

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	Ourselves and our families	Colours and Autumn	Winter and traditional tales	My town and pets	Minibeasts and growing	Holidays and transport
Reception	Do you want to be my friend?	What happens when we are sleeping?	Dinosaurs and fossils?	The zoo	Once upon a time	Ready, steady, cook!
Year 1	Home	Kings and Queens	Come fly with me	Australia	Let's grow	Egyptians
Year 2	Wilderness explorers	Light up the world	Wartime	This is me	Ahoy	

Nursery		
Term	Autumn 1	Autumn 2
Theme	Ourselves and our families	Colours and Autumn
Science objectives		
Children will be taught to...	Humans: -With support, to be aware of their own hygiene through learning to use the toilet and washing their hands -With support, learn to put on their own coat, shoes or wellies -Interact with new people with support -Recognise the people who are part of their family -Understand that people have names, learn their own name and the names of others -Begin to discuss and share their likes through what they eat, play etc.	Humans: -Share nursery equipment with others, with support -Be supported to make friends and interact with others -Name and point to their own body parts e.g. through songs such as head, shoulders, knees and toes
		Animals: -Begin to use language to identify basic animals seen in the outdoor area such as a bird. Adults to model identifying and naming whilst outside.
		Plants: -With support, recognise that leaves fall from trees -With support, talk about the colours of leaves as they change -Show curiosity of nature they find outside or in the classroom such as a pine cone -With support, recognise that flowers start to die during Autumn
		Seasonal changes: -Communicate what they can see happening to the weather e.g. encourage children to comment and discuss when it is raining outside -Begin to recognise how the weather affects them e.g. rain makes their clothes wet -Begin to understand the need for different items of clothing dependent on the weather e.g. that children need to wear wellies if it is raining -With support, recognise how things change outside when the weather changes e.g. when it rains, the leaves or grass become wet -With support, recognise how the weather affects animals. E.g. When it rains, do we see as many animals in the outdoor area? Do the animals hide from the rain?
	Looking after the environment: -Look after their own belongings which they bring to school with adult support	Looking after the environment: -Independently look after their own belongings which they bring to school -With adult support, look after the things in the classroom and outdoor shared area (toys and objects they use) -Know to put their rubbish in the bin, understand right and wrong in relation to disposing of rubbish

Nursery		
Term	Spring 1	Spring 2
Theme	Winter and traditional tales	My town and pets
Science objectives	*Knows some of the things that make them unique, and can talk about some of the similarities and differences in relation to friends or family.	*Knows some of the things that make them unique, and can talk about some of the similarities and differences in relation to friends or family.
Children will be taught to...	Humans: -Build friendships with support. Children will be taught to use their speech to interact with others and to play collaboratively. -With support, express their own ideas and opinions. -With support, recognise that everyone is different	Humans: -Begin to independently express their own ideas and opinions. -Independently recognise the differences of others -Independently use language to share their needs and feelings. -With support, listen to the opinions of others.
		Animals: -Identify, recognise and correctly name animals that are kept as pets. -Share if they have a pet at home, the type of animal this is and its name. -Use prior knowledge of their own body parts to identify the body parts of pets e.g. head, legs, feet -Recognise that pets have a tail but humans do not. -Recognise and describe pets body coverings with simple vocabulary e.g. furry -Use small world animals to identify and name common animals when playing.
		Plants: -Be encouraged to notice the plants and flowers that are growing in the outdoor area. -Describe the size and colours of the flowers growing with support and encouragement from the adults.
	Seasonal changes: -Extend their vocabulary when discussing weather by recognising snow, ice and frost -Explore ice through activities such as ice cube painting -Discuss changes they see outside in the outdoor nursery area. -Recognise the clothes or shoes needed to suit the weather changes -Recognise the sounds created by whether such as the sound of rain falling.	Seasonal changes: -Recognise the changes in weather and describe the weather. -Recognise the change in clothes needed when working outside. -Notice how nature is changing and growing.
	Everyday materials: -Recognise different properties of materials when creating art work e.g. describe something as dark, light or shiny	Everyday materials: -Develop scissor skills and explore how different materials cut. Adults to encourage children to comment on how some materials are more difficult to cut than others.
	Looking after the environment: -Recognise there are two bins within the classroom and understand that each bin is for different things -Observe adults following recycling rules and having good recycling habits -Independently look after the things in the classroom and outdoor shared area (toys and objects they use)	Looking after the environment: -Understand we should look after things at home such as pets and how to do this -Understand why we should look after our pets -Know to ask an adult which bin to put something into, recycling or general

Nursery		
Term	Summer 1	Summer 2
Theme	Mini beasts and growing	Holidays and transport
Science objectives	<p>*Developing an understanding of growth, decay and changes over time.</p> <p>*Shows care and concern for living things and the environment</p>	<p>*Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>*Developing an understanding of growth, decay and changes over time.</p> <p>*Shows care and concern for living things and the environment</p>
Children will be taught to...	<p>Humans:</p> <p>-Independently listen to the ideas and opinions of others and respond.</p>	<p>Humans:</p> <p>-Begin to recognise danger and ask adults for help</p>
	<p>Animals:</p> <p>-Name and describe animals they find and see in the school outdoor area such as a bird seen in the playground.</p> <p>-Find mini beasts and explore where they can be found (in the school playground/nursery outdoor area)</p> <p>-Begin to correctly name some mini beasts.</p> <p>-Use their language to explain what they have observed in the outdoor area.</p> <p>-Observe how butterflies grow and change from a caterpillar. Children will have a mesh butterfly garden within the nursery classroom to observe the changes that take place during a butterfly's life cycle. Children will be taught to describe their observations.</p> <p>-Respect wild animals in the school outdoor area and help to look after their outdoor environment</p> <p>-Be supported to understand how and why questions about animals and begin to form answers with support.</p> <p>-Use a range of media to record their observations of animals e.g. drawing, painting, play dough etc.</p> <p>-Collect natural items e.g. twigs, leaves or grass to then build a minibeast home</p>	<p>Animals:</p> <p>-Explore and be exposed to a different environment during a local walk</p> <p>-Use prior knowledge of insects and animals to identify and name some creatures seen in a different environment during a local walk</p>
	<p>Plants:</p> <p>-Use their language to explain what they have observed in the outdoor area and describe the plants they have seen.</p> <p>-Take part in a plant hunt in the school outdoor area. Children to be supported to use the words plant, flower or tree when they find one.</p> <p>-Be supported to understand how and why questions about plants and begin to form answers with support.</p> <p>-Use a range of media to record their observations of plants e.g. drawing, painting, play dough etc.</p>	<p>Plants:</p> <p>-Children independently use the word plant, flower or tree to explain what they have observed outside.</p> <p>-Explore and be exposed to a different environment during a local walk</p> <p>-Use prior knowledge of nature to identify plants, flowers and trees seen in a different environment during a local walk using the simple vocabulary 'plant/flower/tree'</p>
		<p>Seasonal changes:</p> <p>-Discuss the weather, use suitable vocabulary to describe the weather.</p> <p>-Recognise that coats are no longer needed and jumpers can be removed if the weather is hot.</p>
	<p>Everyday materials:</p> <p>-Explore and experiment with different construction materials to build models.</p>	<p>Everyday materials:</p> <p>-Understand the use and purpose of materials within the classroom for example knowing to draw onto paper and where not to draw.</p> <p>-Choose appropriate materials for completing an activity within their classroom. Children may not necessarily use the correct names of materials but will understand their use within the classroom.</p> <p>-Explore and experiment with different construction materials to build models. Children will be taught to choose their own materials from a range of options.</p>
	<p>Looking after the environment:</p> <p>-Be exposed to the word 'recycling' for example when adults are using the recycling bin they could 'think aloud' to explain what they are doing.</p> <p>-Understand to look after nature in the outdoor area at school</p> <p>-Understand how to look after nature and not damage or have a negative impact on the natural environment e.g. not disturbing mini beasts or picking plants</p> <p>-Understand taps should always be turned off when the water isn't being used</p>	<p>Looking after the environment:</p> <p>-Understand the different ways to travel and that walking is a good form of travel for the world and for our bodies. This could be through discussion of how children travel to school.</p> <p>-Begin to make decisions, with adult support, about which bin to place something into, recycling or general</p>

Reception		
Term	Autumn 1	Autumn 2
Theme	Do you want to be my friend?	What happens when we are sleeping?
Science objectives	<p>*Developing an understanding of growth, decay and changes over time.</p> <p>*Shows care and concern for living things and the environment.</p>	<p>*Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>*Talks about why things happen and how things work.</p> <p>*Developing an understanding of growth, decay and changes over time.</p> <p>*Shows care and concern for living things and the environment.</p>
Children will be taught to...	<p>Humans:</p> <ul style="list-style-type: none"> -Name and point to body parts e.g. through songs such as head, shoulders, knees and toes -Compare own body to others e.g. difference or similarities in height, hair colour -Explain how they are feeling from the signs their bodies are given e.g. explain when they are hungry -Begin to independently look after themselves with hygiene and clothing e.g. using the toilet, unzipping a coat, washing hands -Begin to understand that hygiene is important for looking after themselves e.g. through hand washing 	<p>Humans:</p> <ul style="list-style-type: none"> -Explain how they know if they are feeling a certain way. How do you know when you are hungry or tired? Identify what happens to their bodies. -Understand how to respond to the messages their bodies are sending e.g. what can you do to help your body when you feel hungry or tired? -Understand the importance of sleep and how this helps the body to function -Begin to recognise growth within humans. Will I always be this height? Will my hands always be this size? How will I change? A record could be made of a child's or all children's height/hand span/footprint to then come back to later in the year and compare the growth. -Notice and discuss what happens to their bodies when they exercise and how it makes them feel.
	<p>Animals:</p> <ul style="list-style-type: none"> -Knowing the correct names for pets and identifying these animals e.g. dog/cat 	<p>Animals:</p> <ul style="list-style-type: none"> -Use small world animals to identify and name common wild British animals when playing -Explain their own opinion about animals, share which animals they like or dislike -Begin to verbally use the correct terminology for animal body parts such as beak, wings, tail -Mimic animals by moving like common animals and showing understanding of how they move e.g. using arms to mimic the wings of an owl -Name and describe things they find and see in the natural world such as a bird seen in the playground. -Understand that some animals are awake at night and be introduced to the word 'nocturnal'. -Know a few common British animals that are nocturnal and understand what they do during the night such as catch their food.
	<p>Plants:</p> <ul style="list-style-type: none"> -Use simple vocabulary for nature such as 'flower', 'plant' and 'tree' when discussing things they see in the school playground/outdoor area -Notice that leaves change colour and fall from the trees -Understand that trees don't always have leaves -Identify the colour of the leaves as they are changing -Talk about and describe the tree leaves found on the ground, how the leaves feel and look as well as their size, colour and shape. 	
	<p>Seasonal changes:</p> <ul style="list-style-type: none"> -Observe nature within the classroom in seasonal trays or tuft spot. During Autumn children may have conkers, leaves, twigs, pine cones, pumpkins to observe within their class. -Communicate what they can see happening to the trees in the school grounds throughout the year In Autumn/Winter adults will encourage children to recognise and discuss how the leaves are changing colour and are falling from the trees -Talk about and describe the tree leaves found on the ground, how the leaves feel and look as well as their size, colour and shape. -Begin to use the correct vocabulary to describe the weather. Children will recognise if it is sunny or rainy. Children will begin to understand that if it is cold then they will need to wear a coat and if it is raining then they will need wellie boots. 	
	<p>Everyday materials:</p> <ul style="list-style-type: none"> -Recognise the basic use for some materials within their classroom e.g. paper is for drawing on whereas plastic is not. Children may not necessarily use the correct names of materials but will understand their use within the classroom. 	<p>Everyday materials:</p> <ul style="list-style-type: none"> -Use simple vocabulary when choosing materials to work with e.g. paper. -Begin to describe materials through exploration during continuous provision
	<p>Looking after the environment:</p> <ul style="list-style-type: none"> -Understand they each have a responsibility to respect the classroom environment and outdoor area in terms of equipment and each other -Recognise that there are two bins within the classroom and that these have different purposes -Be exposed to the word 'recycling' by adults using and modelling. For example, adults thinking aloud when they are putting rubbish into the bin to explain the decision they are making about which bin to use 	<p>Looking after the environment:</p> <ul style="list-style-type: none"> -Understand they each have a responsibility to respect living things in the outdoor area -Begin to make their own decisions about which bin to place something into, recycling or general. Know to ask an adult for help with this decision when needed. -Understand how water can be wasted when taps are not turned off and link to home experiences such as brushing their teeth. -Understand wasting energy by being taught to turn the lights off when they are not needed

Reception		
Term	Spring 1	Spring 2
Theme	Dinosaurs and fossils	The zoo
Science objectives	<p>*Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>*Talks about why things happen and how things work.</p> <p>*Developing an understanding of growth, decay and changes over time.</p> <p>*Shows care and concern for living things and the environment.</p> <p>*Looks closely at similarities, differences, patterns and change.</p>	<p>*Can talk about some of the things they have observed such as plants, animals, natural and found objects.</p> <p>*Talks about why things happen and how things work.</p> <p>*Developing an understanding of growth, decay and changes over time.</p> <p>*Shows care and concern for living things and the environment.</p> <p>*Looks closely at similarities, differences, patterns and change.</p>
Children will be taught to...	<p>Humans:</p> <ul style="list-style-type: none"> -Name their body parts and describe what they are doing with them whilst moving like a dinosaur e.g. "I am stomping my feet" -Use the correct words to describe senses such as when using feely bags children will use the word 'feel' when describing what they are touching inside the bag. -Use mirrors to look at their own facial features. Children will use the correct word to describe their senses when looking in the mirror e.g. "I can see..." Children will also use the correct terminology to discuss their facial features including eyes, nose, mouth, ears, hair. 	<p>Humans:</p> <ul style="list-style-type: none"> -Recognise that they are growing; compare their own body to that of an animal in terms of height and size -Compare their growth to records from the Autumn term
	<p>Animals:</p> <ul style="list-style-type: none"> -How did the environment look when the dinosaurs existed? Discuss the natural environment and compare to how the world looks today -Ask their own questions about the things they find e.g. why /how do birds fly? -Know the names of some dinosaurs -Use their knowledge and understanding of animal body parts to identify the parts of a dinosaur such as tail, wings, legs -Understand that some creatures hatch from eggs by being taught that dinosaurs hatched from an egg -Understand and use the word extinct. Children will be taught that dinosaurs are extinct and this means they are no longer alive on the planet. This will be compared to other animals that are extinct. -Observe fossils and understand how they are made. Children will be taught to understand that fossils help scientists to learn about dinosaurs -Become aware of bones and that bones are inside of us as well as some animals. Children will be taught that dinosaur bones help scientists. 	<p>Animals:</p> <ul style="list-style-type: none"> -Compare natural environments and built up environments. Discuss how zoo animals may live within a built up environment when in a zoo but in the wild the environment would be very different -Express their opinions of natural environments and built up environments. Which environment do you think the animals prefer? -Draw or make a model of a common animal and explain its basic structure, naming basic body parts -Recognise and explain similarities and differences between an animal and themselves e.g. a bird has wings but a human doesn't. -Understand how to look after animals in the wild and pets, recognise how they can care for wild animals in their own local environment -Ask questions about animals that begin with 'why', 'how' or 'I wonder'. -Observe the beginning of life by having chicks to hatch in school. Children will be taught to care for the eggs before hatching and how the chicks must be looked after once they have hatched -Understand the needs of animals and compare to a human e.g. an animal needs food and drink just as a human does
	<p>Plants:</p> <ul style="list-style-type: none"> -Identify and name a plant and tree, look at plants and trees in images of dinosaur scenes -Begin to use some basic vocabulary for parts of a tree (leaf, branch, root, trunk) 	<p>Plants:</p> <ul style="list-style-type: none"> -Notice the flowers and blossom that are beginning to grow around the school grounds. -Notice that leaves are growing back on the trees around school -Compare plants/flowers/trees seen around school grounds by discussing size, colour and discussing their preference
	<p>Seasonal changes:</p> <ul style="list-style-type: none"> -Communicate what they can see happening to the trees in the school grounds throughout the year In Spring adults will encourage children to recognise and discuss how the leaves are growing on trees, blossom is growing and flowers are beginning to grow 	
	<p>Everyday materials</p> <ul style="list-style-type: none"> -Have a range of opportunities to explore a variety of materials and use different materials for creating models or to build with. This will allow children to begin to understand simple properties of some materials. Adults will encourage children to describe the materials they are using to build or create models with. 	
	<p>Looking after the environment:</p> <ul style="list-style-type: none"> -Understand why there are two bins in the classroom and use the word 'recycling' -Make connections between the junk modelling they create and how they are reusing materials -Begin to identify some materials that go into each bin for example to know that paper goes into the recycling bin 	<p>Looking after the environment:</p> <ul style="list-style-type: none"> -Understand how to take care of living things in the outdoor area e.g. by watering plants -Discuss who they share their outdoor play space with (birds, butterflies, worms etc.) and what type of environment these creatures need to live and how they must look after the environment for them -Understand protecting the habitats of animals, look at where animals live in the outdoor area of school and consider how they can prevent damage to these habitats -Understand that litter can be bad for plants and animals and can damage their habitats -Carry out a litter picking activity to begin to recognise that rubbish isn't always disposed of in the correct way and that this can be negative for the environment we live in -Be encouraged to ask how and why questions when learning about the environment

Reception		
Term	Summer 1	Summer 2
Theme	Once upon a time	Ready, steady, cook
Science objectives	*They make observations of animals and plants and explain why some things occur, and talk about changes.	*They make observations of animals and plants and explain why some things occur, and talk about changes.
Children will be taught to...		Humans: -Understand it is important to eat and try different types of food to keep our bodies healthy -Understand the words 'healthy' and 'unhealthy'. Recognise that fruit and vegetables are healthy. -Use their senses and with support start to use the appropriate vocabulary to describe how something looks, tastes, smells, feels and sounds -Have a simple understanding of the importance of exercise to be healthy and look after our bodies. Children will be taught to understand that moving our bodies helps them to be healthy and strong.
		Animals: -Understand that animals are used for food for humans, identify which animals are used for food and match the animal to the type of food they create e.g. cows create beef
	Plants: -Begin to use some simple flower names e.g. daisy, sunflower, daffodil -Identify plants that are in stories and correctly name these -Observe and draw a plant. Children will then be given opportunity to draw, paint or create a model of their own imaginary plant.	Plants: -Understand that some food comes from a plant. Children will be taught that food such as peppers or pumpkins have been grown as a plant -Plant a seed and observe how a plant grows. Discuss the changes that happen whilst the plant grows. -Use the correct terminology to talk about and describe the flower, leaf, petal, root, soil -Observe food that comes from plants whilst cooking -Investigate what is inside of different types of fruit and question why. Children will be encouraged to consider what would happen if the seeds from a fruit were planted.
	Seasonal changes: -Recognise changes in weather including temperature. Children will be taught to understand the type of clothes or shoes they might need to wear during summer	
	Everyday materials: -Learn material names through stories E.g. brick house in 'The three little pigs' -Use the correct language when talking about a material an object is made from -Notice patterns on materials e.g. when looking at bricks. Children may take rubbings of different materials such as brick, stone or wood to discover the patterns they create.	Everyday materials: -Have a simple understanding of how some materials can change e.g. ice can melt to become water, chocolate can be melted when cooking
	Looking after the environment: -Understand there are not limitless resources within their classroom and so they must be sensible about the way they use the resources -Understand and explain using a simple definition what the word 'recycling' means -Understand we should respect the things we see when in the local area such as when walking home from school or walking to the shop -Understand they each have a responsibility to respect the local area outside of school	Looking after the environment: -Understand how food can be wasted and ways to prevent this happening e.g. only selecting the food you are going to eat during snack time -Gain a simple understanding that traveling by bike, push scooter or walking helps to 'keep the air clean' Children to be exposed to the word pollution and have a simple definition that it means the air is 'dirty' -Be encouraged to question why it is important to not waste water and recognise how valuable water is. Look at the different uses of water by participating in activities such as using watering cans to water plants

Year 1		
Term	Autumn 1	Autumn 2
Theme	Home	Kings and Queens
Science objectives	Seasonal Changes: *Observe changes across the four seasons *Observe and describe weather associated with the seasons and how day length varies. Animals, including humans: *describe and compare the structure of a variety of common animals *identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Working scientifically: *Observing closely, using simple equipment *Using their observations and ideas to suggest answers to questions *Asking simple questions and recognising that they can be answered in different ways (focus on the first part of the objective) *Identifying and classifying (focus on identifying)	Everyday Materials: *Distinguish between an object and the material from which it is made *Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock *Describe the simple properties of a variety of everyday materials *compare and group together a variety of everyday materials on the basis of their simple physical properties Working scientifically: *Identifying and classifying *Using their observations and ideas to suggest answers to questions *Performing simple tests *Observing closely, using simple equipment *Gathering and recording data to help in answering questions
	Seasonal changes: -Name and order the four seasons -Name simple terms for weather (rain, sun, cloud, rainbow, snow, wind, storm, lightning, thunder, hot, cold) -Observe how trees change throughout the seasons; look at the work of Mark Hirsch and discuss how he documented his observations, make similar observations themselves with trees around the school. Children could perhaps select one tree to regularly document throughout the year through photographs or drawing etc. This could be completed as a whole class project rather than individual. -Discuss the weather children noticed during the summer holidays, what type of weather is associated with Summer? Compare to the weather expected during other seasons. -Observe and discuss how towards the end of Autumn the evenings and mornings begin to get darker.	
Children will be taught to...	Animals including humans: -Name the observable features and structure of animals by looking at animals found near their own homes in the local environment as well as pets -Be encouraged to ask and verbally share questions about the animals they are observing -Understand the difference between wild animals and pets -Name and identify, body parts on themselves verbally or through drawing -Begin to use scientific vocabulary whilst completing a practical task where they will use their senses. For example working with food to follow a recipe and being encouraged to describe how the food tastes, smells, looks, feels and possibly the sounds being made whilst chopping or mixing. Children encouraged to explain how they know what the food looks/tastes/smells/feels/sounds like, which body part are you using? Children will be taught to verbalise their understanding of senses whilst completing a practical activity and staff to take notes.	
		Everyday materials: -Recognise that materials are all around us, find materials around their classroom/school -Learn material names based on what objects are made from, starting with objects found around the classroom/school -Independently name and identify materials recognising the material objects are made from -Sort and group objects based on the material they are made from -Describe the way the material an object is made from looks and feels. -Describe simple physical properties of a material such as colour, size, texture and shape -Recognise that different materials can have similar properties and sort materials based on their properties e.g. place all smooth materials together -Use their knowledge of materials to explain why some materials would be inappropriate for certain items e.g. wooden trousers -Understand some materials are 'see-through' whilst others are not. Children will be taught the correct vocabulary and meaning of transparent, translucent and opaque. -Conduct a simple investigation as a group to explore the properties of materials and decide whether materials are transparent, translucent or opaque.
	Looking after the environment: -Turn off the lights in the classroom when everyone leaves	Looking after the environment: -Recognise the materials that common litter is made from and understand why materials have become an issue for the environment in terms of litter. Children will understand the problems litter causes for the local environment including how the materials litter is made from can be damaging for animals for example if it is sharp. (expanded on during year 2) -Begin to recognise how simple properties of materials might hurt or damage an animal or plant -Correctly dispose of rubbish by choosing which bin to use for different materials, recycling or general

Year 1		
Term	Spring 1	Spring 2
Theme	Come fly with me	Australia
Science objectives	Seasonal Changes: *Observe changes across the four seasons *Observe and describe weather associated with the seasons and how day length varies. Animals, including humans: *Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals *Identify and name a variety of common animals that are carnivores, herbivores and omnivores Working scientifically: *Observing closely, using simple equipment *Performing simple tests *Gathering and recording data to help in answering questions *Identifying and classifying *Using their observations and ideas to suggest answers to questions	Animals, including humans: *describe and compare the structure of a variety of common animals *Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals *Identify and name a variety of common animals that are carnivores, herbivores and omnivores Plants: *Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees *Identify and describe the basic structure of a variety of common flowering plants, including trees Working scientifically: *Identifying and classifying *Observing closely, using simple equipment *Gathering and recording data to help in answering questions *Using their observations and ideas to suggest answers to questions
	Seasonal changes: -Understand the affect the seasons have on plants/trees. What happened to trees during Winter time? Look back at the class record of the tree(s) being observed in the school grounds. What will now begin to happen to the trees during Spring? -Understand why the leaves of some trees change colour throughout the seasons relating to the change of sunlight and temperature -Conduct an experiment to investigate why leaves change colour and make connections to how the amount of sunlight changes during the year -Understand staying safe in different types of weather including to not look directly at the sun even when wearing glasses -Observe signs of Spring through hands on experience finding plants/insects/animals that appear during Spring time -Understand how sun rise becomes later and sun set becomes earlier in Winter time, link to how clocks are changed during the year. Children to recognise and understand the daylight hours are longer in Spring time. -Conduct an experiment to investigate rainfall over a period of time. Link to Working Scientifically objectives and children to discuss patterns within the data -Record data for weather and learn new terminology (temperature, rainfall, wind speed) This could be a weather journal, chart or their own weather report presented to others.	
Children will be taught to...	Animals including humans: -Begin to use and understand the terminology carnivore, omnivore and herbivore by understanding what each word means and the type of food that relates to each term e.g. Carnivore means something that eats only meat. -Begin to group animals into carnivore, omnivore and herbivore during a practical task as a whole class or group activity -Begin to use terminology fish, amphibian, reptile, bird and mammal to group animals. Understand the observable features of each group e.g. birds have feathers and wings. Look at the observable features of each animal on photos or small world objects and place these into the correct animal groups. Practical sorting. -Link to theme by identifying animals that fly and comparing their structure	Animals including humans: -Observe the shape and size of teeth of animals and understand how this can help to identify what an animal eats -Independently group animals into categories of carnivore, omnivore and herbivore using observations of animals teeth to support -Label the observable features and structure of animals, compare these features noticing similarities and differences between animals as well as comparing to humans -Make comparisons between animal groups e.g. reptiles have scales but mammals have fur. -Name and describe common animals (including those kept as pets) from each category of fish, amphibians, reptiles, birds, mammals. For example name a pigeon and an owl and describe the structure of these animals to explain how they know that they are both birds. -Understand and identify if groups of animals are warm blooded or cold blooded. Children will be taught to understand what this means and how the animals body temperature alters.
	Plants: -Recognise and explain how some plants and trees change over time (link to seasons) Children will be able to explain the change in colours and how leaves fall from certain trees	Plants: -Identify and correctly name a range of common trees, compare the leaves of different types of trees and recognise the shapes of a leaf that match a tree. Children to walk through the local environment with a leaf chart to identify the types of trees they can see. Children may want to record the trees they see through drawing or taking photos. Compare to trees that grow in Australia. -Identify and name the parts of a tree including the trunk, branches, leaf, roots, bark -Identify which trees are deciduous and which are evergreen, compare leaf shapes to decide if a tree is evergreen or deciduous. (Practical, possibly during a nature walk or hunt) -Work scientifically by dissecting a flowering plant to identify and name the different parts (root, stem, leaves, petals)
	Looking after the environment: -Understand and recognise they each have a responsibility to respect and look after the local environment that they live in. -Understand steps that can be taken to look after the local environment including the animals and plants that live there.	Looking after the environment: -Understand the term 'air pollution' and how decisions they each make can contribute to pollution or decrease it e.g. walking to school rather than driving -Understand that air pollution isn't limited to cars. Become aware of air pollution caused by factories/aeroplanes

Year 1		
Term	Summer 1	Summer 2
Theme	Let's grow	Egyptians
Science objectives	Plants: *Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees *Identify and describe the basic structure of a variety of common flowering plants, including trees *observe and describe how seeds and bulbs grow into mature plants (Touch on, year 2 objective) *find out and describe how plants need water, light and a suitable temperature to grow and stay healthy (Touch on, Year 2 objective) Animals, including humans: *Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. Working scientifically: *Performing simple tests *Gathering and recording data to help in answering questions *Asking simple questions and recognising that they can be answered in different ways *Observing closely, using simple equipment *Using their observations and ideas to suggest answers to questions	Everyday Materials: *Distinguish between an object and the material from which it is made *Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock *Describe the simple properties of a variety of everyday materials *compare and group together a variety of everyday materials on the basis of their simple physical properties Working scientifically: *Performing simple tests *Observing closely, using simple equipment *Asking simple questions and recognising that they can be answered in different ways *Using their observations and ideas to suggest answers to questions
Children will be taught to...	Animals including humans: -Name, identify, draw and label body parts not only on themselves but also on others and images of humans --Name the senses and match to the correct body part e.g. tongue and taste -Describe how they use their senses day to day such as on their walk to school, can discuss how senses help them to stay safe e.g. sight helps them to cross the road safely -Use their own senses and use a range of vocabulary related to senses to describe how something tastes/sounds/feels to touch/looks/smells e.g. describe a taste as sweet or sour -Recognise what they would not be able to do without a body part e.g. without a pair of eyes, we would not be able to see -Understand how some people live without one or more of their senses, what do they have to aid them?	
	Plants: -Identify and correctly name a range of common wild and garden flowers -Draw a diagram and label the different parts of a plant (root, stem, leaves, petals, seed, bulb, fruit, flower) -Plant a seed/bulb for growing vegetables or salad, understand plants can be food for humans -Observe and orally describe what happens to their seed/bulb as it grows and be taught to look after their plant. Children will be introduced to the things a plant needs to grow and be healthy including water, sunlight and soil. -Recognise that vegetables come from a plant, identify the parts of a plant that are used to eat and compare e.g. a carrot is the root but a cauliflower is the flower of the plant -Recap terms deciduous and evergreen. Children are to explain in a more formal way how they know if a tree is deciduous or evergreen and what these terms mean.	
		Everyday materials: -Begin to look at non-observable features of a material by conducting an experiment to see if materials are waterproof or absorbent. Using a pipette to place water onto a range of materials and observe what happens -Recognise and explain why it might be important to have a waterproof material or an absorbent material. For example, why must an umbrella be made of a waterproof material? Why would you not want to have an absorbent umbrella? -Use results from an experiment to decide on the most suitable material for a given purpose -Answer questions and ask their own questions around materials -Conduct other experiments to answer questions based around materials e.g. what would be the best material for making an Egyptian pyramid?
	Looking after the environment: -Learn how to look after and care for plants whilst growing their own.	Looking after the environment: -Link the properties of materials to why they would cause problems in the environment for example some materials do not rot -Understand the journey rubbish takes and where it ends up. E.g. look at what would happen to a toy that is thrown in the bin. Understand how the amount of rubbish created by people is causing problems. Consider the question—Why are some materials more difficult to dispose of than others? -Begin to understand wasting materials. Begin to question peoples purchasing habits of material items and understand reusing and donating belongings. Do new items need to be bought or could things be reused? For example, do you need a new toy or could you make things by recycling materials and using craft skills? If you have grown out of your toys, could you donate them to younger children rather than putting them into the bin? Understand the importance to reuse. -Understand and recognise they each have a responsibility to respect and look after the world we live in -Understand that small actions taken by all will contribute to a larger outcome to make a difference in protecting the planet -Make suggestions for how people could decrease the amount of rubbish they produce

Year 2	
Term	Autumn 1
Theme	Wilderness explorers
Science objectives	<p>Living things and their habitats:</p> <ul style="list-style-type: none"> *explore and compare the differences between things that are living, dead and things that have never been alive *identify that most living things live in habitats to which they are suited are describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other *identify and name a variety of plants and animals in their habitats, including micro-habitats *describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. <p>Animals, including humans:</p> <ul style="list-style-type: none"> *notice that animals, inc humans, have offspring which grow into adults *find out about and describe the basic needs of animals, inc humans, for survival *describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. <p>Plants:</p> <ul style="list-style-type: none"> *observe and describe how seeds and bulbs grow into mature plants *find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. <p>Working scientifically:</p> <ul style="list-style-type: none"> *Observing closely, using simple equipment *Using their observations and ideas to suggest answers to questions *Asking simple questions and recognising that they can be answered in different ways *Identifying and classifying *Performing simple tests *Gathering and recording data to help in answering questions
Children will be taught to...	<p>Living things and their habitats:</p> <ul style="list-style-type: none"> -Understand the difference between things that are living and dead by linking to animals diet . Children will identify the animals that have been eaten by another by observing the skeletons. Children will be taught to understand that these animals were once alive but are now dead and the bones of the animal comes from their dead body. -Understand and recognise how to know if something is no longer living. What are the characteristics of something that is living? E.g. moving, breathing, eating. Children will be taught to recognise that this no longer happens when something is dead. -Recognise that plants and trees are living and that fallen leaves/petals/branches are dead. Children will be taught to recognise how we know that a plant/tree is living. -Recognise the different types of habitats for British wildlife. Children will be taught to understand how habitats provide basic needs for British animals and plants. -Identify and name animals and plants found in British habitats. -Begin to understand the term 'micro-habitat' and learn about a micro-habitat that can be found in British wildlife. -Begin to understand how a micro-habitat differs to a habitat. Children will explore, observe and find micro-habitats in the school grounds. -Understand the conditions of a microhabitat and why some animals survive better within a microhabitat. Children will be taught to use the word 'suited' to explain. E.g. Children could explore and find woodlice to recognise the conditions of their microhabitat. Children could then be taught that under stones and logs the air is damper which allows woodlice to survive there as they lose their body moisture easily in dry air. -Understand how plants within a British habitat can help the animals that live there and vice versa. -Understand how habitats can have different conditions in terms of temperature, light and weather. Children will be taught to recognise the typical conditions within British habitats. -Recognise how pollution can affect animal/plant habitats within Britain. -Explain and understand what animals must do (British wildlife) to get the things they need for survival e.g. how they hunt. Include animals that must hunt other animals as well as animals that are herbivores. -Create a simple food chain of British wildlife as a class or a small group using photos or objects with no more than three links within the chain. -Link food chains to the diet of a human. Where do humans fit into a food chain? <p>Animals, including humans:</p> <ul style="list-style-type: none"> -Recognise that humans and animals have offspring and compare. -Understand humans need air (oxygen), food and water to survive and be healthy. -Begin to use and understand the correct terminology for food groups (carbohydrates, protein, fruit and vegetables, dairy, fats, sugar) -Recognise and sort items of food into their correct food groups -Understand where different food groups come from e.g. meat and fish comes from animals, fruit and vegetables are grown on farms. -Understand it is important to eat food from each food group to keep healthy. Discuss how some people may not eat food from every group e.g. vegetarians/vegans and consider how these people ensure they have a healthy diet. -Understand the word hygiene, through the theme of wilderness explorers children will be asked to consider what would need to happen if an injury occurred whilst exploring outside in the dirt e.g. if somebody fell and cut their knee with dirt on their legs. Children will discuss the word 'germs' and cleaning to remove these germs. -Understand what germs are and how germs are spread. -Recognise what happens to their body when they exercise and how exercise makes them feel. Gain a simple understanding that exercise helps our bodies to work correctly and to stay healthy. -Understand that hygiene is more than looking after our bodies but also taking care of our belongings. Children will be taught the importance of storing food correctly and safely to prevent illness. -Explain what animals need to survive and why focusing on British wildlife. -Understand and explain how animals use their senses to help survival focusing on British wildlife. -Group British wildlife into groups of mammals, amphibians, reptiles, fish and birds. Use the correct terminology and understand the observable and non-observable features of each group. E.g. warm-blooded animals and cold-blooded animals. -Explain in what form animal groups have offspring. E.g. birds lay eggs but mammals give birth to live young. -Draw upon year 1 learning to use the terms carnivore, omnivore and herbivore whilst making links between the type of teeth a carnivore/omnivore/herbivore has and the type of food they eat. Use animals teeth to help to identify what the animal eats. Focus on British wildlife and link to how the animal survives. Link to learning of food chains and the terms 'predator' and 'prey'. -Identify non-observable features of animals recognising similarities and differences between animals. Understand what a cold blooded/warm blooded animal needs to survive and how the characteristics for each differ e.g. cold blooded animals need less food as their requirement for energy is less than warm blooded animals for their survival. <p>Plants:</p> <ul style="list-style-type: none"> -Identify and correctly name a range of British plants, flowers and trees -Understand what a plant needs to grow, be healthy and survive including sunlight, water, soil, air, space, suitable temperature. -Explain why a plant needs water, light, soil, air, space and a suitable temperature -Observe, describe and explain how seeds and bulbs grow into plants. Children will be taught to record what is happening to their plant e.g. through drawing, photographs -Observe and measure the growth of a plant over time -Keep a plant diary to record the growth of a plant through drawing and writing comments using scientific vocabulary -Understand how some plants can be dangerous to humans or animals as well as how some plants can be used for treatments or medicine. E.g. Research what happens when a human touches a stinging nettle. Link to human/animal survival. <p>Looking after the environment:</p> <ul style="list-style-type: none"> -Understand the word 'pollution' and that it relates to any harmful substance being introduced to the environment -Understand the impact litter has on plants and animals in the environment by observing how it damages habitats and can injure plants and animals. -Recognise that animals do not understand how to stay safe around litter and therefore may try to eat litter. -Develop a deeper understanding of the long term affects of pollution in the local area in terms of British animals becoming endangered or extinct.

Year 2			
Term	Autumn 2	Spring 1	Spring 2
Theme	Light up the world	Wartime	This is me
Science objectives	Uses of Everyday Materials: *identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses *find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. Working scientifically: -Using their observations and ideas to suggest answers to questions -Performing simple tests -Gathering and recording data to help in answering questions	Animals, including humans: *find out about and describe the basic needs of animals, inc humans, for survival (focus on humans) *describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (focus on food and hygiene) Working scientifically: -Performing simple tests -Gathering and recording data to help in answering questions	Animals, including humans: *notice that animals, inc humans, have offspring which grow into adults *find out about and describe the basic needs of animals, inc humans , for survival *describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. Working scientifically: -Observing closely, using simple equipment -Identifying and classifying -Using their observations and ideas to suggest answers to questions -Gathering and recording data to help in answering questions
Children will be taught to...			
		Animals, including humans: -Build upon their understanding of the word hygiene and recognise it is more than washing your body. They will recognise that hygiene relates to keeping your body clean, wearing clean clothes, brushing your hair and looking after your teeth. -Children will consider the hygiene of people during war time and discuss why events at the time may have prevented people having good hygiene. -Recognise what happens if people don't brush and clean their teeth. -Understand basic needs of humans to survive and how these needs were challenged during war time.	Animals, including humans: -Recognise, understand and order the life cycle of a human and of an animal. Compare the human life cycle to that of an animal. -Understand life cycles can move at different paces of time and creatures can have different life spans e.g. the lifespan of a housefly is 15-30 days whereas the lifespan of an elephant is about 60-80 years -Identify that there are different stages of a humans life and how a human looks different in each of these stages e.g. how a humans height changes as they grow older. Also use the correct vocabulary to describe each stage. -Identify what a person can do at each stage of life e.g. what a toddler can do compared to a teenager. -Record data by measuring different parts of their own body e.g. height, hand span, forearm, leg, foot etc. Compare measurements, recognise similarities and differences within own measurements such as arm span may be similar size to height. Compare length of one body part to another e.g. arm length is the same as 3 feet. Children will be able to name and identify parts of the body to complete this. Discuss patterns in growth such as will arm span stay the same as height when an adult? -Use and understand the correct terminology for food groups (carbohydrates, protein, fruit and vegetables, dairy, fats, sugar) as well as understand the amount that should be eaten from each food group -Understand that carbohydrates and fats provide energy. -Understand meat, fish and eggs help a human to grow. -Understand fruit and vegetables help to keep a human well. -Identify and name major organs within the human body and how they keep the body working. -Understand how exercise and eating well helps to look after the organs inside of a humans body. -Understand what exercise does to the body and why it is important for keeping a humans body healthy. Understand the impact on muscles and joints. -Understand it is important for humans to not do too much exercise as this can cause problems.
	Uses of Everyday Materials: -Explore materials and predict which is the most waterproof whilst explaining why they predict this. Children will recap their understanding of the terms waterproof and absorbent from year 1. Children will conduct a comparative test to find which material, out of a selection, is the most waterproof. Children will conduct a more structured experiment than when they were in year 1 and will record their observations. Children will use the results of the experiment to decide the best material for a given purpose E.g. creating a bucket for The Great Fire of London. Children's finished product will then be tested to see if it is successful and children will comment on the results. -Children will explore how materials can be changed by creating the desired shape for a finished product. They will verbally explain what they are noticing about materials they are using for their product when trying to change its shape. -Understand that new materials are always being invented. Children will be taught about Charles Macintosh and how he experimented with chemicals and materials and was able to invent a waterproof material to be used for a coat.		
			Looking after the environment: -Understand that the production of meat for food contributes to air pollution as animals produce methane which damages the atmosphere. Children to also be taught that animal waste (manure) also pollutes streams, rivers and oceans. -Understand the affects of damage to the worlds atmosphere

Year 2		
Term	Summer 1	Summer 2
Theme	Ahoy	
Science objectives	<p>Living things and their habitats:</p> <ul style="list-style-type: none"> *explore and compare the differences between things that are living, dead and things that have never been alive *identify that most living things live in habitats to which they are suited are describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other *identify and name a variety of plants and animals in their habitats, including micro-habitats *describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. <p>Animals:</p> <ul style="list-style-type: none"> *find out about and describe the basic needs of animals, inc humans, for survival *notice that animals, including humans, have offspring which grow into adults <p>Uses of Everyday Materials:</p> <ul style="list-style-type: none"> *identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses *find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. <p>Plants:</p> <ul style="list-style-type: none"> *observe and describe how seeds and bulbs grow into mature plants *find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. <p>Working scientifically:</p> <ul style="list-style-type: none"> *Observing closely, using simple equipment *Asking simple questions and recognising that they can be answered in different ways *Performing simple tests *Identifying and classifying *Using their observations and ideas to suggest answers to questions *Gathering and recording data to help in answering questions 	
	<p>Living things and their habitats:</p> <ul style="list-style-type: none"> -Understand and explain why animals need plants within their habitat and vice versa whilst looking at different types of habitats. -Identify and correctly name the main habitats found in the world (aquatic, desert, forest, woodland, tundra, grassland). Children will be taught the characteristics of each habitat and what each would provide to the animals and plants that live there. -Recognise the conditions of different habitats and compare. Children will be taught the temperature, weather patterns and the times of daylight in different habitats and how this affects the plants and animals that can grow and live there. -Recognise and understand that the conditions of a habitat will affect the plants that can grow which in turn affects the animals in the habitat which rely on plants (herbivores) which in turn affects the carnivores that can live in that habitat. Linking the conditions of a habitat to food chains. -Understand micro-habitats found in different habitats around the world and understand that a micro-habitat can have a microclimate. -Begin to understand the word 'adaptations' and link to their understanding of the word 'suited' from earlier in the year. Children will be taught to understand the features an animal/plant has which suits it to its habitat (adaptations). -Identify and name animals and plants that live in different habitats and recognise why they live in the habitat that they do, linking to the animals/plants needs for survival. -Compare habitat features by beginning to question what would happen to an animal/plant if it was placed in a different habitat. Would the animal/plant be able to survive? -Recognise and sort things into categories of living, dead and things that have never been alive whilst explaining how they know. -Explain the characteristics of something that is living (plant/animal/human) and use these characteristics to explain how they know if something has never been living. -Recognise and explain how they know that something was once living but no longer is. Children will be taught to identify features such as a skeleton to explain how they know that something was once living as well as use their prior knowledge such as knowing that something breathes and moves usually. -Recognise materials that come from something that was once living compared to materials that have never been alive. For example, wood is a material which is dead and comes from something that was once alive whereas metal is a material that has never been living. -Learn and understand the vocabulary 'consumer' and 'producer' and identify these within a food chain. -Question and understand what may happen if one element of a food chain was removed. Children will be taught to understand the affect this would have on the rest of the food chain as well as their habitat. -Independently represent a food chain using a diagram and label. -Understand that food chains begin with the sun. <p>Animals, including humans:</p> <ul style="list-style-type: none"> -Name parts of the inside of a human body including names for organs and bones, compare skeleton to that of an animal (Touched upon in preparation for Year 3) -Look at the teeth of animals that live in the ocean and use the shape of the teeth to decide if the animals are carnivores, herbivores or omnivores. Explain how the teeth give clues as to what the animal eats. -Group animals into sets of mammals, amphibians, reptiles, fish and birds, focusing on ocean and exotic animals. Use the correct terminology and understand the observable and non-observable features of each group. E.g. warm-blooded animals and cold-blooded animals. Make links between cold blooded/warm blooded characteristics and their needs for survival. -Understand how ocean animals begin life and grow. -Understand the needs of ocean animals for survival. <p>Plants:</p> <ul style="list-style-type: none"> -Conduct a comparative experiment to observe what would happen to a plant without water/light/soil/suitable temperature and record what happens. The same type of seed/bulb will be placed in different areas so they are missing one thing needed e.g. light. Children will make predictions before the experiment begins and will be taught to regularly record what is happening throughout the experiment. Children will be taught to take measurements of the growth and record this data. -Understand the processes of reproduction in plants -Understand Scientists through history who have studied plants and how Science develops -Observe bulbs, cut bulbs in half to examine the insides. Understand that parts of the plant can already be seen inside some bulbs e.g. leaves and stems are already inside of the bulb -Understand the process of germination -Compare the growth between different plants where the seed/bulb is planted at the same time. -Explore the affects of temperature on a plant by conducting a test. -Compare plants from around the world and how they survive in different habitats. E.g. How do cacti survive in the desert without much water? <p>Uses of Everyday Materials:</p> <ul style="list-style-type: none"> -Understand how materials have been developed and new materials have been invented to suit a particular purpose or solve a problem. Children will learn about people who have done this e.g. John Dunlop. -Understand that some materials are natural and others are man-made. Children will be taught to recognise and name materials that belong to either group. Children will be taught the process of how some man-made materials are created. -Understand where some materials come from e.g. leather is made from an animal -Children will be taught to understand whether natural or man-made materials are more damaging to the environment and why. -Understand that materials are not just solid but can also be a liquid or a gas (touch on, taught in Year 4) -Recognise that an object can be made from different materials e.g. a spoon can be made from metal, plastic or wood. Discuss the positives and negatives of using each material for the same purpose. E.g. When would a wooden spoon be better than a metal spoon? Children will be taught to use their knowledge of the properties of materials to explain which materials are most suitable for a particular purpose. -Experiment with how the shape of an object can sometimes be changed depending on the material it is made from, this can be done by bending, twisting or squeezing the material. Children will be expected to record this in some way. -Make comparisons between different materials and if they are able to change shape. Children will also compare how the same material can be used for different objects and how the shape of the object as well as the way the material has been used means that it may not bend, twist or squeeze in the same way. E.g. a thin plastic bottle would twist whereas a thicker plastic bottle would not. Children will recognise and be able to explain why this happens. -Use prior knowledge of materials to predict which material would be most suited for a purpose which will include sinking/floating. <p>Looking after the environment:</p> <ul style="list-style-type: none"> -Develop a deeper understanding of the long term affects of pollution for the world in terms of animals or plants becoming endangered or extinct as well as the long term affect on humans. -Understand how materials are negatively affecting the planet -Understand that there are not limitless resources in the world and so it is important to reduce, reuse and recycle -Understand the affect materials and litter are having on the wider world including the oceans -Understand how Scientists are approaching issues with materials, inventing new materials and finding ways to remove/destroy the problem materials -Understand water pollution in terms of the ocean and how this is polluted. -Understand how pollution affects the habitats of plants and animals 	

Progression through years

Animals & Humans

Nursery AUT 1	Nursery AUT 2	Nursery SPR 1	Nursery SPR 2	Nursery SUM 1	Nursery SUM 2
<ul style="list-style-type: none"> -With support, to be aware of their own hygiene through learning to use the toilet and washing their hands -With support, learn to put on their own coat, shoes or wellies -Interact with new people with support -Recognise the people who are part of their family -Understand that people have names, learn their own name and the names of others -Begin to discuss and share their likes through what they eat, play etc. 	<ul style="list-style-type: none"> -Share nursery equipment with others, with support -Be supported to make friends and interact with others -Name and point to their own body parts e.g. through songs such as head, shoulders, knees and toes -Begin to use language to identify basic animals seen in the outdoor area such as a bird. Adults to model identifying and naming whilst outside. 	<ul style="list-style-type: none"> -Build friendships with support. Children will be taught to use their speech to interact with others and to play collaboratively. -With support, express their own ideas and opinions. -With support, recognise that everyone is different -With support, be encouraged to use language to share needs and feelings. 	<ul style="list-style-type: none"> -Begin to independently express their own ideas and opinions. -Independently recognise the differences of others -Independently use language to share their needs and feelings. -With support, listen to the opinions of others. -Approach and ask adults for help when needed. -Identify, recognise and correctly name animals that are kept as pets. -Share if they have a pet at home, the type of animal this is and its name. -Use prior knowledge of their own body parts to identify the body parts of pets e.g. head, legs, feet -Recognise that pets have a tail but humans do not. -Recognise and describe pets body coverings with simple vocabulary e.g. furry -Use small world animals to identify and name common animals when playing. 	<ul style="list-style-type: none"> -Independently listen to the ideas and opinions of others and respond. -Name and describe animals they find and see in the school outdoor area such as a bird seen in the playground. -Find mini beasts and explore where they can be found (in the school playground/ nursery outdoor area) -Begin to correctly name some mini beasts. -Use their language to explain what they have observed in the outdoor area. -Observe how butterflies grow and change from a caterpillar. Children will have a mesh butterfly garden within the nursery classroom to observe the changes that take place during a butterfly's life cycle. Children will be taught to describe their observations. -Respect wild animals in the school outdoor area and help to look after their outdoor environment -Be supported to understand how and why questions about animals and begin to form answers with support. -Use a range of media to record their observations of animals e.g. drawing, painting, play dough etc. -Collect natural items e.g. twigs, leaves or grass to then build a minibeast home 	<ul style="list-style-type: none"> -Begin to recognise danger and ask adults for help -Explore and be exposed to a different environment during a local walk -Use prior knowledge of insects and animals to identify and name some creatures seen in a different environment during a local walk

Reception AUT 1	Reception AUT 2	Reception SPR 1	Reception SPR 2	Reception SUM 2
<ul style="list-style-type: none"> -Name and point to body parts e.g. through songs such as head, shoulders, knees and toes -Compare own body to others e.g. difference or similarities in height, hair colour -Explain how they are feeling from the signs their bodies are given e.g. explain when they are hungry -Begin to independently look after themselves with hygiene and clothing e.g. using the toilet, unzipping a coat, washing hands -Begin to understand that hygiene is important for looking after themselves e.g. through hand washing -Knowing the correct names for pets and identifying these animals e.g. dog/ cat 	<ul style="list-style-type: none"> -Explain how they know if they are feeling a certain way. How do you know when you are hungry or tired? Identify what happens to their bodies. -Understand how to respond to the messages their bodies are sending e.g. what can you do to help your body when you feel hungry or tired? -Understand the importance of sleep and how this helps the body to function -Begin to recognise growth within humans. Will I always be this height? Will my hands always be this size? How will I change? A record could be made of a child's or all children's height/hand span/footprint to then come back to later in the year and compare the growth. -Notice and discuss what happens to their bodies when they exercise and how it makes them feel. -Use small world animals to identify and name common wild British animals when playing -Explain their own opinion about animals, share which animals they like or dislike -Begin to verbally use the correct terminology for animal body parts such as beak, wings, tail -Mimic animals by moving like common animals and showing understanding of how they move e.g. using arms to mimic the wings of an owl -Name and describe things they find and see in the natural world such as a bird seen in the playground. -Understand that some animals are awake at night and be introduced to the word 'nocturnal'. -Know a few common British animals that are nocturnal and understand what they do during the night such as catch their food. 	<ul style="list-style-type: none"> -Name their body parts and describe what they are doing with them whilst moving like a dinosaur e.g. "I am stomping my feet" -Use the correct words to describe senses such as when using feely bags children will use the word 'feel' when describing what they are touching inside the bag. -Use mirrors to look at their own facial features. Children will use the correct word to describe their senses when looking in the mirror e.g. "I can see..." Children will also use the correct terminology to discuss their facial features including eyes, nose, mouth, ears, hair. -How did the environment look when the dinosaurs existed? Discuss the natural environment and compare to how the world looks today -Ask their own questions about the things they find e.g. why /how do birds fly? -Know the names of some dinosaurs -Use their knowledge and understanding of animal body parts to identify the parts of a dinosaur such as tail, wings, legs -Understand that some creatures hatch from eggs by being taught that dinosaurs hatched from an egg -Understand and use the word extinct. Children will be taught that dinosaurs are extinct and this means they are no longer alive on the planet. This will be compared to other animals that are extinct. -Observe fossils and understand how they are made. Children will be taught to understand that fossils help scientists to learn about dinosaurs -Become aware of bones and that bones are inside of us as well as some animals. Children will be taught that dinosaur bones help scientists. 	<ul style="list-style-type: none"> -Recognise that they are growing; compare their own body to that of an animal in terms of height and size -Compare their growth to records from the Autumn term -Compare natural environments and built up environments. Discuss how zoo animals may live within a built up environment when in a zoo but in the wild the environment would be very different -Express their opinions of natural environments and built up environments. Which environment do you think the animals prefer? -Draw or make a model of a common animal and explain its basic structure, naming basic body parts -Recognise and explain similarities and differences between an animal and themselves e.g. a bird has wings but a human doesn't. -Understand how to look after animals in the wild and pets, recognise how they can care for wild animals in their own local environment -Ask questions about animals that begin with 'why', 'how' or 'I wonder'. -Observe the beginning of life by having chicks to hatch in school. Children will be taught to care for the eggs before hatching and how the chicks must be looked after once they have hatched -Understand the needs of animals and compare to a human e.g. an animal needs food and drink just as a human does 	<ul style="list-style-type: none"> -Understand it is important to eat and try different types of food to keep our bodies healthy -Understand the words 'healthy' and 'unhealthy'. Recognise that fruit and vegetables are healthy. --Use their senses and with support start to use the appropriate vocabulary to describe how something looks, tastes, smells, feels and sounds --Have a simple understanding of the importance of exercise to be healthy and look after our bodies. Children will be taught to understand that moving our bodies helps them to be healthy and strong. -Understand that animals are used for food for humans, identify which animals are used for food and match the animal to the type of food they create e.g. cows create beef

Progression through years

Animals & Humans

Year 1 AUT 1	Year 1 SPR 1	Year 1 SPR 2	Year 1 SUM 1
<p>-Name the observable features and structure of animals by looking at animals found near their own homes in the local environment as well as pets</p> <p>-Be encouraged to ask and verbally share questions about the animals they are observing</p> <p>-Understand the difference between wild animals and pets</p> <p>-Name and identify, body parts on themselves verbally or through drawing</p> <p>-Begin to use scientific vocabulary whilst completing a practical task where they will use their senses. For example working with food to follow a recipe and being encouraged to describe how the food tastes, smells, looks, feels and possibly the sounds being made whilst chopping or mixing. Children encouraged to explain how they know what the food looks/tastes/smells/ feels/sounds like, which body part are you using? Children will be taught to verbalise their understanding of senses whilst completing a practical activity and staff to take notes.</p>	<p>-Begin to use and understand the terminology carnivore, omnivore and herbivore by understanding what each word means and the type of food that relates to each term e.g. Carnivore means something that eats only meat.</p> <p>-Begin to group animals into carnivore, omnivore and herbivore during a practical task as a whole class or group activity</p> <p>-Begin to use terminology fish, amphibian, reptile, bird and mammal to group animals. Understand the observable features of each group e.g. birds have feathers and wings. Look at the observable features of each animal on photos or small world objects and place these into the correct animal groups. Practical sorting.</p> <p>-Link to theme by identifying animals that fly and comparing their structure</p>	<p>-Observe the shape and size of teeth of animals and understand how this can help to identify what an animal eats</p> <p>-Independently group animals into categories of carnivore, omnivore and herbivore using observations of animals teeth to support</p> <p>-Label the observable features and structure of animals, compare these features noticing similarities and differences between animals as well as comparing to humans</p> <p>-Make comparisons between animal groups e.g. reptiles have scales but mammals have fur.</p> <p>-Name and describe common animals (including those kept as pets) from each category of fish, amphibians, reptiles, birds, mammals. For example name a pigeon and an owl and describe the structure of these animals to explain how they know that they are both birds.</p> <p>-Understand and identify if groups of animals are warm blooded or cold blooded. Children will be taught to understand what this means and how the animals body temperature alters.</p>	<p>Animals including humans:</p> <p>-Name, identify, draw and label body parts not only on themselves but also on others and images of humans</p> <p>-Name the senses and match to the correct body part e.g. tongue and taste</p> <p>-Describe how they use their senses day to day such as on their walk to school, can discuss how senses help them to stay safe e.g. sight helps them to cross the road safely</p> <p>-Use their own senses and use a range of vocabulary related to senses to describe how something tastes/sounds/feels to touch/looks/smells e.g. describe a taste as sweet or sour</p> <p>-Recognise what they would not be able to do without a body part e.g. without a pair of eyes, we would not be able to see</p> <p>-Understand how some people live without one or more of their senses, what do they have to aid them?</p>

Year 2 AUT 1	Year 2 SPR 1	Year 2 SPR 2	Year 2 SUM
<p>-Recognise that humans and animals have offspring and compare.</p> <p>-Understand humans need air (oxygen), food and water to survive and be healthy.</p> <p>-Begin to use and understand the correct terminology for food groups (carbohydrates, protein, fruit and vegetables, dairy, fats, sugar)</p> <p>-Recognise and sort items of food into their correct food groups</p> <p>-Understand where different food groups come from e.g. meat and fish comes from animals, fruit and vegetables are grown on farms.</p> <p>-Understand it is important to eat food from each food group to keep healthy. Discuss how some people may not eat food from every group e.g. vegetarians/vegans and consider how these people ensure they have a healthy diet.</p> <p>-Understand the word hygiene; through the theme of wilderness explorers children will be asked to consider what would need to happen if an injury occurred whilst exploring outside in the dirt e.g. if somebody fell and cut their knee with dirt on their legs. Children will discuss the word 'germs' and cleaning to remove these germs.</p> <p>-Understand what germs are and how germs are spread.</p> <p>-Recognise what happens to their body when they exercise and how exercise makes them feel. Gain a simple understanding that exercise helps our bodies to work correctly and to stay healthy.</p> <p>-Understand that hygiene is more than looking after our bodies but also taking care of our belongings. Children will be taught the importance of storing food correctly and safely to prevent illness.</p> <p>-Explain what animals need to survive and why focusing on British wildlife.</p> <p>-Understand and explain how animals use their senses to help survival focusing on British wildlife.</p> <p>-Group British wildlife into groups of mammals, amphibians, reptiles, fish and birds. Use the correct terminology and understand the observable and non-observable features of each group. E.g. warm-blooded animals and cold-blooded animals.</p> <p>-Explain in what form animal groups have offspring. E.g. birds lay eggs but mammals give birth to live young.</p> <p>-Draw upon year 1 learning to use the terms carnivore, omnivore and herbivore whilst making links between the type of teeth a carnivore/omnivore/herbivore has and the type of food they eat. Use animals teeth to help to identify what the animal eats. Focus on British wildlife and link to how the animal survives. Link to learning of food chains and the terms 'predator' and 'prey'.</p> <p>-Identify non-observable features of animals recognising similarities and differences between animals. Understand what a cold blooded/warm blooded animal needs to survive and how the characteristics for each differ e.g. cold blooded animals need less food as their requirement for energy is less than warm blooded animals for their survival.</p>	<p>-Build upon their understanding of the word hygiene and recognise it is more than washing your body. They will recognise that hygiene relates to keeping your body clean, wearing clean clothes, brushing your hair and looking after your teeth.</p> <p>-Children will consider the hygiene of people during war time and discuss why events at the time may have prevented people having good hygiene.</p> <p>-Recognise what happens if people don't brush and clean their teeth.</p> <p>-Understand basic needs of humans to survive and how these needs were challenged during war time.</p>	<p>-Recognise, understand and order the life cycle of a human and of an animal. Compare the human life cycle to that of an animal.</p> <p>-Understand life cycles can move at different paces of time and creatures can have different life spans e.g. the lifespan of a housefly is 15-30 days whereas the lifespan of an elephant is about 60-80 years</p> <p>-Identify that there are different stages of a humans life and how a human looks different in each of these stages e.g. how a humans height changes as they grow older. Also use the correct vocabulary to describe each stage.</p> <p>-Identify what a person can do at each stage of life e.g. what a toddler can do compared to a teenager.</p> <p>-Record data by measuring different parts of their own body e.g. height, hand span, forearm, leg, foot etc. Compare measurements, recognise similarities and differences within own measurements such as arm span may be similar size to height. Compare length of one body part to another e.g. arm length is the same as 3 feet. Children will be able to name and identify parts of the body to complete this. Discuss patterns in growth such as will arm span stay the same as height when an adult?</p> <p>-Use and understand the correct terminology for food groups (carbohydrates, protein, fruit and vegetables, dairy, fats, sugar) as well as understand the amount that should be eaten from each food group</p> <p>-Understand that carbohydrates and fats provide energy.</p> <p>-Understand meat, fish and eggs help a human to grow.</p> <p>-Understand fruit and vegetables help to keep a human well.</p> <p>-Identify and name major organs within the human body and how they keep the body working.</p> <p>-Understand how exercise and eating well helps to look after the organs inside of a humans body.</p> <p>-Understand what exercise does to the body and why it is important for keeping a humans body healthy. Understand the impact on muscles and joints.</p> <p>-Understand it is important for humans to not do too much exercise as this can cause problems.</p>	<p>-Name parts of the inside of a human body including names for organs and bones, compare skeleton to that of an animal (Touched upon in preparation for Year 3)</p> <p>-Look at the teeth of animals that live in the ocean and use the shape of the teeth to decide if the animals are carnivores, herbivores or omnivores. Explain how the teeth give clues as to what the animal eats.</p> <p>-Group animals into sets of mammals, amphibians, reptiles, fish and birds, focusing on ocean and exotic animals. Use the correct terminology and understand the observable and non-observable features of each group. E.g. warm-blooded animals and cold-blooded animals. Make links between cold blooded/warm blooded characteristics and their needs for survival.</p> <p>-Understand how ocean animals begin life and grow.</p> <p>-Understand the needs of ocean animals for survival.</p>

Progression through years

Plants

Nursery AUT 2	Nursery SPR 2	Nursery SUM 1	Nursery SUM 2
<ul style="list-style-type: none"> -With support, recognise that leaves fall from trees -With support, talk about the colours of leaves as they change -Show curiosity of nature they find outside or in the classroom such as a pine cone -With support, recognise that flowers start to die during Autumn 	<ul style="list-style-type: none"> -Be encouraged to notice the plants and flowers that are growing in the outdoor area. -Describe the size and colours of the flowers growing with support and encouragement from the adults. 	<ul style="list-style-type: none"> -Use their language to explain what they have observed in the outdoor area and describe the plants they have seen. -Take part in a plant hunt in the school outdoor area. Children to be supported to use the words plant, flower or tree when they find one. -Be supported to understand how and why questions about plants and begin to form answers with support. -Use a range of media to record their observations of plants e.g. drawing, painting, play dough etc. 	<ul style="list-style-type: none"> Children independently use the word plant, flower or tree to explain what they have observed outside. -Explore and be exposed to a different environment during a local walk -Use prior knowledge of nature to identify plants, flowers and trees seen in a different environment during a local walk using the simple vocabulary 'plant/flower/tree'

Reception AUT	Reception SPR 1	Reception SPR 2	Reception SUM 1	Reception SUM 2
<ul style="list-style-type: none"> -Use simple vocabulary for nature such as 'flower', 'plant' and 'tree' when discussing things they see in the school playground/ outdoor area -Notice that leaves change colour and fall from the trees -Understand that trees don't always have leaves -Identify the colour of the leaves as they are changing -Talk about and describe the tree leaves found on the ground, how the leaves feel and look as well as their size, colour and shape. 	<ul style="list-style-type: none"> -Identify and name a plant and tree, look at plants and trees in images of dinosaur scenes -Begin to use some basic vocabulary for parts of a tree (leaf, branch, root, trunk) 	<ul style="list-style-type: none"> -Notice the flowers and blossom that are beginning to grow around the school grounds. -Notice that leaves are growing back on the trees around school -Compare plants/flowers/trees seen around school grounds by discussing size, colour and discussing their preference 	<ul style="list-style-type: none"> -Begin to use some simple flower names e.g. daisy, sunflower, daffodil -Identify plants that are in stories and correctly name these -Observe and draw a plant. Children will then be given opportunity to draw, paint or create a model of their own imaginary plant. 	<ul style="list-style-type: none"> -Understand that some food comes from a plant. Children will be taught that food such as peppers or pumpkins have been grown as a plant -Plant a seed and observe how a plant grows. Discuss the changes that happen whilst the plant grows. -Use the correct terminology to talk about and describe the flower, leaf, petal, root, soil -Observe food that comes from plants whilst cooking -Investigate what is inside of different types of fruit and question why . Children will be encouraged to consider what would happen if the seeds from a fruit were planted.

Year 1 SPR 1	Year 1 SPR 2	Year 1 SUM 1
<ul style="list-style-type: none"> -Recognise and explain how some plants and trees change over time (link to seasons) Children will be able to explain the change in colours and how leaves fall from certain trees 	<ul style="list-style-type: none"> -Identify and correctly name a range of common trees, compare the leaves of different types of trees and recognise the shapes of a leaf that match a tree. Children to walk through the local environment with a leaf chart to identify the types of trees they can see. Children may want to record the trees they see through drawing or taking photos. Compare to trees that grow in Australia. -Identify and name the parts of a tree including the trunk, branches, leaf, roots, bark -Identify which trees are deciduous and which are evergreen, compare leaf shapes to decide if a tree is evergreen or deciduous. (Practical, possibly during a nature walk or hunt) -Work scientifically by dissecting a flowering plant to identify and name the different parts (root, stem, leaves, petals) 	<ul style="list-style-type: none"> -Identify and correctly name a range of common wild and garden flowers -Draw a diagram and label the different parts of a plant (root, stem, leaves, petals, seed, bulb, fruit, flower) -Plant a seed/bulb for growing vegetables or salad, understand plants can be food for humans -Observe and orally describe what happens to their seed/bulb as it grows and be taught to look after their plant. Children will be introduced to the things a plant needs to grow and be healthy including water, sunlight and soil. -Recognise that vegetables come from a plant, identify the parts of a plant that are used to eat and compare e.g. a carrot is the root but a cauliflower is the flower of the plant -Recap terms deciduous and evergreen. Children are to explain in a more formal way how they know if a tree is deciduous or evergreen and what these terms mean.

Year 2 AUT 1	Year 2 SUM
<ul style="list-style-type: none"> -Identify and correctly name a range of British plants, flowers and trees -Understand what a plant needs to grow, be healthy and survive including sunlight, water, soil, air, space, suitable temperature. -Explain why a plant needs water, light, soil, air, space and a suitable temperature -Observe, describe and explain how seeds and bulbs grow into plants. Children will be taught to record what is happening to their plant e.g. through drawing, photographs -Observe and measure the growth of a plant over time -Keep a plant diary to record the growth of a plant through drawing and writing comments using scientific vocabulary -Understand how some plants can be dangerous to humans or animals as well as how some plants can be used for treatments or medicine. E.g. Research what happens when a human touches a stinging nettle. Link to human/animal survival. 	<ul style="list-style-type: none"> -Conduct a comparative experiment to observe what would happen to a plant without water/light/soil/suitable temperature and record what happens. The same type of seed/bulb will be placed in different areas so they are missing one thing needed e.g. light. Children will make predictions before the experiment begins and will be taught to regularly record what is happening throughout the experiment. Children will be taught to take measurements of the growth and record this data. -Understand the processes of reproduction in plants -Understand Scientists through history who have studied plants and how Science develops -Observe bulbs, cut bulbs in half to examine the insides. Understand that parts of the plant can already be seen inside some bulbs e.g. leaves and stems are already inside of the bulb -Understand the process of germination -Compare the growth between different plants where the seed/bulb is planted at the same time. -Explore the affects of temperature on a plant by conducting a test. -Compare plants from around the world and how they survive in different habitats. E.g. How do cacti survive in the desert without much water?

Progression through years

Seasonal changes

Nursery AUT 2	Nursery SPR 1	Nursery SPR 2	Nursery SUM 2
-Communicate what they can see happening to the weather e.g. encourage children to comment and discuss when it is raining outside -Begin to recognise how the weather affects them e.g. rain makes their clothes wet -Begin to understand the need for different items of clothing dependent on the weather e.g. that children need to wear wellies if it is raining -With support, recognise how things change outside when the weather changes e.g. when it rains, the leaves or grass become wet -With support, recognise how the weather affects animals. E.g. When it rains, do we see as many animals in the outdoor area? Do the animals hide from the rain?	-Extend their vocabulary when discussing weather by recognising snow, ice and frost -Explore ice through activities such as ice cube painting -Discuss changes they see outside in the outdoor nursery area. -Recognise the clothes or shoes needed to suit the weather changes -Recognise the sounds created by whether such as the sound of rain falling.	-Recognise the changes in weather and describe the weather. -Recognise the change in clothes needed when working outside. -Notice how nature is changing and growing.	-Discuss the weather, use suitable vocabulary to describe the weather. -Recognise that coats are no longer needed and jumpers can be removed if the weather is hot.
Reception AUT	Reception SPR	Reception SUM	
-Observe nature within the classroom in seasonal trays or tuft spot. During Autumn children may have conkers, leaves, twigs, pine cones, pumpkins to observe within their class. -Communicate what they can see happening to the trees in the school grounds throughout the year In Autumn/Winter adults will encourage children to recognise and discuss how the leaves are changing colour and are falling from the trees -Talk about and describe the tree leaves found on the ground, how the leaves feel and look as well as their size, colour and shape. -Begin to use the correct vocabulary to describe the weather. Children will recognise if it is sunny or rainy. Children will begin to understand that if it is cold then they will need to wear a coat and if it is raining then they will need wellie boots.	-Communicate what they can see happening to the trees in the school grounds throughout the year In Spring adults will encourage children to recognise and discuss how the leaves are growing on trees, blossom is growing and flowers are beginning to grow	Recognise changes in weather including temperature. Children will be taught to understand the type of clothes or shoes they might need to wear during summer	
Year 1 AUT 1	Year 1 SPR 1		
-Name and order the four seasons -Name simple terms for weather (rain, sun, cloud, rainbow, snow, wind, storm, lightning, thunder, hot, cold) -Observe how trees change throughout the seasons; look at the work of Mark Hirsch and discuss how he documented his observations, make similar observations themselves with trees around the school. Children could perhaps select one tree to regularly document throughout the year through photographs or drawing etc. This could be completed as a whole class project rather than individual. -Discuss the weather children noticed during the summer holidays, what type of weather is associated with Summer? Compare to the weather expected during other seasons. -Observe and discuss how towards the end of Autumn the evenings and mornings begin to get darker.	-Understand the affect the seasons have on plants/trees. What happened to trees during Winter time? Look back at the class record of the tree(s) being observed in the school grounds. What will now begin to happen to the trees during Spring? -Understand why the leaves of some trees change colour throughout the seasons relating to the change of sunlight and temperature -Conduct an experiment to investigate why leaves change colour and make connections to how the amount of sunlight changes during the year -Understand staying safe in different types of weather including to not look directly at the sun even when wearing glasses -Observe signs of Spring through hands on experience finding plants/insects/animals that appear during Spring time -Understand how sun rise becomes later and sun set becomes earlier in Winter time, link to how clocks are changed during the year. Children to recognise and understand the daylight hours are longer in Spring time. -Conduct an experiment to investigate rainfall over a period of time. Link to Working Scientifically objectives and children to discuss patterns within the data -Record data for weather and learn new terminology (temperature, rainfall, wind speed) This could be a weather journal, chart or their own weather report presented to others.		

Progression through years

Everyday materials

Nursery SPR 1	Nursery SPR 2	Nursery SUM 1	Nursery SUM 2	
-Recognise different properties of materials when creating art work e.g. describe something as dark, light or shiny	-Develop scissor skills and explore how different materials cut. Adults to encourage children to comment on how some materials are more difficult to cut than others.	-Explore and experiment with different construction materials to build models.	-Understand the use and purpose of materials within the classroom for example knowing to draw onto paper and where not to draw. -Choose appropriate materials for completing an activity within their classroom. Children may not necessarily use the correct names of materials but will understand their use within the classroom. -Explore and experiment with different construction materials to build models. Children will be taught to choose their own materials from a range of options.	
Reception AUT 1	Reception AUT 2	Reception SPR 1	Reception SUM 1	Reception SUM 2
-Recognise the basic use for some materials within their classroom e.g. paper is for drawing on whereas plastic is not. Children may not necessarily use the correct names of materials but will understand their use within the classroom.	-Use simple vocabulary when choosing materials to work with e.g. paper. -Begin to describe materials through exploration during continuous provision	-Have a range of opportunities to explore a variety of materials and use different materials for creating models or to build with. This will allow children to begin to understand simple properties of some materials. Adults will encourage children to describe the materials they are using to build or create models with.	-Learn material names through stories E.g. brick house in 'The three little pigs' -Use the correct language when talking about a material an object is made from -Notice patterns on materials e.g. when looking at bricks. Children may take rubbings of different materials such as brick, stone or wood to discover the patterns they create.	-Have a simple understanding of how some materials can change e.g. ice can melt to become water, chocolate can be melted when cooking
Year 1 AUT 2			Year 1 SUM 2	
Recognise that materials are all around us, find materials around their classroom/school -Learn material names based on what objects are made from, starting with objects found around the classroom/school -Independently name and identify materials recognising the material objects are made from -Sort and group objects based on the material they are made from -Describe the way the material an object is made from looks and feels. -Describe simple physical properties of a material such as colour, size, texture and shape -Recognise that different materials can have similar properties and sort materials based on their properties e.g. place all smooth materials together -Use their knowledge of materials to explain why some materials would be inappropriate for certain items e.g. wooden trousers -Understand some materials are 'see-through' whilst others are not. Children will be taught the correct vocabulary and meaning of transparent, translucent and opaque. -Conduct a simple investigation as a group to explore the properties of materials and decide whether materials are transparent, translucent or opaque.			-Begin to look at non-observable features of a material by conducting an experiment to see if materials are waterproof or absorbent. Using a pipette to place water onto a range of materials and observe what happens -Recognise and explain why it might be important to have a waterproof material or an absorbent material. For example, why must an umbrella be made of a waterproof material? Why would you not want to have an absorbent umbrella? -Use results from an experiment to decide on the most suitable material for a given purpose -Answer questions and ask their own questions around materials -Conduct other experiments to answer questions based around materials e.g. what would be the best material for making an Egyptian pyramid?	
Year 2 AUT 2		Year 2 SUM		
-Explore materials and predict which is the most waterproof whilst explaining why they predict this. Children will recap their understanding of the terms waterproof and absorbent from year 1. Children will conduct a comparative test to find which material, out of a selection, is the most waterproof. Children will conduct a more structured experiment than when they were in year 1 and will record their observations. Children will use the results of the experiment to decide the best material for a given purpose E.g. creating a bucket for The Great Fire of London. Children's finished product will then be tested to see if it is successful and children will comment on the results. -Children will explore how materials can be changed by creating the desired shape for a finished product. They will verbally explain what they are noticing about materials they are using for their product when trying to change its shape. -Understand that new materials are always being invented. Children will be taught about Charles Macintosh and how he experimented with chemicals and materials and was able to invent a waterproof material to be used for a coat.		-Understand how materials have been developed and new materials have been invented to suit a particular purpose or solve a problem. Children will learn about people who have done this e.g. John Dunlop. -Understand that some materials are natural and others are man-made. Children will be taught to recognise and name materials that belong to either group. Children will be taught the process of how some man-made materials are created. -Understand where some materials come from e.g. leather is made from an animal -Children will be taught to understand whether natural or man-made materials are more damaging to the environment and why. -Understand that materials are not just solid but can also be a liquid or a gas (touch on, taught in Year 4) -Recognise that an object can be made from different materials e.g. a spoon can be made from metal, plastic or wood. Discuss the positives and negatives of using each material for the same purpose. E.g. When would a wooden spoon be better than a metal spoon? Children will be taught to use their knowledge of the properties of materials to explain which materials are most suitable for a particular purpose. -Experiment with how the shape of an object can sometimes be changed depending on the material it is made from, this can be done by bending, twisting or squeezing the material. Children will be expected to record this in some way. -Make comparisons between different materials and if they are able to change shape. Children will also compare how the same material can be used for different objects and how the shape of the object as well as the way the material has been used means that it may not bend, twist or squeeze in the same way. E.g. a thin plastic bottle would twist whereas a thicker plastic bottle would not. Children will recognise and be able to explain why this happens.		

Progression through years

Living things and their habitats

Year 2 AUT 1	Year 2 SUM
<ul style="list-style-type: none"> -Understand the difference between things that are living and dead by linking to animals diet . Children will identify the animals that have been eaten by another by observing the skeletons. Children will be taught to understand that these animals were once alive but are now dead and the bones of the animal comes from their dead body. -Understand and recognise how to know if something is no longer living. What are the characteristics of something that is living? E.g. moving, breathing, eating. Children will be taught to recognise that this no longer happens when something is dead. -Recognise that plants and trees are living and that fallen leaves/petals/branches are dead. Children will be taught to recognise how we know that a plant/tree is living. -Recognise the different types of habitats for British wildlife. Children will be taught to understand how habitats provide basic needs for British animals and plants. -Identify and name animals and plants found in British habitats. -Begin to understand the term 'micro-habitat' and learn about a micro-habitat that can be found in British wildlife. -Begin to understand how a micro-habitat differs to a habitat. Children will explore, observe and find micro-habitats in the school grounds. -Understand the conditions of a microhabitat and why some animals survive better within a microhabitat. Children will be taught to use the word 'suited' to explain. E.g. Children could explore and find woodlice to recognise the conditions of their microhabitat. Children could then be taught that under stones and logs the air is damper which allows woodlice to survive there as they lose their body moisture easily in dry air. -Understand how plants within a British habitat can help the animals that live there and vice versa. -Understand how habitats can have different conditions in terms of temperature, light and weather. Children will be taught to recognise the typical conditions within British habitats. -Recognise how pollution can affect animal/plant habitats within Britain. -Explain and understand what animals must do (British wildlife) to get the things they need for survival e.g. how they hunt. Include animals that must hunt other animals as well as animals that are herbivores. -Create a simple food chain of British wildlife as a class or a small group using photos or objects with no more than three links within the chain. -Link food chains to the diet of a human. Where do humans fit into a food chain? 	<ul style="list-style-type: none"> -Understand and explain why animals need plants within their habitat and vice versa whilst looking at different types of habitats. -Identify and correctly name the main habitats found in the world (aquatic, desert, forest, woodland, tundra, grassland). Children will be taught the characteristics of each habitat and what each would provide to the animals and plants that live there. -Recognise the conditions of different habitats and compare. Children will be taught the temperature, weather patterns and the times of daylight in different habitats and how this affects the plants and animals that can grow and live there. -Recognise and understand that the conditions of a habitat will affect the plants that can grow which in turn affects the animals in the habitat which rely on plants (herbivores) which in turn affects the carnivores that can live in that habitat. Linking the conditions of a habitat to food chains. -Understand micro-habitats found in different habitats around the world and understand that a micro-habitat can have a microclimate. -Begin to understand the word 'adaptations' and link to their understanding of the word 'suited' from earlier in the year. Children will be taught to understand the features an animal/plant has which suits it to its habitat (adaptations). -Identify and name animals and plants that live in different habitats and recognise why they live in the habitat that they do, linking to the animals/plants needs for survival. -Compare habitat features by beginning to question what would happen to an animal/plant if it was placed in a different habitat. Would the animal/plant be able to survive? -Recognise and sort things into categories of living, dead and things that have never been alive whilst explaining how they know. -Explain the characteristics of something that is living (plant/animal/human) and use these characteristics to explain how they know if something has never been living. -Recognise and explain how they know that something was once living but no longer is. Children will be taught to identify features such as a skeleton to explain how they know that something was once living as well as use their prior knowledge such as knowing that something breathes and moves usually. -Recognise materials that come from something that was once living compared to materials that have never been alive. For example, wood is a material which is dead and comes from something that was once alive whereas metal is a material that has never been living. -Learn and understand the vocabulary 'consumer' and 'producer' and identify these within a food chain. -Question and understand what may happen if one element of a food chain was removed. Children will be taught to understand the affect this would have on the rest of the food chain as well as their habitat. -Independently represent a food chain using a diagram and label.

Progression through years

Looking after the environment

Nursery AUT 1	Nursery AUT 2	Nursery SPR 1	Nursery SPR 2	Nursery SUM 1	Nursery SUM 2
-Look after their own belongings which they bring to school with adult support	-Independently look after their own belongings which they bring to school -With adult support, look after the things in the classroom and outdoor shared area (toys and objects they use) -Know to put their rubbish in the bin, understand right and wrong in relation to disposing of rubbish	-Recognise there are two bins within the classroom and understand that each bin is for different things -Observe adults following recycling rules and having good recycling habits -Independently look after the things in the classroom and outdoor shared area (toys and objects they use)	-Understand we should look after things at home such as pets and how to do this -Understand why we should look after our pets -Know to ask an adult which bin to put something into, recycling or general	-Be exposed to the word 'recycling' for example when adults are using the recycling bin they could 'think aloud' to explain what they are doing. -Understand to look after nature in the outdoor area at school -Understand how to look after nature and not damage or have a negative impact on the natural environment e.g. not disturbing mini beasts or picking plants -Understand taps should always be turned off when the water isn't being used	-Understand the different ways to travel and that walking is a good form of travel for the world and for our bodies. This could be through discussion of how children travel to school. -Begin to make decisions, with adult support, about which bin to place something into, recycling or general

Reception AUT 1	Reception AUT 2	Reception SPR 1	Reception SPR 2	Reception SUM 1	Reception SUM 2
-Understand they each have a responsibility to respect the classroom environment and outdoor area in terms of equipment and each other -Recognise that there are two bins within the classroom and that these have different purposes -Be exposed to the word 'recycling' by adults using and modelling. For example, adults thinking aloud when they are putting rubbish into the bin to explain the decision they are making about which bin to use	-Understand they each have a responsibility to respect living things in the outdoor area --Begin to make their own decisions about which bin to place something into, recycling or general. Know to ask an adult for help with this decision when needed. --Understand how water can be wasted when taps are not turned off and link to home experiences such as brushing their teeth. --Understand wasting energy by being taught to turn the lights off when they are not needed	-Understand why there are two bins in the classroom and use the word 'recycling' -Make connections between the junk modelling they create and how they are reusing materials -Begin to identify some materials that go into each bin for example to know that paper goes into the recycling bin	-Understand how to take care of living things in the outdoor area e.g. by watering plants -Discuss who they share their outdoor play space with (birds, butterflies, worms etc.) and what type of environment these creatures need to live and how they must look after the environment for them -Understand protecting the habitats of animals, look at where animals live in the outdoor area of school and consider how they can prevent damage to these habitats -Understand that litter can be bad for plants and animals and can damage their habitats -Carry out a litter picking activity to begin to recognise that rubbish isn't always disposed of in the correct way and that this can be negative for the environment we live in -Be encouraged to ask how and why questions when learning about the environment	-Understand there are not limitless resources within their classroom and so they must be sensible about the way they use the resources -Understand and explain using a simple definition what the word 'recycling' means -Understand we should respect the things we see when in the local area such as when walking home from school or walking to the shop -Understand they each have a responsibility to respect the local area outside of school	-Understand how food can be wasted and ways to prevent this happening e.g. only selecting the food you are going to eat during snack time --Gain a simple understanding that traveling by bike, push scooter or walking helps to 'keep the air clean' Children to be exposed to the word pollution and have a simple definition that it means the air is 'dirty' -Be encouraged to question why it is important to not waste water and recognise how valuable water is. Look at the different uses of water by participating in activities such as using watering cans to water plants

Progression through years

Looking after the environment

Year 1 AUT 1	Year 1 AUT 2	Year 1 SPR 1	Year 1 SPR 2	Year 1 SUM 1	Year 1 SUM 2
-Turn off the lights in the classroom when everyone leaves	-Recognise the materials that common litter is made from and understand why materials have become an issue for the environment in terms of litter. Children will understand the problems litter causes for the local environment including how the materials litter is made from can be damaging for animals for example if it is sharp. (expanded on during year 2) -Begin to recognise how simple properties of materials might hurt or damage an animal or plant -Correctly dispose of rubbish by choosing which bin to use for different materials, recycling or general	-Understand and recognise they each have a responsibility to respect and look after the local environment that they live in. -Understand steps that can be taken to look after the local environment including the animals and plants that live there.	-Understand the term 'air pollution' and how decisions they each make can contribute to pollution or decrease it e.g. walking to school rather than driving -Understand that air pollution isn't limited to cars. Become aware of air pollution caused by factories/ aeroplanes	-Learn how to look after and care for plants whilst growing their own.	Link the properties of materials to why they would cause problems in the environment for example some materials do not rot -Understand the journey rubbish takes and where it ends up. E.g. look at what would happen to a toy that is thrown in the bin. Understand how the amount of rubbish created by people is causing problems. Consider the question—Why are some materials more difficult to dispose of than others? -Begin to understand wasting materials. Begin to question peoples purchasing habits of material items and understand reusing and donating belongings. Do new items need to be bought or could things be reused? For example, do you need a new toy or could you make things by recycling materials and using craft skills? If you have grown out of your toys, could you donate them to younger children rather than putting them into the bin? Understand the importance to reuse. -Understand and recognise they each have a responsibility to respect and look after the world we live in -Understand that small actions taken by all will contribute to a larger outcome to make a difference in protecting the planet -Make suggestions for how people could decrease the amount of rubbish they produce

Year 2 AUT 1	Year 2 SPR 2	Year 2 SUM
-Understand the word 'pollution' and that it relates to any harmful substance being introduced to the environment -Understand the impact litter has on plants and animals in the environment by observing how it damages habitats and can injure plants and animals. -Recognise that animals do not understand how to stay safe around litter and therefore may try to eat litter. -Develop a deeper understanding of the long term affects of pollution in the local area in terms of British animals becoming endangered or extinct.	-Understand that the production of meat for food contributes to air pollution as animals produce methane which damages the atmosphere. Children to also be taught that animal waste (manure) also pollutes streams, rivers and oceans. -Understand the affects of damage to the world's atmosphere	-Develop a deeper understanding of the long term affects of pollution for the world in terms of animals or plants becoming endangered or extinct as well as the long term affect on humans. -Understand how materials are negatively affecting the planet -Understand that there are not limitless resources in the world and so it is important to reduce, reuse and recycle -Understand the affect materials and litter are having on the wider world including the oceans -Understand how Scientists are approaching issues with materials, inventing new materials and finding ways to remove/destroy the problem materials -Understand water pollution in terms of the ocean and how this is polluted. -Understand how pollution affects the habitats of plants and animals