

<b>EYFS</b>	<p><b>Through teaching and continuous provision, science in EYFS enables children to:</b></p> <ul style="list-style-type: none"> <li>• Make comments about what they have heard and ask questions to clarify their understanding.</li> <li>• Use a range of small tools, including scissors, paint brushes and cutlery.</li> <li>• Work and play cooperatively and take turns with others.</li> <li>• Explore the natural world around them, making observations and drawing pictures of plants and animals.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in small group, class, and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.</li> <li>• Understand some important processes and changes in the natural world, including the seasons and changing states of matter.</li> <li>• Feel confident to answer simple questions about observable properties of objects and people, animals, and plants around them.</li> <li>• Compare objects in their environment and talk about similarities and differences.</li> <li>• Ask questions about the world around them and seek to find their own answers.</li> <li>• Know what a plant is.</li> <li>• Know what a flower is.</li> </ul>	<ul style="list-style-type: none"> <li>• Know where you see plants describe different plants and flowers know what an animal is.</li> <li>• Recognise and name a variety of different animals.</li> <li>• Know the names of different body parts of humans and animals they have experience of.</li> <li>• Recognise that different everyday objects are made from different materials.</li> <li>• Describe how different objects look and feel.</li> <li>• Know about different types of weather.</li> <li>• Observe changes in trees and plants as the seasons progress.</li> </ul>
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Class	Cycle	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year 1/2	A	<p><b><u>Park Explorers</u></b></p> <p>This unit introduces children to living things in their local environment by focusing on the plants they can see growing from the ground or in water. Pupils learn to identify the basic parts of a plant and begin to understand that each part has a simple job to help the plant survive. As they explore the park or school grounds, they notice patterns such as some trees losing their leaves while others remain green. Through first-hand observation, children begin to connect what plants need with where they grow, forming early foundations for future learning about habitats and plant biology.</p>	<p><b><u>My Body and my Senses</u></b></p> <p>This unit helps children recognise their own bodies as tools for observing the world. Pupils learn the names of key body parts and begin to understand the role of the five senses in helping them notice and describe what is around them. Through practical and descriptive activities, they explore how the body responds to different tastes, textures and smells. These early experiences strengthen their ability to observe carefully and communicate clearly, building the foundational scientific skills they will use across future units.</p>	<p><b><u>Everyday Materials</u></b></p> <p>This unit introduces children to the materials objects are made from and guides them to observe their simple properties closely. Pupils learn to identify materials such as wood, plastic, metal, glass, fabric and rock, and begin to talk about how they look and feel. They start to link materials to their everyday uses by exploring whether they are hard or soft, bendy or stiff, or whether they keep their shape when pressed. This early understanding of materials and suitability lays the groundwork for deeper materials science in later key stages.</p>	<p><b><u>Animal Groups</u></b></p> <p>This unit introduces the first steps of biological classification by helping pupils recognise the characteristics of five common animal groups. Children learn how features such as feathers, scales, wings, gills or skin help classify animals as birds, reptiles, amphibians, fish or mammals. They observe simple life cycle examples, such as tadpoles becoming frogs. Through comparing and grouping, pupils begin to recognise patterns in how animals look and live, preparing them for more detailed classification work in Year 4.</p>	<p><b><u>Animal Diets</u></b></p> <p>This unit builds on children's understanding of animals by exploring how different animals meet their need for food. Pupils learn the simple scientific terms herbivore, carnivore and omnivore and begin to sort animals according to what they eat. They also explore which foods come from plants and which come from animals, recognising that all living things need food to grow and stay healthy. This early understanding prepares children for later work on food chains and energy transfer.</p>	<p><b><u>Seasonal Changes</u></b></p> <p>This unit helps children make sense of predictable natural changes across the year. Pupils learn to name the four seasons in order and describe the changes in weather, temperature and daylight they observe. They begin to notice patterns, such as trees developing buds in spring or nights becoming longer in winter. By linking these changes with what plants and animals do at different times of the year, pupils start to build an early understanding of seasonal cycles that will support later learning about the environment and climate.</p>
		<p><b><u>Key Knowledge</u></b></p> <p>Children learn that plants are living things that grow from the ground or in water and that each plant has identifiable parts such as the roots, stem, leaves and flower. They begin to understand that each part has a simple role in helping the plant survive. As they explore local green spaces, pupils notice differences between plants and observe how some trees lose their leaves while others remain green throughout the year. They start to recognise that plants need water, light, soil and air to grow, forming secure early knowledge that they build on</p>	<p><b><u>Key Knowledge</u></b></p> <p>Children learn that humans need food, water, air, hygiene and exercise to stay healthy. They explore how humans grow and change from babies into adults and identify the main parts of the body such as the head, arms, legs, torso, ears, eyes, nose and mouth. They learn that the five senses help us understand the world around us, and they notice that exercise affects the body, including changes in heart rate. The unit also introduces the idea that good hygiene helps to keep us healthy.</p>	<p><b><u>Key Knowledge</u></b></p> <p>Children learn that everyday objects are made from materials such as wood, metal, plastic, glass, fabric and rock. They begin to describe materials by their simple properties, noticing whether they are hard or soft, rough or smooth, bendy or stiff. Pupils explore how materials behave when they are pressed or handled and start to recognise that materials are chosen for particular jobs because of the way they look, feel or act. This early knowledge supports later work on materials and their suitability.</p>	<p><b><u>Key Knowledge</u></b></p> <p>Pupils learn that animals can be grouped by their features, such as mammals, birds, reptiles, amphibians, fish and insects. They explore how different groups share common characteristics, such as body covering or how they move, and discover that some animals are born alive while others hatch from eggs. They also begin to understand that an animal's body helps it live successfully in its habitat.</p>	<p><b><u>Key Knowledge</u></b></p> <p>Children learn that animals need food to survive and grow. They discover that herbivores eat plants, carnivores eat meat and omnivores eat both, and they begin to recognise that food provides animals with the energy they need to move, grow and stay healthy. They learn what a simple food chain shows and are introduced to the idea that humans also need a balanced diet to stay healthy.</p>	<p><b><u>Key Knowledge</u></b></p> <p>Pupils learn that the year is divided into four seasons and they begin to describe the weather and natural changes that happen in each one. They notice patterns such as trees growing new leaves in spring, days becoming longer in summer, leaves changing colour in autumn and colder temperatures in winter. By observing the same places or trees across the year, they start to understand that seasonal changes are predictable and affect plants, animals and humans. This helps them make links between weather, daylight</p>

	when studying habitats and plant growth in later years.					hours and what they observe outdoors.
	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• plant</li> <li>• root</li> <li>• stem</li> <li>• leaf</li> <li>• flower</li> <li>• tree</li> <li>• soil</li> <li>• water</li> <li>• light</li> <li>• grow</li> <li>• living</li> <li>• observe</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• body</li> <li>• head</li> <li>• eyes</li> <li>• ears</li> <li>• nose</li> <li>• mouth</li> <li>• hands</li> <li>• senses</li> <li>• taste</li> <li>• touch</li> <li>• smell</li> <li>• hear</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• material</li> <li>• wood</li> <li>• metal</li> <li>• plastic</li> <li>• glass</li> <li>• fabric</li> <li>• rock</li> <li>• hard</li> <li>• soft</li> <li>• smooth</li> <li>• rough</li> <li>• bendy</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• animal</li> <li>• bird</li> <li>• fish</li> <li>• mammal</li> <li>• reptile</li> <li>• amphibian</li> <li>• fur</li> <li>• feathers</li> <li>• scales</li> <li>• wings</li> <li>• fins</li> <li>• group</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• food</li> <li>• eat</li> <li>• plant</li> <li>• animal</li> <li>• herbivore</li> <li>• carnivore</li> <li>• omnivore</li> <li>• grow</li> <li>• healthy</li> <li>• diet</li> <li>• needs</li> <li>• sort</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• season</li> <li>• spring</li> <li>• summer</li> <li>• autumn</li> <li>• winter</li> <li>• weather</li> <li>• daylight</li> <li>• rain</li> <li>• wind</li> <li>• snow</li> <li>• cold</li> <li>• warm</li> </ul>
B	<p><b>Uses of Everyday Materials</b></p> <p>This unit helps children explore the materials that everyday objects are made from and understand that each material has simple properties that we can observe or test. They learn that materials such as wood, metal, plastic, glass and fabric behave differently when they are bent, squashed, twisted or stretched. As pupils investigate these differences, they begin to recognise that materials are chosen for specific jobs because of how they behave. This early scientific thinking lays the groundwork for their later study of materials and their properties in KS2.</p>	<p><b>Local Habitats</b></p> <p>This unit introduces children to the idea that living things depend on the places where they live in order to survive. They begin by learning the difference between things that are living, dead or have never been alive, and then explore the school grounds or local park to see how different habitats meet the needs of the plants and animals found there. Through first-hand observation, pupils start to notice the connections between living things and their environment. This early awareness supports the development of their understanding of habitats and classification as they move into KS2.</p>	<p><b>Animal Needs</b></p> <p>This unit introduces children to the basic needs that animals, including humans, must have in order to survive. Pupils learn that food, water and air are essential, and they begin to recognise that all animals change and grow as they move through different stages of life. Through observing and discussing examples of animals and humans, children notice simple patterns in growth and develop an early understanding of how exercise and hygiene help keep the body healthy. These ideas prepare them for more detailed work on animals, humans and health in KS2.</p>	<p><b>Growing Plants</b></p> <p>This unit introduces young children to the idea that plants grow from seeds and bulbs and change over time. They learn that plants need water, light and the right temperature in order to grow well. Through observing seeds at different stages, pupils notice patterns in growth and begin to link environmental conditions with outcomes. These early ideas prepare them for the deeper study of plants in Year 3.</p>	<p><b>Habitats and Microhabitats</b></p> <p>This unit helps children explore small-scale habitats and understand that different conditions support different forms of life. Pupils investigate places such as soil, leaf litter, under stones or on tree bark, noticing how light, moisture and temperature vary and how these differences influence which creatures can live there. As pupils observe these spaces over time, they begin to recognise simple patterns in how living things respond to their environment. This early understanding strengthens the foundations they will build on when studying more complex habitats and ecosystems in KS2.</p>	<p><b>Food Chains and Health</b></p> <p>This unit introduces children to the idea that all living things need food to survive and that food chains show how energy passes from one living thing to another. Pupils learn that plants make their own food and that animals rely on plants or other animals to meet their needs. As they build simple food chains, they begin to understand the roles of producers, consumers, predators and prey. Alongside this, pupils explore what humans need to stay healthy and learn that a balanced diet supports wellbeing. These early concepts prepare them for deeper study of nutrition, food chains and ecosystems in KS2.</p>
	<p><b>Key Knowledge</b></p> <p>Pupils learn that everyday objects are made from different materials such as wood, metal, plastic, glass, fabric and rubber. They explore the simple properties of these materials, including whether they are hard, soft, flexible, strong or smooth, and begin to understand that these properties help determine how materials are used. They also find out that some materials can change shape when they are squashed, bent, twisted or stretched, and that simple tests can</p>	<p><b>Key Knowledge</b></p> <p>Pupils learn that living things depend on their habitats to provide what they need, such as food, water, air and shelter. They come to understand the difference between things that are living, dead and never alive, and use their observations of the local environment to explain these ideas. As they explore the school grounds or nearby green spaces, they begin to recognise that different places support different plants and animals. Through simple investigations, they notice</p>	<p><b>Key Knowledge</b></p> <p>Children learn that animals, including humans, have basic needs such as food, water, air and shelter. They begin to understand that animals grow and change as they move from babies to adults and that different animals have different life cycles. Through observing animals in stories, pictures and their environment, pupils notice simple patterns in how animals move, feed and behave. They also develop their understanding of how exercise helps humans stay healthy and</p>	<p><b>Key Knowledge</b></p> <p>Children learn that seeds and bulbs grow into plants when their basic needs are met. Germination is the first stage of growth where a root and shoot begin to appear. They discover that plants need water, light and the right temperature to grow well, and that roots anchor the plant and take in water. The stem holds the plant upright and moves water to the leaves, while the leaves help the plant make food. Through simple observations, pupils begin to recognise that plants grow at</p>	<p><b>Key Knowledge</b></p> <p>Pupils learn that living things need food, water, air and shelter to survive and that a habitat is a place where plants and animals live because it meets these needs. They explore different microhabitats such as soil, leaf litter, stones or tree bark, noticing that conditions like light, shade, moisture and temperature influence what can live there. Through observations, they begin to understand that living things depend on each other within a habitat and that some animals are</p>	<p><b>Key Knowledge</b></p> <p>Pupils learn that all living things need food to survive and that food chains show how energy is passed from one living thing to another. They come to understand that plants are producers because they make their own food, while animals are consumers that eat plants or other animals. Through building simple food chains, they begin to recognise the roles of predators and prey. Alongside this, they explore what humans need for a healthy lifestyle and start to understand that eating a balanced diet supports the body's growth and wellbeing.</p>

	help us decide which materials are most suitable for a particular job.	how features of a habitat, such as shade, water or shelter, influence the living things found there.	begin to recognise the importance of caring for animals by meeting their basic needs.	different rates depending on the conditions they are in.	better suited to certain environments than others.	
	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>material</li> <li>wood</li> <li>metal</li> <li>plastic</li> <li>glass</li> <li>fabric</li> <li>property</li> <li>hard</li> <li>soft</li> <li>smooth</li> <li>rough</li> <li>bendy</li> <li>stiff</li> <li>waterproof</li> <li>absorbent</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>habitat</li> <li>living</li> <li>dead</li> <li>never alive</li> <li>plant</li> <li>animal</li> <li>environment</li> <li>shelter</li> <li>food</li> <li>water</li> <li>soil</li> <li>tree</li> <li>leaf</li> <li>observe</li> <li>compare</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>animal</li> <li>human</li> <li>baby</li> <li>adult</li> <li>life cycle</li> <li>food</li> <li>water</li> <li>air</li> <li>exercise</li> <li>hygiene</li> <li>healthy</li> <li>grow</li> <li>survive</li> <li>change</li> <li>heart rate</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>seed</li> <li>bulb</li> <li>growth</li> <li>soil</li> <li>light</li> <li>water</li> <li>temperature</li> <li>germinate</li> <li>sprout</li> <li>leaves</li> <li>flower</li> <li>fruit</li> <li>shoot</li> <li>root</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>microhabitat</li> <li>habitat</li> <li>insect</li> <li>minibeast</li> <li>conditions</li> <li>light</li> <li>shade</li> <li>temperature</li> <li>moisture</li> <li>adaptation</li> <li>shelter</li> <li>soil</li> <li>log</li> <li>observe</li> <li>record</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>food chain</li> <li>producer</li> <li>consumer</li> <li>plant</li> <li>animal</li> <li>predator</li> <li>prey</li> <li>energy</li> <li>eat</li> <li>herbivore</li> <li>carnivore</li> <li>omnivore</li> <li>diet</li> <li>healthy</li> <li>nutrition</li> </ul>
Year 3	<p><b>Plants</b></p> <p>The main context for learning is plant growth and the seasons. In this unit, children will build on previous knowledge gained in Year 2. They will understand the functions of different parts of flowering plants they learnt to identify in Year 2 and further develop their understanding of how each part supports its growth. By the end of this unit, children will be able to carry out investigations in order to understand and explain different processes associated with plants. It will consolidate and extend their knowledge of the functions of the different parts of flowering plants and the part that flowers play in the life cycle of a flowering plant.</p>	<p><b>Rocks</b></p> <p>Children will build on prior learning from Year 2 of materials, living things and plants. Their knowledge of animals and plants learned in Year 2, will help them to understand the concept of fossils and organic matter within soil. By the end of this unit, children will be able to compare and sort different kinds of rocks based on their appearance and physical properties. They will be able to describe how fossils are formed and that soils are made from rocks and organic matter.</p>	<p><b>Light and Shadow</b></p> <p>Children will build on prior learning of electricity from Year 2 science. By the end of this unit, children will be able to recognise that we need light in order to see things and that dark is the absence of light. They will know that light is reflected from surfaces and how shadows are formed.</p>	<p><b>Animals Including Humans</b></p> <p>Children will build on their learning in Year 2. They will further investigate the body of humans and animals, building on their understanding by learning how the body works and grows. By the end of this unit, they will be able to identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food. Additionally, that humans and some other animals have skeletons and muscles for support, protection and movement.</p>	<p><b>Force and Magnet</b></p> <p>Children will build on prior learning of materials from Year 2. They will use their knowledge of sorting, by a given criterion, to compare and group objects that are magnetic. By the end of this unit, children will understand that forces need contact between two objects, but magnetic forces can act at a distance. They will have investigated how magnets attract and repel different materials. They will know that magnets have two poles and be able make predictions about whether two magnets will attract or repel each other.</p>	<p><b>The Bee Project</b></p> <p>Pupils will explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. They 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. They will further identify that humans and some other animals have skeletons and muscles for support, protection and movement.</p>
	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Understand what plants need to grow. (Working scientifically - making a predication, making scaffolded conclusions based on evidence, use of secondary data)</li> <li>Understand the functions of different parts of plants. (working scientifically - follow and set up a simple investigation, identifying and classifying).</li> <li>Describe the different ways in which plants can disperse</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Compare and group together different kinds of rocks (sedimentary, igneous, metamorphic) based on their appearance and simple physical properties – durable, permeable, impermeable, density. (working scientifically- compare and classify, make predictions, set up a simple procedure, comparative test).</li> <li>Describe in simple terms how fossils are formed when</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Recognise that they need light in order to see things and that dark is the absence of light. (working scientifically- questioning and observations)</li> <li>Notice that light is reflected from surfaces. (working scientifically - comparative testing)</li> <li>Recognise that light from the sun can be dangerous and that there are ways to protect their eyes and skin.</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Name the five food groups. (working scientifically- identifying and grouping).</li> <li>Identify that animals, including humans, need the right types and amount of nutrition (predict, observe, comparative testing and evaluation).</li> <li>Identify that humans and some other animals have skeletons and muscles for support, protection and movement. (Working</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know that some forces need contact between two objects (pushes and pulls), but magnetic forces can act at a distance. (working scientifically -follow a simple practical procedure, observe, make conclusions based on evidence, evaluation)</li> <li>Investigate how different surfaces can cause more or less friction.</li> <li>Working scientifically - Fair test, predictions, variables,</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know that bees live in hives. (Working scientifically - observations using a range of equipment).</li> <li>To recognise that bees communicate the position of nectar by doing a waggle dance. (working scientifically - systematic observations, follow a practical procedure)</li> <li>To recognise that not all bees make honey. (working scientifically - comparative</li> </ul>

	<p>their seeds. (Working scientifically - follow and set up a simple investigation Comparative or fair test).</p> <ul style="list-style-type: none"> <li>Investigate the way in which water is transported in a plant. (Working scientifically -observation over time, follow a simple investigation.)</li> <li>Know the part that flowers play in the life cycle of flowering plants, including pollination and seed formation. (Working scientifically- Follow a simple investigation, comparative or fair test. Identify and change variables.)</li> <li>Know the different ways in which plants can disperse their seeds: air, wind, water, animal.</li> </ul>	<p>things that have lived are trapped within rock. (working scientifically - follow a simple practical procedure)</p> <ul style="list-style-type: none"> <li>Know that Mary Anning made significant discoveries impacting palaeontology.</li> <li>Recognise that soils are made from rocks and organic matter and describe the four processes of soil formation (addition, losses, translocations and transformation).</li> <li>Working scientifically - follow a simple practical procedure, observe over time, make a conclusion based on evidence.</li> </ul>	<p>(working scientifically- observation).</p> <ul style="list-style-type: none"> <li>Know how shadows are formed and which objects are more likely to form a shadow: transparent, translucent or opaque. (working scientifically- Fair testing, identifying, classifying and grouping).</li> </ul>	<p>scientifically -Observe, modelling)</p>	<p>pattern seeking, repeats, averages, conclusion based on evidence.</p> <ul style="list-style-type: none"> <li>Know magnets attract or repel each other and attract some materials and not others. (Working scientifically - fair test, prediction, variables, repeats, pattern seeking, conclusion, evaluation).</li> <li>Describe magnets as having two poles. (working scientifically - observation).</li> </ul>	<p>and fair test, observing, asking questions).</p>
	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>roots</li> <li>stem</li> <li>trunk</li> <li>leaves</li> <li>flowers</li> <li>nutrients</li> <li>evaporation</li> <li>fertilisation</li> <li>petal</li> <li>stamen</li> <li>carpel (pistil)</li> <li>sepal</li> <li>pollination</li> <li>pollinator</li> <li>germinator</li> <li>seed dispersal</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>rocks</li> <li>igneous</li> <li>metamorphic</li> <li>sedimentary</li> <li>anthropic</li> <li>permeable</li> <li>impermeable</li> <li>Mary Anning</li> <li>cast fossil,</li> <li>mould fossil</li> <li>replacement fossil</li> <li>extinct</li> <li>organic matter</li> <li>topsoil</li> <li>sub soil</li> <li>base rock</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>light</li> <li>dark</li> <li>reflection</li> <li>ray</li> <li>pupil</li> <li>retina</li> <li>shadow</li> <li>opaque</li> <li>translucent</li> <li>transparent</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>nutrition</li> <li>nutrients</li> <li>carbohydrates</li> <li>proteins</li> <li>vitamins</li> <li>minerals</li> <li>fibre</li> <li>skeleton</li> <li>bones</li> <li>muscles</li> <li>joints</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>force</li> <li>magnetic force</li> <li>magnet</li> <li>attract</li> <li>repel</li> <li>poles</li> <li>contact force</li> <li>non-contact force</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>abdomen</li> <li>antennae</li> <li>mandible</li> <li>proboscis</li> <li>stinger thorax</li> <li>venom</li> <li>bee</li> <li>bread</li> <li>cells</li> <li>colonies</li> <li>drone</li> <li>hexagonal larva</li> <li>pupa royal</li> <li>jelly</li> <li>social bees</li> <li>honey</li> <li>propolis swarm</li> <li>waggle dance</li> <li>honeydew</li> <li>solitary</li> <li>beekeepers</li> <li>insecticide</li> </ul>
Year 4	<p><b>States of Matter</b></p> <p>This unit builds on prior knowledge from Year 2 where pupils developed their understanding and knowledge of everyday materials, properties and suitability. This topic links to the geography topic of weather as it will contextualise their knowledge of the water cycle and how rivers are formed.</p>	<p><b>Animals Including Humans</b></p> <p>This builds on knowledge from prior learning from Year 3 where pupils: identified 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 and identify that humans and some other animals have skeletons and</p>	<p><b>Sound</b></p> <p>This unit builds on knowledge from music lessons and discussions about pitch and tempo. Pupils' knowledge will also be strengthened through computing sessions on manipulating sound. At the end of this unit, pupils will have an understanding that sound is caused by objects vibrating;</p>	<p><b>Living Things and Their Habitats</b></p> <p>This unit builds on from prior knowledge where pupils were to taught to: explore and compare the differences between things that are living, dead and have never been alive. In addition to this, pupil will identify that most living things live in habitats to which they are suited and</p>	<p><b>Electricity</b></p> <p>Pupils will have gained some supporting knowledge from the Year 3 Light unit of study. They will also identify it as a cleaner source of energy. As a result of this unit, pupils should be able to identify common appliances which run on electricity. They should also be able to create a simple circuit and be aware of</p>	<p><b>The History of Science</b></p> <p>Pupils will understand that science ideologies evolve over time, depending upon what the research tells us, but this is also dependent upon whether technology is able to support the investigation. Pupils should be able to begin to recognise how scientific studies have impacted on evidence and may begin to</p>

<p>Following this unit, pupils will be able to: identify some of the key characteristics of liquids, solids, and gases; understand how some materials can change state e.g. freezing water changes it from a liquid to a solid, boiling it changes into a gas.</p>	<p>muscles for support, protection and movement. This unit will result in pupils being able to: describe the process of food through the digestive system; be able to identify the different teeth and their functions and have a deepened understanding of the transfer of energy through a food chain.</p>	<p>understand the difference between pitch and volume and recognise that sound travels through various mediums.</p>	<p>describe how different habitats meet their basic needs. The unit will also support Climate taught in geography, giving contextual knowledge to pupils about how change to environment can pose dangers to living things. As a result of this unit, pupils should be able to: use classification keys; recognise the differences between vertebrate and invertebrates; and identify that vertebrates can be grouped into mammals, reptiles, fish, birds, and amphibians.</p>	<p>different materials which can act as an insulator or a conductor.</p>	<p>apply this to other subject areas including Relationships and Health Education.</p>
<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know the main properties of solids, liquids and gases. (working scientifically - identify and classify, observations)</li> <li>Solids - holds its shape, closely packed particles.</li> <li>Liquids - takes shape of container, can be poured, particles less tightly packed.</li> <li>Gases - fill space they are in, particles very loosely packed.</li> <li>Compare and group materials according to whether they are solids, liquids or gases. (working scientifically-identify and classify)</li> <li>Know that some materials change state when they are heated or cooled (ice, water, water vapour). (working scientifically - set up and follow a simple investigation, predictions, conclusion, evaluation, research)</li> <li>Know what the water cycle is and the four main stages: evaporation, condensation, precipitation, collection. (working scientifically - set up and follow a simple investigation, observation, conclusion based on evidence, modelling, secondary data).</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Name and describe the simple functions of the basic parts of the human digestive system (mouth, oesophagus, stomach, liver, pancreas, duodenum, small intestine, large intestine, rectum, anus) (working scientifically - setup and follow a simple investigation, observation, conclusion based on evidence.)</li> <li>Identify different types of human teeth and their functions (molar, premolar, canine, incisor, wisdom).</li> <li>Identify differences in teeth of carnivores, omnivores and herbivores and why this is. Understand what causes tooth decay (plaque, bacteria, acids) and that some foods can damage teeth (sugars and starches, acids).</li> <li>(Working scientifically - follow and set up a simple investigation, predict, comparative test, conclusion, evaluation, variables).</li> <li>Construct and interpret a variety of food chains and know meaning of predator, prey, source, producer, consumer.</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know that sound is made when objects vibrate the air molecules nearby, causing a sound wave. (Working scientifically - observation over time).</li> <li>Know main parts of the ear (outer ear, middle ear, inner ear, auditory canal, ear drum, ossicles, cochlea, auditory nerve; working scientifically - observation over time)</li> <li>Know that vibrations from sounds travel through a medium (solid, liquid, gas) to the ear.</li> <li>Know pitch is how high or low a sound is and that the faster the vibrations, the higher the pitch. (Working scientifically - pattern seeking testing, measuring.)</li> <li>Know that the louder the sound (volume), the bigger the vibration (amplitude).</li> <li>Working scientifically- follow an investigation, fair testing, measuring sound, use of simple equipment).</li> <li>Know that sounds get fainter as the distance from the sound source increases.</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know that living things can be grouped in a variety of ways (e.g. plants and animals, flowering and non-flowering plants, vertebrates and invertebrates). Know the 5 main vertebrate groups: mammals, reptiles, amphibians, fish and birds. (Working scientifically - identify and classify, secondary data, observing, grouping, pattern seeking, making conclusions based on evidence).</li> <li>Use classification keys to help group, identify, and name living things in the environment. (Working scientifically - secondary data, classifying, identifying, pattern seeking, conclusions.)</li> <li>Know that environments can change through the effects of human population and development, litter, deforestation and natural events such as fire and floods and this can damage habitats. (Working scientifically - secondary data, evaluate data).</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Identify common appliances that run on electricity. (Working scientifically - follow and set up a simple practical procedure to gather and record data, observe over time, conclusion). <ul style="list-style-type: none"> <li>Describe common conductors (metals such as copper, iron and steel) and insulators (plastic, wood, rubber). (working scientifically - follow and set up a simple investigation, gather and record data, pattern seeking, comparative test, conclusion, evaluation, variables, suggestions for further enquiry).</li> </ul> </li> <li>Identify and name basic parts of a simple series electrical circuit (cells, wires, bulbs, switches and buzzers) (working scientifically - follow and set up a simple investigation, working with basic equipment, suggestions for further enquiry).</li> <li>Know that a switch opens and closes a circuit.</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know a lever is a type of simple machine. Levers are one of the earliest types of technology used by humans. (working scientifically - follow and set up a simple investigation, gathering and recording data, pattern seeking).</li> <li>Know that Ancient Egyptians removed moisture from bodies in order to make mummies! (working scientifically - follow and set up a simple practical enquiry, gather and record data, conclusion, evaluation).</li> <li>Recognise that scientific knowledge can develop overtime for example - many of Aristotle's ideas were accepted for over 2000 years! Some ideas were incorrect and could have been proven wrong if experiments had been carried out. (working scientifically - careful observations, use secondary data).</li> <li>Ibn-al-Haytham was a Muslim scientist who proved that the eye is not a light source.</li> <li>Appreciate that scientists often have different beliefs until their ideas are 'proven'. Copernicus suggested the earth and other planets travel around the sun unlike</li> </ul>

						Aristotle, who believed the sun travelled around other planets and that earth was in the centre.
	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>condensation</li> <li>evaporation</li> <li>precipitation</li> <li>boiling point</li> <li>melting point</li> <li>liquid</li> <li>solid</li> <li>gas</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>herbivore</li> <li>carnivore</li> <li>digestive system</li> <li>tongue</li> <li>mouth</li> <li>teeth</li> <li>oesophagus</li> <li>stomach</li> <li>gall bladder</li> <li>small intestine</li> <li>pancreas</li> <li>large intestine</li> <li>liver</li> <li>tooth,</li> <li>canine</li> <li>incisor</li> <li>molar</li> <li>premolar</li> <li>producer</li> <li>consumer</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>amplitude</li> <li>volume</li> <li>quiet</li> <li>loud</li> <li>ear</li> <li>pitch</li> <li>high</li> <li>low</li> <li>particles</li> <li>instruments</li> <li>wave</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>classification</li> <li>classification key</li> <li>environment</li> <li>habitat</li> <li>migrate</li> <li>hibernate</li> <li>vertebrates</li> <li>invertebrates</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>appliance</li> <li>circuit</li> <li>conductor</li> <li>insulator</li> <li>battery</li> <li>cell</li> <li>switch</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>machines</li> <li>prehistoric</li> <li>technology</li> <li>Bronze</li> <li>civilisations</li> <li>mummification</li> <li>papyrus</li> <li>horizon</li> <li>pharaohs</li> <li>philosophy</li> <li>aqueducts</li> <li>hygiene</li> <li>malaria</li> <li>mosquitoes</li> <li>algebra</li> <li>Baghdad</li> <li>Kaaba</li> <li>Persia</li> <li>Timbuktu</li> <li>gravity</li> <li>renaissance</li> <li>temperature</li> </ul>
Year 5	<p><b>Chemistry: Properties and Changes of Materials</b></p> <p>Pupils will learn about materials and the components in which they are made. Pupils will use this knowledge to investigate which materials would be best suited to a set specification.</p> <p>Pupils will explore the processes of dissolving and separating, providing justified reasons to explain reversible and irreversible changes.</p> <p>Previous learning from the unit 'States of Matter' (Y4), 'Forces and Magnets' (Y3) and 'Uses of Everyday Materials' (Y2) will be transferrable in helping pupils when observing materials and their changing state.</p>	<p><b>Biology: Animals Including Humans</b></p> <p>Pupils will learn about the interconnections between animals and humans, exploring the similarities and differences between food chains and reproduction. Pupils will explore how the human body changes over time (including during puberty) and how this may be similar for some animals. They will further their knowledge by making links to the size of a mammal and the gestation period that they experience.</p> <p>Previous learning from Year 4, where pupils explored the effects of the environment can have on animals, will support children during this unit.</p>	<p><b>Physics: Forces</b></p> <p>Pupils will learn about an array of scientists who have discovered different forces. They will explore the work of Isaac Newton who discovered gravity, as well as scientists such as Galileo Galilei and Albert Einstein. Pupils will use their learning from the Year 3 unit, Forces and Magnets, to deepen their understanding of resistance and buoyancy. Pupils will work scientifically to answer a range of questions, using experiments and other sources to support learning.</p>	<p><b>Biology: Living Things and their Habitats</b></p> <p>In this unit of study, pupils will investigate plants and how they can be affected or have their expectancy altered based on the habitat in which they live. Pupils will be able to use their knowledge and understanding of the different animal groups to justify any differences in the reproduction of some plants and animals. By the end of this unit, pupils should be able to describe how human interactions and behaviour implicate reproduction and growth. Pupils will also be exposed to famous naturalists such as David Attenborough and Mary Agnes Chase. Pupils will be able to use transferrable skills taught in Year 4 to use classification keys as a means of understanding different living things and the environments that they thrive most in.</p>	<p><b>Physics/Earth Science: Earth and Space</b></p> <p>Pupils will learn about the planets and how they orbit around the Earth. Pupils will use their understanding of the planets, rotation and day and night to answer scientific questions about astronomy.</p> <p>Pupils will explore links between the size of planets and the time that it takes to travel around the sun. Linked to this, pupils will calculate what their age would be on different planets. They will also develop scientific thinking to explain why the moon usually cannot be seen during the day.</p>	<p><b>The Scientific Method</b></p> <p>Pupil' knowledge will be affirmed through the reinforcement of disciplinary knowledge investigations which seek to ensure that pupils know the different types of variables which form key parts of scientific Investigations. They will develop knowledge of categorical, independent, dependent variables through the use of the 'Variables Song' and recognise how these can be applied to graphs.</p>
	<p><b>Key knowledge</b></p> <ul style="list-style-type: none"> <li>Know the properties of different materials using</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Order the stages of human development. (Working</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know that forces change the motion of an object – make it</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Compare the life cycle of certain mammals, reptiles,</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know the movements of the Earth, Sun and Moon</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>Know the different types of variables which form part of</li> </ul>

<p>words such as impermeable, conductive, thermal, soluble, transparent. (Working scientifically - Carry out an investigation, pattern seeking, comparative testing, drawing conclusions based on evidence).</p> <ul style="list-style-type: none"> <li>• Know that some materials will dissolve in liquid to form a solution and that some substances can be recovered from a solution. (Working scientifically - Observe and compare)</li> <li>• Explain with examples reversible and irreversible changes to a material including burning. (Working scientifically, observe, make conclusions, evaluate, suggest improvements). <ul style="list-style-type: none"> <li>• Explain the terms: properties, dissolve, solution, filtering, sieving and evaporating. (Working scientifically, observations).</li> </ul> </li> </ul>	<p>scientifically - Identifying, classifying and grouping).</p> <ul style="list-style-type: none"> <li>• Demonstrate understanding of how babies grow in height and weight. (Working scientifically- observations, pattern seeking).</li> <li>• Know the main changes that occur during puberty. (Working scientifically - comparative testing, pattern seeking, trends.)</li> <li>• Know the main changes that take place in old age. Working scientifically – <ul style="list-style-type: none"> <li>• Pattern seeking, data handling, secondary sources.</li> </ul> </li> </ul>	<p>start, move, speed up, slow down or change shape.</p> <ul style="list-style-type: none"> <li>• Know that unsupported objects fall towards the Earth due to the pulling force of gravity. (Working scientifically - Comparative testing, observation, investigation).</li> <li>• Know and identify effects of friction, air resistance and water resistance. (Working scientifically - comparative testing, fair test, observation, data handling.)</li> <li>• Understand how these can be affected by different variables, e.g. mass, surface, shape, streamlining. (Working scientifically - Variables, comparative testing).</li> <li>• Know that levers, gears and pulleys allow a smaller force and have a greater effect (Working scientifically - observation over time, pattern seeking).</li> </ul>	<p>amphibians and birds. (Working scientifically- pattern seeking, secondary research).</p> <ul style="list-style-type: none"> <li>• Identify the parts of a plant and its function. (Working scientifically - identifying and classification).</li> <li>• Explain asexual reproduction and sexual reproduction in plant. (Working scientifically - observations, investigation, pattern seeking).</li> </ul>	<p>including length of time to orbit. (Working scientifically- secondary research).</p> <ul style="list-style-type: none"> <li>• Know what causes night and day and why night and day varies in different parts of the world. (Working scientifically - secondary research).</li> <li>• List the names and order of the planets in the Solar System.</li> </ul>	<p>scientific investigations (Working scientifically - design a comparative test, fair test, observation, secondary research).</p> <ul style="list-style-type: none"> <li>• Recognise the 'Variables Song' as a way in which to remember the different types of experimental variables and how these can be applied to graphs. (Working scientifically - variables).</li> </ul>
<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• solids,</li> <li>• liquids</li> <li>• gas</li> <li>• particles</li> <li>• state</li> <li>• materials</li> <li>• properties</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• puberty</li> <li>• sexual reproduction <ul style="list-style-type: none"> <li>• sperm cell</li> <li>• menstruation</li> <li>• period</li> <li>• sperm</li> <li>• egg</li> <li>• foetus,</li> <li>• gestation</li> </ul> </li> <li>• life expectancy</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• forces</li> <li>• gravity</li> <li>• weight</li> <li>• mass</li> <li>• friction</li> <li>• air resistance</li> <li>• water</li> <li>• resistance</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• lifecycle</li> <li>• reproduction</li> <li>• sexual</li> <li>• reproduction</li> <li>• asexual reproduction <ul style="list-style-type: none"> <li>• fertilise</li> <li>• metamorphosis</li> <li>• runner</li> <li>• bulb</li> <li>• cutting</li> <li>• tuber</li> </ul> </li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• Earth</li> <li>• sun</li> <li>• moon</li> <li>• Axis</li> <li>• rotation</li> <li>• day</li> <li>• night</li> <li>• phases of the moon <ul style="list-style-type: none"> <li>• star</li> </ul> </li> <li>• constellation <ul style="list-style-type: none"> <li>• waxing</li> <li>• waning</li> <li>• crescent</li> <li>• gibbous</li> <li>• Mercury</li> <li>• Venus</li> <li>• Mars</li> <li>• Jupiter</li> <li>• Saturn</li> <li>• Uranus</li> <li>• Neptune</li> <li>• planets</li> </ul> </li> <li>• solar system <ul style="list-style-type: none"> <li>• day</li> <li>• night</li> <li>• rotate</li> <li>• orbit</li> <li>• spherical</li> </ul> </li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>• hypothesis</li> <li>• control variable</li> <li>• dependent variable</li> <li>• independent variable</li> <li>• Bunsen burner <ul style="list-style-type: none"> <li>• data</li> </ul> </li> <li>• data logger</li> <li>• measuring cylinder <ul style="list-style-type: none"> <li>• pipette,</li> <li>• volume</li> <li>• accurate</li> <li>• average</li> <li>• conclusion</li> <li>• precise</li> <li>• repeatable</li> <li>• centrifuge</li> </ul> </li> </ul>

					<ul style="list-style-type: none"> <li>• geocentric</li> <li>• heliocentric</li> </ul>	
	<p><b>Animals Including Humans</b> This unit builds on pupils' prior understanding of the human body and how it changes and grows over time. Pupils will have a good understanding of human growth from birth through to old age which will help them better understand the specific processes in the body. As a result of the unit, pupils will be able to explain how the human circulatory system works, as well as how lifestyle factors can both positively and negatively affect the functioning of the body.</p>	<p><b>The Science of Light</b> This unit develops pupils' understanding of light from previous learning in Year 3. They consolidate their knowledge of how light moves and the processes involved in allowing us to see. This unit allows pupils to develop their understanding from being able to notice changes to being able to explain them using appropriate vocabulary. Pupils will work scientifically in order to observe changes and provide an account for why these have occurred.</p>	<p><b>Electric Circuits</b> This unit of work builds on pupils' prior learning from their electricity topic in Year 4. Pupils will have already learnt about how to construct circuits and how to identify whether a circuit will work. They will now extend their understanding to be able to give reasons for different effects on the components of a circuit. As a result of this unit, pupils will be able to account for changes in the functioning of various components in a circuit and will be able to explain how changes can be made.</p>	<p><b>Evolution and Inheritance</b> This unit builds on pupils' prior understanding of animals and living things from their key stage 2 programmes of study. Pupils will be familiar with various groups of animals and the associated habitats. They will develop their understanding of the specific features which are beneficial for each habitat by exploring how changes happen over long periods of time. Pupils will also extend their understanding of reproduction to be able to explain how features are inherited and passed down from parents.</p>	<p><b>Living Things and their Habitats</b> This unit of work builds on prior learning from Year 5, where pupils studied 'Living things and their habitats' in the context of the life cycles and reproduction of animals and birds. In Year 6, the children will describe how living things are classified into groups including micro-organisms, animals and plants. They will be able to give reasons for classifying animals and plants.</p>	<p><b>Preparing for Secondary Science</b> This unit of work revises core concepts from the Key Stage 2 curriculum in preparation for Key Stage 3.</p>
Year 6	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>• The circulatory system is made of the heart, lungs and blood vessels. (Working scientifically - comparative testing, observations over time).</li> <li>• Arteries carry oxygenated blood from the heart to the rest of the body (except the pulmonary artery). (Working scientifically - Pattern seeking, identifying, classifying and grouping, observing over time).</li> <li>• Veins carry deoxygenated blood from the body to the heart (except the pulmonary vein). (Working scientifically- Pattern seeking, identifying, classifying and grouping, observing over time).</li> <li>• Nutrients, oxygen and carbon dioxide are exchanged via the capillaries. (Working scientifically - identifying, classifying and grouping, observing over time).</li> <li>• Some choices, such as smoking and drinking alcohol can be harmful to our health. (Working scientifically - comparative testing, research using secondary sources).</li> <li>• Tobacco can cause short-term effects such as</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>• Light travels in straight lines. (Working scientifically - comparative testing).</li> <li>• When there is an opaque object blocking the light, a shadow is formed. Shadows have the same shape as the opaque objects that cast them. (Working scientifically - Research using secondary data).</li> <li>• Light can travel through transparent objects. (Working scientifically - comparative testing).</li> <li>• Some light can travel through translucent objects. (Working scientifically - comparative testing).</li> <li>• Light consists of a spectrum of colour: red, orange, yellow, green, blue, indigo and violet. (Working scientifically - observation).</li> <li>• Light travels at a different speed through water which can cause refraction – making objects look larger than they are.</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>• Explain the difference between non-renewable and renewable mains power.</li> <li>• Use symbols when drawing a simple circuit diagram. (Working scientifically - Identifying, classifying and grouping, research using secondary sources).</li> <li>• Associate the brightness of a lamp with the number and voltage of cells in a circuit. (Working scientifically - Comparative testing).</li> <li>• Explain how electricity is made. (Working scientifically- identify, secondary research).</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>• Offspring inherit genes from their parent or parents. (Working scientifically - Identify, classify and grouping).</li> <li>• Inherited and learnt characteristics are often referred to nature vs nurture. (Working scientifically - Identify, classify and grouping).</li> <li>• Adaptations occur due to random mutations and can lead to evolution. (Working scientifically - Research using secondary data).</li> <li>• Charles Darwin established his theory of evolution from observing finches. (Working scientifically - Identify, classify and grouping).</li> <li>• We can use fossils to study and document the evolution of different animals and plants. (Working scientifically - Identify, classify and grouping).</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>• Give reasons for classifying plants and animals based on specific characteristics. (Working scientifically - Identify, classify and grouping, observations over time, plan an investigation)</li> <li>• Know living things are classified into broad groups according to common observable characteristics. (Working scientifically - Identify, classify and grouping, observations).</li> </ul>	<p><b>Key Knowledge</b></p> <ul style="list-style-type: none"> <li>• To revise principles of variables and classification.</li> <li>• Begin to recognise the techniques used to further scientific study and knowledge including chromatography, the principles of acid/alkali and energy transformation.</li> <li>• Working scientifically - revisit all areas of working scientifically covered.</li> </ul>

	<p>shortness of breath, difficulty sleeping and loss of taste and long-term effects such as organ damage, cancer and death. (Working scientifically - comparative testing, research using secondary sources).</p> <ul style="list-style-type: none"> <li>Exercise can tone our muscles and reduce fat, increase fitness, make you feel physically and mentally healthier, strengthens the heart and improves lung function (Working scientifically - comparative testing).</li> </ul>					
	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>oxygenated</li> <li>deoxygenated <ul style="list-style-type: none"> <li>valve</li> </ul> </li> <li>exercise</li> <li>respiration</li> <li>circulatory system <ul style="list-style-type: none"> <li>heart</li> <li>lungs</li> </ul> </li> <li>blood vessels <ul style="list-style-type: none"> <li>blood</li> <li>artery</li> <li>vein</li> </ul> </li> <li>pulmonary <ul style="list-style-type: none"> <li>alveoli</li> <li>capillary</li> </ul> </li> <li>digestive</li> <li>transport <ul style="list-style-type: none"> <li>gas</li> </ul> </li> <li>exchange <ul style="list-style-type: none"> <li>villi</li> </ul> </li> <li>nutrients <ul style="list-style-type: none"> <li>water</li> <li>oxygen</li> <li>alcohol</li> <li>drugs</li> <li>tobacco</li> </ul> </li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>light source <ul style="list-style-type: none"> <li>dark</li> </ul> </li> <li>reflect</li> <li>ray</li> <li>mirror</li> <li>bounce</li> <li>visible</li> <li>beam</li> <li>sun</li> <li>glare</li> <li>travel</li> <li>straight</li> <li>opaque</li> <li>shadow</li> <li>block</li> <li>transparent</li> <li>translucent <ul style="list-style-type: none"> <li>reflect</li> <li>absorb</li> <li>emitted</li> </ul> </li> <li>scattered</li> <li>refraction</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>circuit <ul style="list-style-type: none"> <li>cell</li> </ul> </li> <li>battery</li> <li>current</li> <li>amps</li> <li>voltage</li> <li>resistance</li> <li>electrons</li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>evolution</li> <li>offspring</li> <li>inherited</li> <li>characteristics</li> <li>variation</li> <li>adapted</li> <li>environment <ul style="list-style-type: none"> <li>species</li> <li>fossil</li> </ul> </li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>characteristics <ul style="list-style-type: none"> <li>classify</li> </ul> </li> <li>taxonomist</li> <li>bacteria</li> <li>microorganism <ul style="list-style-type: none"> <li>species</li> </ul> </li> </ul>	<p><b>Key Vocabulary</b></p> <ul style="list-style-type: none"> <li>acid</li> <li>alkali</li> <li>characteristics</li> <li>chromatography <ul style="list-style-type: none"> <li>classify</li> <li>bacteria</li> </ul> </li> <li>microorganism <ul style="list-style-type: none"> <li>species</li> </ul> </li> <li>photosynthesis</li> <li>transformation</li> </ul>

### Assessment & Progression

Assessment Methods:

Ongoing observation, self- and peer-assessment, and performance checks.

Consideration of effort, teamwork, leadership, and understanding of theory concepts.

### End-of-Year Outcomes

Pupils develop physical competence, control, and confidence in varied activities.

Pupils understand the benefits of being active and making healthy choices.

Pupils apply teamwork, tactics, and leadership across PE contexts.

Pupils enjoy physical activity and are prepared for lifelong participation in sport.



*Living, loving and learning together with our eyes focused on Jesus*