

Science Curriculum Map: Early Years with links to Year 1

<p>KS1 key skills (nc):</p> <ul style="list-style-type: none"> ● <i>Ask scientific questions</i> ● <i>Observe closely</i> ● <i>Perform simple tests</i> ● <i>Gather/record results</i> ● <i>Present & interpret results, answer questions</i> 	<p>KS1 enquiry type (nc)</p> <ul style="list-style-type: none"> ● <i>Classify</i> ● <i>Fair testing</i> ● <i>Pattern seeking</i> ● <i>Researching</i> ● <i>Observing over time</i> 	<p>EYFS key skills:</p> <p><i>Observe, curiosity, explore, ask questions, sort, notice similarities, differences, patterns & change</i></p> <p><i>(EYFS/Early Years Outcomes/Development Matters/CoEL)</i></p>		
	<p>Seasonal change</p>	<p>Plants, animals including humans, habitats, evolution and inheritance</p>	<p>Everyday materials, rocks, states of matter, properties and changes of materials</p>	<p>Light, forces, magnets, sound, electricity, Earth and space</p>
<p>Key concepts: End of Yr1</p>	<ul style="list-style-type: none"> ○ Observe changes across the 4 seasons ○ Observe and describe weather associated with the seasons 	<p>Animals, including humans</p> <ul style="list-style-type: none"> ○ Describe and compare the structure of a variety of common animals ○ Identify ... parts of the human body and say which part is associated with each sense <p>Plants (growing)</p> <ul style="list-style-type: none"> ○ Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees 	<ul style="list-style-type: none"> ○ Distinguish between an object and the material from which it is made ○ Identify and define a variety of everyday materials ○ Describe the physical properties of everyday materials ○ Compare and group a variety of everyday materials 	
<p>Key concepts: End of EYFS</p> <p>Key thread: <i>Oracy runs throughout – developing</i></p>	<ul style="list-style-type: none"> ○ Name and describe the 4 seasons & associated weather 	<ul style="list-style-type: none"> ○ Identify and name the trees and plants in our forest and outdoor areas ○ Observe, describe and and draw plants/trees/snails etc. ○ Know about certain habitats – logpiles etc. ○ Know stages/key features of & describe life cycles of butterfly, chicks 	<ul style="list-style-type: none"> ○ Describe materials – wood, card, rock - properties ○ Describe differences in 	<ul style="list-style-type: none"> ○ Experience attraction and repulsion magnets and light

<i>exploratory and presentational talk, developing vocabulary</i>		<ul style="list-style-type: none"> ○ Identify main parts of snails, stick insects, fish & common animals ○ Identify main human body parts 	materials and changes e.g. during cooking, ice melting etc.	
Early Years – Key Experiences (adult led)				
Nursery	<p>Summer 2 – Under the Sea Observing and talking about the different weather. What would you pack for a sunny day at the seaside? Trip to the seaside Text link: Pirate Feast</p> <p>Ongoing –</p> <ul style="list-style-type: none"> ● Regular visits- experience nature and changes ● Observe and talk about seasons and weather as part of daily routine - Singing weather songs 	<p>Autumn 1 – All About Me Name body parts – e.g through singing and games Text link: Funny Bones</p> <p>Spring 2 – Down on the Farm Animal handling, animal names and features Life cycles - Chicks hatching Trip to the farm Text link: Mrs Wishy washy farm, Squash and a squeeze, Farmyard hullabaloo</p> <p>Summer 1 - Minibeasts Life cycles - Caterpillars to Butterflies Zoolab Visit, Caterpillars Text Link: The Very Hungry Caterpillar, the very quiet cricket</p> <p>Summer 2 – Under the Sea Identify different habitats – animals who live on land and in water Trip to the seaside</p> <p>Ongoing -</p> <ul style="list-style-type: none"> ● Nature visits – explore trees and other plants. ● Pond dipping – observing, talking about and identifying pond life ● Compost making – links to Geography ● ‘Vegetable patches’ ● Planting bulbs and vegetables 	<p>Autumn 2 – Once Upon a Time Potion making – combining ingredients, watching changes – use pipettes etc.</p> <p>Spring 1 – People Who Help Us Saving small world toys from ice. Observing ice and snow and changes</p> <p>Ongoing -</p> <ul style="list-style-type: none"> ● Regular cooking – observe and describe changes – eg melting chocolate, combining ingredients 	<p>Autumn 1 – All About Me Exploring shadows – drawing around shadows on the floor</p>

		<ul style="list-style-type: none"> Planting throughout the year – beans/mothers day/grass <p>Text link: Rainbow fish</p>		
<p>Reception</p>	<p>Ongoing –</p> <ul style="list-style-type: none"> Regular visits – experience nature and changes Observe and talk about seasons and weather as part of daily routine- Singing weather songs- seasonal changes linked with WRM! 	<p>Autumn 1 – All About Me Name and label body parts (Literacy link-funny bones) Body parts singing and games (EAD link) Self portraits (EAD link) Similarities and differences with each other Text link: Funny Bones</p> <p>Autumn 2 - On the move Transport museum - How do vehicles move? Science museum - Rockets, astronauts, dinosaur workshop Taking the overground - experiencing different types of transport Bike project/ activity</p> <p>Spring 1 - To the Rescue Seasons - teaching in maths with science and geography links to changes around us Text links: Super worm, Super potato, my mums a super hero</p> <p>Spring 2 - Animal Kingdom Naming and labelling parts of animals (Literacy link) The 6 basic animal groups Zoo trip Willows Farm Trent Park Pet shop in Edmonton Green</p> <p>Summer 1 – Marvellous Minibeasts Naming different minibeasts and parts of minibeasts Life cycles Trips/ visitors: Zoolab Visit Caterpillars</p>	<p>Spring 1 – To the Rescue Potion making – combining ingredients, observing and recording changes – use pipettes etc.</p> <p>Ongoing - Regular cooking – observe and describe changes – eg melting chocolate, combining ingredients</p>	<p>Autumn 2 – On the Move Exploring floating and sinking Text link: Mr Gumpy’s Outing, the naughty bus</p> <p>Exploring shadows – making shadow puppets linked to core books</p>

		<p>Nature visits Text link: Yucky Worms, The Very Hungry Caterpillar (maths link to days)</p> <p>Summer 2 – Food Glorious Food Growing plants and identifying what plants need to grow Compost making – links to Geography Parents to show how to cook a cultural dish 'Vegetable patches', planting bulbs and vegetables Text link: Jack and the Beanstalk/Jaspers Beanstalk</p>		
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Early Years Continuous Provision (independent and adult supported)

<p>Nursery/Reception (ongoing through year)</p> <p><i>Examples of adult role in continuous provision: Encourage children to talk about their observations and experiences. Introduce vocabulary. Intervene to extend language/thinking/knowledge.</i></p>	<p>Outdoor areas – used throughout the year, in all weathers.</p> <p>Observe and experience seasonal changes – e.g leaves/trees.</p> <p>Explore weather – first hand experiences - windmills, kites, streamers etc. on windy days, puddles on wet days, ice and snow in winter etc.</p> <p>Gardening & growing vegetables, flowers and other plants.</p>	<p>Science and investigation areas outside and in all classrooms with a range of scientific equipment available.</p> <p>Plants and/or fish in all classrooms. Observe, feed and look after our animals and plants.</p> <p>Non-fiction books available in all parts of continuous provision.</p> <p>Scientific vocabulary rich environment.</p> <p>Observational drawings & opportunities to record findings throughout provision.</p> <p>Minibeast habitats in the outdoor area – logpiles etc.</p> <p>‘Family books’ to look at regularly with children and discuss changes since they were babies.</p> <p>Forest – exploring plants, including flowers and trees</p>	<p>Junk modelling opportunities at creative workshop – variety of materials available.</p> <p>Mud kitchen in outdoor area – mixing soil and water etc. observing changes.</p> <p>Water and sand play inside and outside – floating and sinking, exploring flow etc.</p> <p>Natural materials – including shells/rocks/stones/crystals etc. available for exploration in investigation areas.</p>	<p>Magnets – available in investigation areas for exploration.</p> <p>Torches and dark areas available for exploration.</p> <p>Explore floating and sinking in the water play area.</p>
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Key Vocabulary	<u>Nursery</u>		<u>Reception</u>	
Key Vocabulary	Spring, summer, autumn, winter, hot, cold Weather vocab – rain, wind, snow, ice	Body parts – head, neck, arms, legs, elbows, knees, face, ears, eyes, nose, hair, mouth, teeth Animal names & body parts – ears, tail Names of flowers and trees found in outdoor area – daisy, dandelion, daffodil, tulip, oak, plane, lime, ash, oak Plant parts – root, stem, leaf Bulb, seed	Hard/soft, stretchy, rough/smooth, bendy Melt, change	Earth, moon, sun, mars, Saturn Attract, repel

**Key
Knowledge
for
Assessment**

***New ELGs
(2021/22) –
The Natural
World***

*Understanding
the World*

Children at the expected level of development will:

- ✓ Understand some important processes and changes in the natural world around them, including the seasons
- ✓ Explore the natural world around them, making observations and drawing pictures of animals and plants
- ✓ Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class
- ✓ Understand some important processes and changes ... including ... changing states of matter.