether two magnets will attract or repel each other, depending on which poles are facing <p>I can identify the forces acting on objects.</p> <p>I can investigate how a toy car moves over different surfaces.</p> <p>I can sort magnetic and non-magnetic materials</p> <p>I can investigate the strength of magnets.</p> <p>I can explore magnetic poles</p> <p>I can observe how magnets attract some materials.</p>

KS2 Content

Working Scientifically

- 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
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- 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
- identifying scientific evidence that has been used to support or refute ideas or arguments.

Year 5

Living Things and their Habitats

- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- describe the life process of reproduction in some plants and animals.

Animals, including Humans

- describe the changes as humans develop to old age

Properties and changes of Materials

- 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
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- 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

Earth and Space

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

Forces

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Year 6

Living Things and their Habitats

- 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.

Animals, including Humans

- 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.

Evolution and Inheritance

- 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.

Light

- 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.

Electricity

- 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.

	Autumn		Spring		Summer	
Year 6	<p>Electricity</p> <ul style="list-style-type: none"> Identifying scientific evidence that has been used to support or refute ideas or arguments Use recognised symbols when representing a simple circuit in a diagram Associate the brightness of a bulb 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 Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary Recording data and results of increasing complexity Reporting and presenting findings from enquiries Using test results to make predictions to set up further comparative and fair tests 	<p>Light</p> <ul style="list-style-type: none"> To recognise that light appears to travel in straight lines To 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 To 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 To identify scientific evidence that has been used to support or refute ideas or arguments 	<p>Animals, including humans</p> <ul style="list-style-type: none"> To identify and name the main parts of the human circulatory system To describe the functions of the heart, blood vessels and blood To describe the ways in which nutrients and water are transported within animals, including humans To recognise the impact of diet and exercise on the way their bodies function To plan different types of scientific enquiries to answer questions To record data and results of increasing complexity To recognise the impact of drugs on the way their bodies function To identify scientific evidence that has been used to support or refute ideas or arguments 	<p>Living things and their habitats</p> <ul style="list-style-type: none"> To give reasons for classifying plants and animals based on specific characteristics To 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 	<p>Forces (Curriculum Recovery)</p> <ul style="list-style-type: none"> To explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object To identify the effects of air resistance, water resistance and friction To recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect 	<p>Evolution and Inheritance</p> <ul style="list-style-type: none"> 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 Identifying scientific evidence that has been used to support or refute ideas or arguments; Identify how 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 Identify how adaptation may lead to evolution
	<ul style="list-style-type: none"> I can explain the importance of the major discoveries in electricity I can observe and explain the effects of differing volts in a circuit. I can observe and explain the effects of differing volts in a circuit. I can plan an investigation. I can understand variations in how components function. I can conduct an investigation. I can record my data and report my findings. I can investigate my results further. 	<ul style="list-style-type: none"> I can explain that light travels in straight lines from light sources to our eyes, and from light sources to objects and then to our eyes I can understand how mirrors reflect light, and how they can help us see objects. I can investigate how refraction changes the direction in which light travels I can investigate how a prism changes a ray of light. I can investigate how light enables us to see colours. I can explain why shadows have the same shape as the object that casts them. 	<ul style="list-style-type: none"> I can identify and name the parts of the human circulatory system. I can describe the functions of the main parts of the circulatory system I can explain how water and nutrients are transported within the body. I can describe how diet and exercise impact on human bodies. I can plan a scientific enquiry. I can record, report and present results appropriately. I can explain the impact of drugs and alcohol on the body. I can describe how scientific evidence highlighted the dangers of smoking. 	<ul style="list-style-type: none"> I can give reasons for classifying animals based on their similarities and differences. I can describe how living things are classified into groups. I can identify the characteristics of different types of animals. I can classify a creature based on its characteristics. I can describe and investigate helpful and harmful microorganisms. I can identify the characteristics of different types of microorganisms. 	<ul style="list-style-type: none"> I can identify forces acting on objects I can explore the effect gravity has on objects and how gravity was discovered. I can investigate the effects of air resistance I can investigate the effects of air resistance I can investigate the effects of friction. I can To explore and design mechanisms. 	<ul style="list-style-type: none"> I can explain the scientific concept of inheritance. I can demonstrate understanding of the scientific meaning of adaptation. I can identify the key ideas of the theory of evolution. I can identify evidence for evolution from fossil records. I can understand how human beings have evolved. I can explain how adaptations can result in both advantages and disadvantages. I can explain how human intervention affects evolution.