



**Science Year 1
Long Term Overview**

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Science Curriculum Area	Materials	Seasonal Changes	Animals (including Humans)	Plants	Seasonal Changes	Humans (Including Animals)
Rationale	<p>Within the EYFS children naturally explore and manipulate materials within their play. This Materials unit leads on from that initial investigative work, to begin to show how we can identify and classify these materials further taking into account their physical properties.</p>	<p>Having had real life experience of the Autumn and now moving into the winter seasons, children will be able to draw on personal experience and articulate changes that they observed.</p>	<p>Children will begin to make the distinction between different animal types - based on their individual attributes e.g. wings, scales, feathers. Children will draw on their underlying knowledge of body parts and will use this knowledge to discuss structure of common animals. They will use this knowledge to group and classify according to characteristics.</p> <p>Continuing from the experience of grouping animals according to their characteristics, children will begin to learn about the different types of food that animals eat.</p> <p>Children will use this knowledge to group animals according to their diets e.g. carnivore, herbivore and omnivore.</p>	<p>Following on from Autumn Term 1 and the knowledge that the children will have acquired during their work on Seasonal Change, they will now begin to apply this understanding when linking this to the growth and changing state of seedling into plant. The children will look at plants and learn what they key parts of the plant are.</p>	<p>Children will have previously completed a unit in the Autumn term on Seasons. The children should be able to already name the 4 seasons as previously taught. The children will work on understanding what is different about the Autumn and winter in comparison to the summer and spring.</p>	<p>Children will gain an understanding of different parts of their bodies. This will build on the existing knowledge that they already have learnt from the EYFS. The children will be extended by linking the various body parts to the five main senses.</p> <p><i>At Key Stage 1, the National Curriculum for Science includes teaching about the names of the main external parts of the body. This is not part of Sex Education. It helps young children understand their own bodies and is an important part of Safeguarding.</i></p>
Learning Objectives	<p><u>To know there is a difference between an object and the material it is made from</u></p> <p><u>To name objects and then say what they are made of (wood, plastic, glass, metal, water and rock, brick, paper, fabric).</u></p> <p>To know that materials have different properties and can be hard, soft, strong, weak, absorbent, waterproof, heavy, light, solid and runny, smooth and rough; that these descriptions denote the properties of a material.</p> <p><u>To say whether a material is hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent.</u></p> <p>To know that materials can be grouped according to their properties</p>	<p><u>To name the four seasons winter, spring, summer, autumn</u></p> <p><u>To know that it is colder in the winter</u></p> <p><u>To know that in Autumn the weather begins to get colder and the leaves start to fall from the trees.</u></p> <p><u>To know that days are shorter in the Winter.</u></p>	<p><u>To identify some common animals: goat, snake, frog, lizard and seagull.</u></p> <p><u>To identify common differences between animals e.g. what they eat, legs/no legs, wings, feathers, fur, scales, beaks</u></p> <p>To know that animals have different characteristics by which they can be grouped: fish, amphibians, reptiles, birds, and mammals</p> <p>To know that fish lay eggs, have scaly skin and have gills to breath under water</p> <p>To know that a reptile lays eggs, has scaly skin, cold blood and breath air</p> <p>To know that birds have a beak and feathers, and lay eggs</p> <p>To know that mammals have fur, give birth to live young, feed their young milk</p> <p>To know that amphibians live on both land and water, lay eggs</p>	<p><u>To identify and name at least two garden plants (rose, sunflower) and two wild plants (dandelion, daisy), including deciduous and evergreen trees)</u></p> <p><u>To know the basic structure of a plant and identify the parts; roots, stem, leaves, flower, petals, fruit, bulb, seed</u></p> <p><u>To know the basic structure of a tree and identify the parts; trunk, roots, leaves, branches, fruit</u></p> <p>To know that deciduous trees shed their leaves in the autumn</p> <p>To know that evergreen trees keep their leaves throughout the year</p>	<p><u>To know that it is hotter in the summer</u></p> <p><u>To know that Spring is often rainy and new plants begin to grow.</u></p> <p><u>To know that days are longer in the Summer</u></p> <p><u>To know that symbols are used in a weather forecast to show what the weather will be like in a particular area.</u></p> <p>To recognise the main weather symbols (sun, cloud, rain, snow, sunshine and showers, sleet, thunderstorm and fog)</p>	<p><u>To name and identify further parts of the body; hand, foot, fingers, toes, knee, elbows, tongue, teeth, neck, back, shoulder, eyebrow, forehead, chest, stomach.</u></p> <p><u>To know the name of the male and female private body parts vagina, penis, testicles, vulva, anus</u> (taught in jigsaw also)</p> <p>That certain parts of the body are linked to our senses</p> <p>To have an awareness that we also have parts inside our body: bones, heart, lungs, blood.</p> <p><u>To know that eyes are associated with sight; ears with sound; nose with smell; tongue with taste; and skin with touch, and that these are known as our five senses.</u></p>



			<p>To know that fish, amphibians, reptiles, mammals and birds are similar because they have internal organs and a SKELETON (backbone) which means they are known as VERTEBRATES</p> <p>To know that carnivores eat other animals and identify at least one carnivore</p> <p>To know that herbivores eat plants and identify at least one herbivore</p> <p>To know that omnivores eat both animals and plants and to identify at least one omnivore</p>			
Teacher Assessment Framework 'Must have'	-Distinguish objects from materials, describe their properties, identify and group everyday materials	-Describe and compare seasonal changes.	-Group animals according to what they eat	- Name the basic parts of a plant.	-Describe and compare seasonal changes	Name and locate parts of the human body, including those related to the senses

Investigations Each Year group will undertake 3 or 4 main investigations	Which material makes the best umbrella for Noi to use at sea?	Does it rain the most in the Winter or the Summer?			Does it rain the most in the Winter or the Summer?	What is our class's favourite smell?
	<i>Predict & Plan</i> To know that a scientific investigation begins with a question that they want to find the answer to	<i>Predict & Plan</i> To know that they can ask questions about the world around them and then make observations to find the answer			<i>Predict & Plan</i> To say what they think the outcome of an investigation is going to be	
	<i>Conduct</i> To know that objects can be identified or sorted into groups based on their observable properties	<i>To use non-standard measures whilst making measurements of length and time</i>	<i>Conduct</i> To know that objects can be identified or sorted into groups based on their observable properties			
	<i>Record</i> To know that in order to answer the asked questions, data needs to be gathered and recorded			<i>Record</i> To draw pictures to record what is found	<i>Record</i> To present results in tables, drawings and block graphs which are either provided or designed with the teacher	<i>Record</i> To write down words and numbers into pre-drawn tables
	<i>Conclude</i> To use their observations and ideas to suggest answers to	<i>Conclude</i>			<i>Conclude</i> To make simple comparisons by identifying similarities and	<i>Conclude</i> To explain what they did within an investigation

	questions, using scientific vocabulary	To suggest an answer based on real life experience or using taught scientific knowledge			differences between living things, objects and events	
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Science Medium Plan Year 1
TERM: Autumn 1
CONTEXT: Materials

<u>Prior Learning: EYFS</u>	<u>Y1 National Curriculum</u>	<u>Next Steps: Year 2</u>
<p><u>To know that some materials float and some materials sink.</u> To sort items into groups - those that float and those that sink To begin to recognise plastic, glass, wood and metal as materials</p>	<p>To distinguish between an object and the material from which it is made. To identify and name a variety of every day materials, including wood, plastic, glass, metal, water and rock. To describe the simple physical properties of a variety of everyday materials. To compare and group together a variety of everyday materials on the basis of their simple physical properties.</p>	<p><u>To know that materials can have useful properties that make them suitable for a given job (including being waterproof, flexible, rigid, opaque and transparent).</u> <u>To link a property to how suitable the materials are for particular uses</u>, e.g. bricks used for houses cannot be squishable; material used for windows must be transparent. To know that many types of plastic are waterproof, that metal is usually strong, that rock is usually hard and rigid, that rubber is flexible, that rock is rigid To know that rigid means something that will not bend without breaking. To know that flexible is something that can bend without breaking. <u>To know that applying forces (e.g. bending, squashing and twisting)</u> to objects can change their shape. To know that materials can be manmade and natural (link to Y1 Geography)</p>

<u>Learning Objectives</u>	<u>Key Vocabulary</u>
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<p><u>To know there is a difference between an object and the material it is made from.</u> <u>To name objects and then say what they are made of (wood, plastic, glass, metal, water and rock, brick, paper, fabric).</u> To know that materials have different properties and can be <u>hard, soft, strong, weak, absorbent, waterproof, heavy, light, solid and runny, smooth and rough</u>; that these descriptions denote the properties of a material. To say whether a material is <u>hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent.</u></p>	<p>metal, water and rock, brick, paper, fabric, properties, hard, soft, strong, weak, absorbent, waterproof, heavy, light, solid, runny, smooth, rough, why, how, data, recorded, tables, graphs,</p>
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<u>Opportunities for Scientific Enquiry</u>	<u>Working Scientifically focus skills</u>
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Which material makes the best	<p><u>Predict & Plan</u> To know that a scientific investigation begins with a question that they want to find the answer to</p>
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umbrella for Noi to use at sea?	<p><u>Conduct</u> To know that objects can be identified or sorted into groups based on their observable properties</p> <p><u>Record</u> To know that in order to answer the asked questions, data needs to be gathered and recorded</p> <p><u>Conclude</u> To use their observations and ideas to suggest answers to questions, using scientific vocabulary</p>
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Science Medium Plan Year 1
TERM: Autumn 2
CONTEXT: Seasonal Changes (Part One)

<u>Prior Learning: EYFS</u>	<u>Y1 National Curriculum</u>	<u>Next Steps: Year 2</u>
<p>To understand the effect of changing seasons on the natural world around them (Rec - UTW)</p> <ul style="list-style-type: none"> - It is cold in the winter - We wear warm clothes in the winter - It is warm in the summer - We wear shorts and t-shirts in the summer - We wear sun-cream to protect our skin from burning <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter (ELG - TNW)</p> <p>To know that there are four seasons and name them - Autumn, Winter, Spring, Summer</p>	<p>To observe changes across the 4 seasons.</p> <p>To observe and describe weather associated with the seasons and how day length varies.</p>	<p>Seasonal changes is taught and covered again in Year 3.</p>

<u>Learning Objectives</u>	<u>Key Vocabulary</u>
<p>To name the four seasons winter, spring, summer, autumn.</p> <p>To know that it is colder in the winter.</p> <p>To know that in Autumn the weather begins to get colder and the leaves start to fall from the trees.</p> <p>To know that days are shorter in the Winter.</p>	<p>Winter, summer, autumn, spring, colder, hotter, change, longer, shorter, temperature, day length, sun, clouds, snow, ice, rain, wing, freezing, melting</p>

<u>Opportunities for Scientific Enquiry</u>	<u>Working Scientifically focus skills</u>
Does it rain the most in the winter or the summer?	<p><u>Predict & Plan</u> To know that they can ask questions about the world around them and then make observations to find the answer</p> <p><u>Record</u> To use non-standard measures whilst making measurements of length and time</p> <p><u>Conclude</u> To suggest an answer based on real life experience or using taught scientific knowledge</p>



Science Medium Plan Year 1
TERM: Spring 1
CONTEXT: Animals (including Humans)

<u>Prior Learning: EYFS</u>	<u>Y1 National Curriculum</u>	<u>Next Steps: Year 2</u>
<p>To name some common animals e.g. cat, dog, horse, cow, chicken, bird, fish, rabbit,</p> <p>To explore the natural world around them, making observations and drawing pictures of animals (ELG - TNW)</p> <p>To know that some animals hatch from an egg</p> <p>To know the names of some baby animals e.g. kitten, puppy, foal, calf, chick</p> <p>To know some of the differences between baby and adult animals</p>	<p>To identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals</p> <p>To identify and name a variety of common animals that are carnivores, herbivores and omnivores</p> <p>To describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets)</p>	<p>To know that animals produce offspring that will grow into adults</p> <p>To know that animals need air, water and food to survive</p>

<u>Learning Objectives</u>	<u>Key Vocabulary</u>
<p><u>To identify some common animals: goat, snake, frog, lizard and seagull.</u></p> <p><u>To identify common differences between animals e.g. what they eat, legs/no legs, wings, feathers, fur, scales, beaks</u></p> <p>To know that animals have different characteristics by which they can be grouped: fish, amphibians, reptiles, birds, and mammals</p> <p>To know that fish lay eggs, have scaly skin and have gills to breath under water</p> <p>To know that a reptile lays eggs, has scaly skin, cold blood and breath air</p> <p>To know that birds have a beak and feathers, and lay eggs</p> <p>To know that mammals have fur, give birth to live young, feed their young milk</p> <p>To know that amphibians live on both land and water, lay eggs</p> <p>To know that fish, amphibians, reptiles, mammals and birds are similar because they have internal organs and a SKELETON (backbone) which means they are known as VERTEBRATES</p> <p><u>To know that carnivores eat other animals and identify at least one carnivore</u></p> <p><u>To know that herbivores eat plants and identify at least one herbivore</u></p> <p><u>To know that omnivores eat both animals and plants and to identify at least one omnivore</u></p>	<p>Fish, amphibian, reptile, bird, mammal, skeleton, organ, categorisation, growth, vertebrate, skeleton, back bone, similarities, differences</p>

<u>Opportunities for Scientific Enquiry</u>	<u>Working Scientifically focus skills</u>
	<p><u>Conduct</u></p> <p>To know that objects can be identified or sorted into groups based on their observable properties</p>

Science Medium Plan Year 1

TERM: Spring 2

CONTEXT: Plants

<u>Science Medium Plan Year 1</u> <u>TERM: Spring 2</u> <u>CONTEXT: Plants</u>		
<u>Prior Learning: EYFS</u>	<u>Y1 National Curriculum</u>	<u>Next Steps: Year 2</u>
<p>To explore the natural world around them, making observations and drawing pictures of plants (ELG - TNW)</p> <p>To name a simple plant (e.g. sunflower)</p> <p>To know that plants need water</p> <p>To know that some foods can be grown (e.g. cress, carrots)</p>	<p>To identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</p> <p>To identify and describe the basic structure of a variety of common flowering plants, including trees.</p>	<p>To know that seeds and bulbs need to be buried underground in soil and that they will grow into adult plants under the right conditions (water, warmth).</p> <p><u>To know that plants need water, light and the right temperature, otherwise they will die.</u></p> <p><u>To know that plants grow from seeds and bulbs.</u></p> <p>To know that germination is when a seed starts to grow.</p> <p>To know that plants produce seeds that grow into new plants that are the same.</p> <p>To know that seeds are dispersed through different means, including travelling on and in animals, exploding, float in the wind or on water and falling to the ground</p>
<u>Learning Objectives</u>		<u>Key Vocabulary</u>
<p>To identify and name at least two garden plants (rose, sunflower) and two wild plants (dandelion, daisy), including deciduous and evergreen trees)</p> <p>To know the basic structure of a plant and identify the parts; roots, stem, leaves, flower, petals, fruit, bulb, seed</p> <p>To know the basic structure of a tree and identify the parts; trunk, roots, leaves, branches, fruit</p> <p>To know that deciduous trees shed their leaves in the autumn</p> <p>To know that evergreen trees keep their leaves throughout the year</p>		<p>Deciduous, evergreen, plant, tree, structure, roots, stem, leaf, trunk, flower, blossom, petal, fruit, branch, bark, stalk, bud, energy, growth, wild flower, garden flower, pollination</p>
<u>Opportunities for Scientific Enquiry</u>	<u>Working Scientifically focus skills</u>	<u>Enrichment Activities</u>
	<p><u>Record</u></p> <p>To draw pictures to record what is found</p>	<p>Year 1 children are given the opportunity to grow sunflowers as part of their enrichment. This will not be undertaken during Science lessons. They will grow the sunflowers in preparation for looking at the sunflowers and using them in their lessons to look at and focus on the part of the plant.</p>



Science Medium Plan Year 1
TERM: Summer 1
CONTEXT: Seasonal Changes (Part Two)

<u>Prior Learning: EYFS</u>	<u>Y1 National Curriculum</u>	<u>Next Steps: Year 2</u>
<p>To understand the effect of changing seasons on the natural world around them (Rec - UTW)</p> <ul style="list-style-type: none"> - It is cold in the winter - We wear warm clothes in the winter - It is warm in the summer - We wear shorts and t-shirts in the summer - We wear sun-cream to protect our skin from burning <p>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter (ELG - TNW)</p> <p>To know that there are four seasons and name them - Autumn, Winter, Spring, Summer</p>	<p>To observe changes across the 4 seasons.</p> <p>To observe and describe weather associated with the seasons and how day length varies.</p>	<p>Seasonal changes is taught and covered again in Year 3.</p>

<u>Learning Objectives</u>	<u>Key Vocabulary</u>
<p><u>To know that it is hotter in the summer</u></p> <p><u>To know that Spring is often rainy and new plants begin to grow.</u></p> <p><u>To know that days are longer in the Summer</u></p> <p><u>To know that symbols are used in a weather forecast to show what the weather will be like in a particular area</u></p> <p>To recognise the main weather symbols (sun, cloud, rain, snow, sunshine and showers, sleet, thunderstorm and fog)</p>	<p>Winter, summer, autumn, spring, colder, hotter, change, longer, shorter, temperature, day length, sun, clouds, snow, ice, rain, wind, freezing, melting</p>

<u>Opportunities for Scientific Enquiry</u>	<u>Working Scientifically focus skills</u>
<p>Does it rain the most in the winter or the summer?</p>	<p><u>Predict & Plan</u> To say what they think the outcome of an investigation is going to be</p> <p><u>Record</u> To present results in tables, drawings and block graphs which are either provided or designed with the teacher</p> <p><u>Conclude</u> To make simple comparisons by identifying similarities and differences between living things, objects and events</p>



Science Medium Plan Year 1
TERM: Summer 2
CONTEXT: Humans (including animals)

<u>Prior Learning: EYFS</u>	<u>Y1 National Curriculum</u>	<u>Next Steps: Year 2</u>
<p>To name and identify basic key body parts head, arms, legs, face, hair, hand, foot, fingers, toes, eyes, ears, mouth, nose, teeth, knee, tongue, teeth, neck, back, shoulder, eyebrow, forehead, chest, stomach</p> <p>To Know and talk about the different factors that support their overall health and wellbeing (Rec - PSED)</p> <ul style="list-style-type: none"> -regular physical activity -healthy eating -teeth brushing -sensible amounts of 'screen time' -having a good sleep routine -being a safe pedestrian <p>To manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices (ELG - PSED)</p> <p>To know we must wash our hands to get rid of germs</p> <p>To know that we must brush our teeth twice a day to keep them clean and healthy</p> <p>To know that too much sugar is bad for our teeth</p> <p>To know that a dentist is a person that helps us to care for our teeth</p> <p>To know some of the differences between baby and adult humans e.g. babies cannot walk</p> <p>To know that there are healthy and unhealthy food choices and to be able to name some</p>	<p>To identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</p>	<p>To know that animals, including humans need food, water and air to survive</p> <p>To know the basic food groups; fruit and vegetables, carbohydrates, protein, dairy, fat and sugary foods</p> <p>To know that, to stay healthy, humans need to eat the right amounts of different types of food.</p> <p>To know that fats and sugary foods should only be eaten occasionally and in small amounts</p> <p>To understand that, to stay healthy, humans need to exercise to help their body stay strong and fit.</p> <p>To understand that, to stay healthy, humans need to keep things clean, including washing and brushing teeth.</p> <p>To know that humans have babies (offspring) that grow into adults.</p>

<u>Learning Objectives</u>	<u>Key Vocabulary</u>
<p>To name and identify further parts of the body; hand, foot, fingers, toes, knee, elbows, tongue, teeth, neck, back, shoulder, eyebrow, forehead, chest, stomach,</p> <p>To know the name of the male and female private body parts vagina, penis, testicles, vulva, anus (taught in jigsaw also)</p> <p>That certain parts of the body are linked to our senses</p> <p>To have an awareness that we also have parts inside our body: bones, heart, lungs, blood.</p> <p>To know that eyes are associated with sight; ears with sound; nose with smell; tongue with taste; and skin with touch, and that these are known as our five senses.</p>	<p>vagina, penis, testicles, anus, bones, heart, lungs, blood, senses</p>

<u>Opportunities for Scientific Enquiry</u>	<u>Working Scientifically focus skills</u>
<p>What is our class's favourite smell?</p>	<p><i>Record</i></p> <p>To write down words and numbers into pre-drawn tables</p> <p><i>Conclude</i></p> <p>To explain what they did within an investigation</p>



