Year group:	EYFS				
Term:	**In EYFS, Science is not taught in discrete blocks, but through continuous provision. Through a range of opportunities, both indoors and outdoors, children are encouraged to be curious, discover and explore. Some of the themes and skills are explored below.**				
Early Learning Goal:	**ELG14:** Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes				
Theme:	**Our Bodies**	**Animals & Plants**	**Materials**	**Forces**	**Seasonal Changes**
Skill/process:	•be able to identify different parts of their body. •Have some understanding of healthy food and the need for variety in their diets. •Know the effects exercise has on their bodies. •Have some understanding of growth and change.	**Animals** •Can talk about things they have observed including animals •Be able to show care and concern for living things. •Comments and questions about the place they live or the natural world. **Plants** •Make observations of plants •Know some names of plants, trees and flowers •May be able to name and describe different plants, trees and flowers •Show some care for their world around them **Our Environment** •Notices features of objects in their environment. •Comments and asks questions about their familiar world.	•be able to ask questions about the place they live. •Talk about why things happen and how things work. •Discuss the things they have observed such as natural and found objects. •Manipulates materials to achieve a planned effect.	•know about similarities and differences in relation to places, objects, materials and living things. •talk about the features of their own immediate environment and how environments might vary from one another. •make observations of animals and plants and explain why some things occur, and talk about changes. •Look closely at similarities, differences, patterns and change.	•Developing an understanding of change. •Observe and explain why certain things may occur (e.g. leaves falling off trees, weather changes). •Look closely at similarities, differences, patterns and change. •Comments and questions about the place they live or the natural world.

Year group:	Year 1 / 2 – please note this is on an A and B year rotation				
	Autumn 1 & Autumn 2		Spring 1 & 2		Summer 1 &2
Unit:	**Everyday materials**	**Seasonal changes**	**Animals, including Humans**	**Living things and their Habitats**	**Identifying Plants**
Knowledge & Understanding	● Distinguish between an object and the material from which it is made. ● Describe materials using their senses, using specific scientific words. ● Explain what material objects are made from. ● Explain why a material might be useful for a specific job. ● Name some different everyday materials e.g. wood, plastic, metal, water and rock and sort these materials into groups by given criteria. ● Explain how solid shapes can be changed by squashing, bending, twisting and stretching. ● Identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard.	● Observe and talk about changes across the four seasons? ● Name the four seasons in order. ● Observe and describe weather associated with the seasons. ● Observe and describe how day length varies. ● Observe features in their environment and explain that these are related to a specific season. ● Talk about weather variations in different parts of the world.	● Point out some of the differences between animals. ● Sort animals into living and non-living categories. ● Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. ● Identify animals which are carnivores, omnivores and herbivores. ● Name and compare parts of an animal's body. ● Name a range of domestic animals. ● Investigate 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.	● Identify name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. ● Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene. ● Draw & label basic parts of the human body. ● Identify the main parts of the human body and link them to their senses. ● Name some parts of the human body that cannot be seen.	● Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen. ● Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, branches, leaves and flowers. ● 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.
Working Scientifically:	● Find out by watching, listening, tasting, smelling and touching. ● Talk about what they see, touch, smell, hear or taste	● Use simple equipment to help them make observations. ● Give a simple reason for their answers.	● Identify and classify things they observe. ● Think of some questions to ask. ● Answer some scientific questions ● Give a simple reason for their answers. ● Explain what they have found out	● Show their work using pictures, labels and diagrams. ● Record findings using standard units. ● Put information into a bar graph or table.	● Perform a simple test. ● Tell other people about what they have done.
Vocabulary:	*Materials, object, wood, metal, glass, fabric, rock, plastic, smooth, shiny, dull, soft, hard.*	*Rain, cloud, sun, Autumn, Winter, Spring, Summer, season, snow, temperature.*	*Animal, group, compare, human, amphibian, mammal, senses, carnivore, herbivore, omnivore, reptile.*	*Senses, sight, heart, lungs, brain, skeleton, muscles.*	*Plant, flower, tree, bush, roots, stem, seed, petal, deciduous, evergreen, temperature, bulbs, branches, trunk.*

Year group:	Year 1 / 2 – please note this is on an A and B year rotation			
	Autumn	**Spring**		**Summer**
Topic:	**Everyday Materials**	**Animals, including Humans**	**Growing Plants**	**Living things & their habitats**
Knowledge & Understanding:	● Describe the simple physical properties of a variety of everyday materials. ● Compare and group together a variety of materials based on their simple physical properties. ● Describe the properties of different materials using words like transparent or opaque, flexible, etc. ● Sort materials into groups and say why they have sorted them in that way. Say which materials are natural and which are man-made.	● Describe what animals need to survive. ● Explain that animals grow and reproduce ● Explain why animals have offspring which grow into adults. ● Describe the life cycle of some living things (e.g. egg, chick, chicken). ● Explain the basic needs of animals, including humans for survival (water, food, air). ● Describe why exercise, balanced diet and hygiene are important for humans. ● Explain that animals reproduce in different ways.	● Describe what plants need to survive. ● 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. ● Describe what plants need to survive and link it to where they are found. ● Explain that plants grow and reproduce in different ways?	● Explore and compare the differences between things that are living, that are dead and 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. ● Understand the effects of pushing and pulling. Pushing and pulling can make things go faster or slower or make them start or stop. ● Understand that larger masses take bigger pushes/pulls to move or stop them. ● Pushing and pulling can change the shape of things as well as move them and bigger pushes and pulls have bigger effects
Working Scientifically:	● Carry out a simple fair test. ● Explain why it might not be fair to compare two things. ● Organise things into groups. Use information from books and online information to find things out.	● Use “see, touch, smell, hear or taste” to help them answer questions and suggest ways of finding things out through the senses. ● Say whether things happened as they expected and if not why not.	● Say whether things happened as they expected. ● Use text, diagrams, pictures, charts, tables to record their observations. ● Measure using simple equipment.	● Use prompts to find things out. ● Compare several things. ● Suggest more than one way of grouping animals and plants and explain their reasons. ● Identify animals and plants by specific criteria, e.g., lay eggs or not; have feathers or not. ●
Vocabulary	*Flexible, opaque, transparent, translucent, material, plastic, hard, smooth, absorbent, brittle, rubber, leather, wool, rigid, fabric, brick, stone, glass, rough, metal, wood, waterproof, paper.*	*Survive, life, reproduce, grow, life-cycle, diet, balanced, exercise, hygiene, offspring, survival.*	*Diagrams, observations, equipment, survive, flowers, plants, strawberry, cress, light, soil, nutrients, root, stem, leaves, seeds, bulbs, temperature, reproduce.*	*Alive, living, dead, never living, organism, animal, plant, habitat, microhabitat, predators, prey, prediction, artificial, food chain, producer, consumer, dependent.*

Year group:	Year 3				
	Autumn		Spring		Summer
Topic:	**Light**	**Materials Rocks & Soils**	**Animals including Humans**	**Forces and Magnets**	Plants
Knowledge & Understanding:	● Recognise that light is needed to see things. ● Recognise that darkness is the absence of light. ● Observe that light is reflected from surfaces. ● Recognise that the light from the sun is dangerous and that there are different ways to protect your eyes from the sun. ● Understand that shadows are formed due to a solid object blocking the light source. ● Explain the need for brighter or dimmer light. ● Differentiate between opaque, transparent and translucent. ● Explain why an objects shadow gets bigger or smaller when light source is brought closer or further away from the object.	● Compare and group together different kinds of rocks on the basis of their simple, physical properties. ● Relate the simple physical properties of some rocks to their formation (igneous or sedimentary) and classify them. ● Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock. ● Recognise that soils are made from rocks and organic matter? ● Begin to relate the properties of rocks with their uses.	● Explain the importance of a nutritionally balanced diet. ● Describe how nutrients, water and oxygen are transported in animals and humans. ● Explain that all animals (including humans) cannot produce their own nutrients and eat to get nutrients. ● Explain the skeletal and muscular system of a human. ● Explain how the muscular and skeletal systems work together to create movement. ● Classify living and non-living things by a number of characteristics. ● Explain how people, weather and environmental factors can affect living.	● 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.	● 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. ● Investigate the way in which water is transported within plants. ● Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. ● Classify a range of common plants according to many criteria (environment it is found in, size, climate required etc.)
Working Scientifically:	● Use a range of equipment in a simple test. ● Explain what they have found out and use measurements/ data to help explain or answer questions.	● Make and record and prediction before testing. ● Make suggestions on how they might be able to find something out. ● Plan a fair test and explain why it is fair. ● Set up a simple fair test and make comparisons.	● Explain why they need to collect evidence/information to answer a question. ● Record and present what they have found using scientific language, drawings, labelled diagrams, bar charts and tables.	● Make accurate measurements using standard units. ● Measure using different equipment and units of measure. ● Describe findings using scientific language. ● Explain findings in numerous ways (presentation, display etc.) ● Use findings to write a simple conclusion. ● Suggest improvements for future testing and predict outcomes from these changes.	● Record observations in various ways (labelled diagram, bar graphs). ● Suggest how to improve their work if they did it again.
Vocabulary	*Light, dark, reflect, surface, natural, shadow, blocked, artificial, source, shine, transparent, translucent, and opaque.*	*Materials, properties, solid, particle, organic, sedimentary, metamorphic, Igneous, fossil and compression.*	*Muscular, skeletal, nutrients, oxygen, classify, human, balanced, diet, non-living.*	*Force, push, pull, friction, surface, Newton, magnet, magnetic, material, North pole, South pole, attract and repel.*	*Plant, flower, tree, bush, roots, stem, leaves, germinate, pollinate, dispersal, seed, stamen, ovary, style, stigma, petal, sepal, nectary, adaptation.*

Year group:	Year 4					
	Autumn		Spring		Summer	
Topic	Living things and their Habitats	Sound	Animals, including Humans	Electricity	States of Matter	Living things & their habitats
Knowledge & Understanding:	● Identify and name a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups. ● Give reasons for classifying plants and animals based on specific characteristics. ● Recognise that environments are constantly changing and that this can sometimes pose dangers to specific habitats. ● Identify that humans and some animals have skeletons and muscles for support, protection and movement. ● Explain how people, weather and the environment can affect living things. ● Explain how certain living things depend on one another to survive. ● Name and group a variety of living things based on feeding patterns	● Identify how sounds are made, associating some of them with something vibrating. ● Recognise that vibrations from sounds travel through a medium to the ear. ● Explain how to change a sound (louder/softer). ● Find patterns between the pitch of a sound and features of the object that produce it. ● Find patterns between the volume of the sound and the strength of the vibrations that produced it. ● Recognise that sounds get fainter as the distance from the sound source increases. ● Explain how you could change the pitch of a sound. ● Investigate how different materials can affect the pitch and volume of sounds.	● Identify the different types of teeth in humans and their simple functions. ● Identify that animals, including humans, need the right types and amounts of nutrition that they cannot make their own food and they get nutrition from what they eat. ● Describe the ways in which nutrients and water are transported within animals, including humans. ● Describe the simple functions of the basic parts of the digestive system in humans. ● Compare the teeth of herbivores and carnivores. ● Explain what a simple food chain shows. ● Construct and interpret a variety of food chains, identifying producers, predators and prey.	● 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 ● Recognise some common conductors and insulators, and associate metals with being good conductors. ● Associate metals with being good conductors. ● Explain why cautions are necessary for working safely with electricity.	● 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 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. ● Associate the rate of evaporation with temperature. ● Group and classify a variety of materials according to the impact of temperature on them. ● Explain what happens over time to materials such as puddles on the playground or washing hanging on a line.	● 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 and have an impact on living things
Working Scientifically	● Decide which information needs to be collected and decide which the best way for collecting it is. ● Make a prediction based on something they have found out. ● Identify differences, similarities or changes related to simple scientific ideas or processes.	● Plan a fair test and isolate variables, explaining why it was fair and which variables have been isolated. ● Plan and carry out an investigation by controlling variables fairly and accurately. ● Use straightforward scientific evidence to answer questions or to support their findings.	● Explain their findings in different ways (display, presentation, and writing). ● Evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables.	● Set up a simple fair test to make comparisons. ● Suggest improvements and predictions. ● Use test results to make further predictions and set up further comparative tests. ● Take measurements and record what they have found in a range of ways. ● Report findings from investigations	● Use their findings to draw a simple conclusion. ● Make accurate measurements using standard units. ● Record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models.	● Make systematic and careful observations over time, looking at similarities & differences ● Use results to draw simple conclusions, make predications ● Identify scientific evidence that has been used to support or refute ideas or arguments

		● Use a graph or diagram to answer scientific questions.				
Vocabulary	*Organism, characteristic, invertebrate, vertebrae, environment, habitat, classification, producer, consumer, predator, prey, herbivore, carnivore, omnivore.*	*Vibration, volume, sound wave, pitch, insulator, conductor, amplitude, wavelength*	*Organ, digestion, nutrients, nutrition, carbohydrate, protein, fat, dairy, sugar, incisor, canine, premolar, molar, carnivore, herbivore, omnivore.*	*Electricity, circuit, switch, insulator, conductor, cells, wires, bulbs, switches, buzzers, battery.*	*Solid, liquid, gases, evaporation, condensation, water cycle, temperature.*	*Amphibians, animals, classify, endangered, deforestation, habitat, invertebrate, nature reserves, ecological, nutrition*

Year group:	Year 5				
	Autumn		Spring		Summer
Topic	Properties & Changes to Materials	Living things and their Habitats	Earth & Space	Forces	Animals, including Humans]
Knowledge & Understanding:	● Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets. ● Understand how 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, oxidisation and the action of acid on bicarbonate of soda. ● Describe methods for separating mixtures (filtration, distillation). ● Explore changes that are difficult to reverse, e.g. burning, rusting and	● Describe the life cycles common to a variety of animals, including humans (birth, growth, development, reproduction, death), and to a variety of plants (growth, reproduction and death). ● Explain the classification of living things into broad groups according to common, observable characteristics and based on similarities and differences, including plants, animals and microorganisms. ● Explore the work of well know naturalists and animal behaviourists (David Attenborough and Jane Goodall). ● Observe their local environment and draw conclusions about life-cycles, e.g. plants in the vegetable garden or flower border. ● Compare the life cycles of plants and animals in their local environment with the life cycles of those around the world, e.g. rainforests.	● 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. ● Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. ● Explain how seasons and the associated weather is created. ● Compare the time of day at different places on the earth. ● Begin to understand how older civilizations used the sun to create astronomical clocks, e.g. Stonehenge. ● Explore the work of some scientists (Ptolemy, Alhazen, and Copernicus).	● Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. ● Describe magnets as having two poles. ● Predict whether two magnets will attract or repel each other, depending on which poles are facing. ● 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. ● Describe and explain how motion is affected by forces (including gravitational attractions, magnetic attraction and friction). Work out how water can cause resistance to floating objects	● Describe the life process of reproduction in some plants and animals. ● Describe the changes as humans develop from birth to old age. ● Create a timeline to indicate stages of growth in certain animals (frogs, butterfly's etc.). ● Describe the changes experienced in puberty. ● Draw a timeline to indicate stages in the growth and development of humans.

	reactions such as vinegar with bicarbonate of soda. ● Explore the work of chemists who created new materials, e.g. Spencer Silver (glue on sticky notes				
Working Scientifically	● Use test results to make predictions to set up comparative and fair tests. ● Take repeat readings when appropriate. ● Decide which units of measurement they need to use. ● Explain why a measurement needs to be repeated. ● Report and present findings from enquiries through written explanations and conclusions.	● Record more complex data and results using scientific diagrams, labels, classification keys, tables, scatter graphs, bar and line graphs. ● Find a pattern from their data and explain what it shows.	● Use information to help make a prediction. ● Explain, in simple terms, a scientific idea and what evidence supports it. ● Suggest how to improve their work and say why they think this.	● Plan and carry out a scientific enquiry to answer questions, including recognising and controlling variables where necessary. ● Make a prediction with reasons. ● Vary one factor whilst keeping the others the same in an experiment. ● Take measurements using a range of scientific equipment with increasing accuracy and precision.	● Present a report of their findings through writing, display and presentation. ● Explore different ways to test an idea, choose the best way and give reasons. ● Use a graph to answer scientific questions. ● Link what they have found out to other science.
Vocabulary	*Reversible, irreversible, solid, liquid, gases, evaporation, condensation, water-cycle, temperature.*	*Life-cycle, organism, offspring, vertebrate, invertebrate, birth, growth, development, stamen, petal, stigma, ovary, sepal, sexual, asexual, reproduction, dissection*	*Heliocentric, planets, orbit, gravity, solar system, rotate, lunar phases, air resistance.*	*Friction, gravity, air-resistance, water-resistance, buoyancy, Newton, Newton metre, push, pull, force, magnetism.*	*Gestation, embryo, organism, offspring, vertebrate, invertebrate, period, adolescence, puberty.*

Year group:	Year 6				
	Autumn		Spring		Summer
Topic	Light	Evolution and Inheritance	Living things & their habitats	Electricity	Animals including humans
Knowledge & Understanding:	● Understand 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/reflect light into the eyes. ● Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes. ● 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. ● Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.	● Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. ● Describe how adaptation leads to evolution. ● Recognise how and why the human skeleton has changed over time, since we separated from other primates. ● Recognise that living things have changed over time & that fossils provide information about living things that inhabited the earth mya. ● Give reasons why offspring are not identical to each other or to their parents. ● Explain the process of evolution and describe the evidence for this. ● Talk about the work of Charles Darwin, Mary Anning and Alfred Wallace. ● Explain how some living things adapt to survive in extreme conditions. ● Analyse the advantages & disadvantages of specific adaptations.	● 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. ● Explain why classification is important. ● Readily group animals into reptiles, fish, amphibians, birds and mammals. ● Sub divide their original groupings and explain their divisions. ● Group animals into vertebrates and invertebrates. ● Find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification?	● Identify and name the basic parts of a simple electric series circuit (cells, wires, bulbs, switches, buzzers). ● Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers, the on/off position of switches. ● Use recognised symbols when representing a simple circuit in a diagram. ● Explain the danger of short circuits. ● Explain what a fuse is. ● Explain how to make changes in a circuit. ● Explain the impact of changes in a circuit. ● Explain the effect of changing the voltage of a battery.	● Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood (including the pulse and clotting). ● Recognise the impact of diet, exercise, drugs and lifestyle on the way human bodies function. ● Describe the ways in which nutrients and water and transported within animals, including humans. ● Compare the organ systems of humans to other animals. ● Make a diagram of the human body and explain how different parts work and depend on one another. ● Name, locate and describe the major organs in the human body.
Working Scientifically	● Explain qualitative & quantitative data. Plan and carry out an investigation by controlling variables fairly and accurately. ● Use a graph to answer scientific questions. ● Suggest how to improve their work and say why they think this. ● Report findings from investigations through written explanations and conclusions. ● Explain how they could improve their way of working.	● Make a prediction with reasons. ● Present a report of their findings through writing, display and presentation. ● Explain how a scientist has used their scientific understanding plus good ideas to have a breakthrough. ● Collect information in different ways. ● Record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models. ● Identify scientific evidence that has been used to	● Vary one factor whilst keeping the others the same in an experiment and explain why they do this. ● Use test results to make further predictions and set up further comparative tests. ● Identify the key factors when planning a fair test. ● Decide which units of measurement they need to use, explaining why a measurement may need to be repeated. ● Record their measurements in different ways	● Use information from different sources to answer a question and plan an investigation. ● Explain why they have chosen specific equipment. ● Find a pattern from their data and explain what it shows. ● Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms.	● Explore different ways to test an idea, choose the best way, and give reasons. ● Use information to help make a prediction. ● Choose the best way to answer a question. ● Make a prediction which links with other scientific knowledge. ● Draw conclusions from their work. ● Link their conclusions to other scientific knowledge.

		support to refute ideas or arguments.			
Vocabulary	*Absorb, reflect, periscope, waves, volt, circuit, parallel, series, angle, light source, shadows, electrical component.*	*Fossils, offspring, inherit, variation, generation evolution, adaptation, habitat, evolve, species.*	*Electricity, circuit, switch, insulator, conductor, cells, wires, bulbs, switches, buzzers, battery, fuse, battery, live.*	*Classification, Life-cycle, organism, offspring, vertebrate, invertebrate, birth, growth, development, reproduction, organism, micro-organism, yeast.*	*Organism, microorganism, circulatory system, red blood cells, white blood cells, platelets, plasma, heart, lungs, arteries, veins, capillaries, oxygenated, deoxygenated, hormones, oxygen, lungs, heart, respiration, trachea (windpipe), bronchus (Bronchi), heart rate.*

How we plan learning in Science

Lessons are planned to ensure an enquiry-led approach is undertaken, with a mixture of creative investigations and experiments, as well as focussed recording and opportunities for problem solving. Teachers also encourage children to make real world links within science, so the topic is always relevant, engaging and most importantly, informative.

Firstly, teachers will focus on the prior learning and recap any knowledge necessary for the topic. Teachers will use this to guide their planning and match the different points of the curriculum to the learning intentions of each session so that the question is easily answered at the end of the topic and the children are following the correct knowledge progression necessary to their learning. Children will also be encouraged to use the topic specific vocabulary throughout their work. Teachers will do 'checks on learning' regularly, to ensure that the correct level of detail and skill is being used by the children, and that the children are grasping the key principals of the topic in Science that they are focussing on.

How we assess learning in Science

Within each academic year, children will study a range of scientific topics. In both Key Stage 1 (KS1) and Key Stage 2 (KS2), children are taught Science as a freestanding subject, covering a specific topic each half term. Each Science topic is primarily based around one of the three core disciplines (Biology, Physics and Chemistry) with the aim that children are exposed to different methods of working scientifically throughout all topic areas. Teachers will assess different National Curriculum learning objectives which link to the topic on the school's online data tracking system Insight.

Health and Safety

In key stage 1, and key stage 2 all pupils study Science within their own classroom environments, with the occasional visit to outside areas when appropriate to the lesson, there are some small risks which need to be monitored. The risk of harm is low, as the experiments/investigations tend to be on a smaller scale. However, it is vital that children and staff follow the key principals of Health and Safety during a Science lesson. In upper Key Stage 2, in order to support transition, children are actively encouraged to use CLEAPPS to risk assess their own enquiries where appropriate.

It is our aim to ensure that all pupils feel safe and secure in Science lessons and do not come to any harm. Children are actively encouraged to be sensible at all times during a Science lesson and to carefully follow the teacher's instructions and the following basic laboratory rules:

- Never run during a practical activity
- Always stand for practical activities
- Have hair tied back during a practical activity
- Ensure chairs are fully tucked under tables during a practical activity
- Ensure hands are washed thoroughly after practical activity
- Clean equipment correctly after practical
- Follow instructions/guidance carefully during practical activity
- Report accidents to teacher immediately
- Never leave equipment unattended during a practical activity
- Keep work area clear and tidy (minimal possessions on table)