

<b>Key concepts: Knowledge</b> →	<b>Plants, animals including humans, habitats, evolution and inheritance</b>  <b>Everyday materials, rocks, states of matter, properties and changes of materials</b>  <b>Light, forces, magnets, sound, electricity, earth and space (KS2)</b>				<b>Key drivers: oracy &amp; outdoor learning</b>
<b>Key concepts: Skills/enquiry</b> →	<b>Working scientifically skills:</b> Questioning, predicting, concluding, observing, identifying and classifying, measuring, testing, recording	<b>Scientific enquiry:</b> Observing changes over time, noticing patterns, grouping and classifying things (noticing similarities and differences), comparative and fair testing, finding things out using secondary sources of information (researching)	<b>EYFS key skills:</b> <i>Observe, curiosity, explore, ask questions, sort, notice similarities, differences, patterns &amp; change (EYFS/DM/CoEL)</i>		
<b>Key concept: Building science capital</b> →	<b>Year 1:</b>  <i>EYFS: See below – in red</i> <i>In addition, explore any science related events/developments through the year (e.g. Mars landing), visitors</i>				
<b>Y1 programme of study (nc)/ units</b>  Composite knowledge	<b>Seasonal change</b>  Observe and talk about changes across the 4 seasons  Observe and describe weather associated with the seasons	<b>Animals including humans</b>  Identify and name a variety of common animals including fish, amphibians, reptiles, birds & mammals  Identify and name a variety of common animals that are carnivores, herbivores and omnivores  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	<b>Plants</b>  Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees	<b>Everyday materials</b>  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	<b>Light, forces ...</b>  (KS2)
<b>EYFS (end of Reception) Composite knowledge</b>	Name and describe the 4 seasons & associated weather -	Know about certain habitats – logpiles and which animals live there etc. Know stages/key features of & describe life cycles of butterfly, chicks Identify main parts of snails, stick insects, fish & common animals  Identify main human body parts	Identify and name the trees and plants in our forest and outdoor areas Observe, describe and draw plants/trees/flowers etc.	Describe materials – wood, card, rock - properties  Describe differences in materials and changes e.g. during cooking, ice melting etc.	Recognise earth, sun, moon (& other planets) Talk about attraction and repulsion magnets and light e.g. torches

<b>EYFS: ELG The Natural World</b>	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.	
<b>Early Years – Key experiences and learning (adult led) (component knowledge). Skills and enquiry types in bold. Science capital in red</b>					
	Seasonal change	Animals including humans	Plants	Everyday materials	Light/forces/space
TWOs	Outdoor experiences – puddle jumping, leaf collecting, snow and ice exploration etc.	<b>Animal handling – exotic</b> (Autumn) <b>Observing</b> and caring for Giant African Land Snails stick insects & fish Learn body parts – vocab e.g through singing and games (all year groups)	Planting bulbs and veg and looking after growing plants	<b>Explore</b> materials with different textures – incl sensory wall Cooking – <b>observe</b> changes, adult model language	
Nursery	<b>Weekly forest visits – experience</b> nature and changes  Weather <b>Text link:</b> We're going on a Bear Hunt (Autumn)  <b>Text link:</b> Stick Man (Autumn)  Weather <b>Text link:</b> Pirate Feast (summer)  Each class as a 'class tree' observe/draw/photograph through the year <b>Text link:</b> The Tree	<b>Animal handling – exotic (Autumn)</b> <b>Text link:</b> Dear Zoo (Autumn) – animal names and features  <b>Life cycles - Chicks hatching (Spring)</b> <b>Birds nests &amp; eggs (Spring/summer)</b> <b>Caterpillars to Butterflies (Summer)</b> <b>Tadpoles to frogs (pond) (summer)</b> <b>Observing changes over time</b> <b>Text Link:</b> Hungry Caterpillar  Adult led <b>observational</b> drawing <b>Observing</b> and caring for Giant African Land Snails & fish  <b>Pond dipping – observing</b> , talking about and <b>identifying</b> pond life (use sign)  Name body parts – e.g through singing and games (all year groups) <b>Text Link:</b> Red Riding Hood - senses	Vegetable patches' Planting bulbs and vegetables  <b>Text link:</b> Jack and the Beanstalk/Jaspers Beanstalk (Spring)  <b>Forest visits – explore trees and other plants/flowers</b>	Potion making (Halloween link) – combining ingredients, <b>observe changes</b> – use pipettes etc.  Regular cooking – <b>observe and describe</b> changes in materials, liquids and solids – melting chocolate, cooking eggs. Making playdough (all year groups) Porridge making <b>Text link: Goldilocks</b> <i>Links to: KS2 – states of matter (solids &amp; liquids)</i>	Explore forces – magnets, floating and sinking
Reception	Weekly forest visits - experience nature and changes  Observe and talk about seasons and weather as part of daily routine  Each class as a 'class tree' observe/draw/photograph through the year (make a book)	Animal handling (Autumn) Life cycles - <b>Chicks hatching (Spring 2 )</b> <b>Caterpillars to Butterflies (Summer)</b> Adult led observational drawing  <b>Observing</b> and caring for Giant African Land Snails & fish <b>Pond dipping – observing, talking about and identifying</b> pond life. Use pondlife	<b>Forest visits – identify trees, flowers and other plants</b>  Compost making (Reception, Autumn)  <b>Text Link:</b> Errol's Garden (Reception – Summer 1) - planting Adult led observational drawing	Porridge making <b>Text link: Goldilocks</b>  Potion making (Halloween link) – combining ingredients, watching changes – use pipettes etc. <b>Text link:</b> Room on the Broom (Autumn)	<b>Text Link:</b> Here we are, Astro Girl (Autumn) – Space – earth, moon  Rocket making – bicarb & vinegar <b>Text Link:</b> Astro Girl (History link: Neil ArmstrongY1)

	<b>Text link:</b> The Tree	identification sign  Mini beast exploration - <b>Text link:</b> Yucky worms  Name body parts – e.g through singing and games (all year groups) Self portraits (Reception) – art link – <b>text</b> ‘Here we are’	‘Vegetable patches’ Planting bulbs and vegetables	<b>Text link:</b> Blue Penguin, The Snowman - Ice/melting  Cooking, making playdough	
<b>Early Years continuous provision - environment/opportunities (independent and adult supported)</b>					
	Seasonal change	Animals including humans	Plants	Everyday materials	Light/forces/space
<i>All on going through year – specific emphasis on plants Spring/ Summer</i>  <b>Opportunities for recall through sharing Learning Journals. Also photo books, story and information books. Key learning revisited through year. Continuous provision/ investigation areas always accessible</b>	Outdoor areas – used throughout the year, in all weathers, including forest area. <b>Observe</b> and experience seasonal changes – e.g leaves/trees (all year groups)  <b>Explore</b> weather – first hand experiences - windmills, kites, streamers etc. on windy days, puddles on wet days, ice and snow in winter etc. (all year groups)  Gardening & growing vegetables, flowers and other plants (all year groups)	Investigation areas in all year groups, all classrooms - Giant African Land Snails, fish <b>Observe</b> , feed and look after our animals <b>Non-fiction books</b> available as part of continuous provision. Children taught vocabulary and names. Observational drawings & opportunities to <b>record findings</b> (all year groups). Observe and talk about alive and dead – where appropriate! <b>Scientific equipment – magnifiers</b> etc. available  Science and investigation areas outside – <b>range of equipment available – magnifiers, identification cards</b> (minibeasts, leaves, flowers) etc. Mini beast homes outside – logpiles, bug houses etc.  ‘Family books’ – look at regularly with children – discuss changes since they were babies. Name body parts – e.g through singing and games (all year groups)  Drawing opportunities throughout provision, including outside – clipboards etc. (all year groups)	Investigation areas – plants, cacti – care for (see ‘animals’)  <b>Forest – exploring plants, including flowers and trees (all year groups) – use tree identification sign</b>	Woodwork areas in Nursery and Reception (D&T link)  Junk modelling opportunities at creative workshop – variety of materials available (all year groups)  Mud kitchens – all year groups – mixing soil and water etc. <b>observing</b> changes (all year groups)  Water and sand play inside and outside – floating and sinking, <b>exploring</b> flow etc. (all year groups)  Natural materials –, including shells Rocks/stones/crystals etc. available for exploration in investigation areas  <b>Explore</b> snow/ice in winter	Magnets – available in investigation areas for <b>exploration</b> (N & R) <i>Links to: Forces and magnets (Y3)</i>  Torches and dark areas available for <b>exploration</b> (N & R) <i>Links to: Light (Y3)</i>  Marble runs - build and use (N&R)

**Seamless provision:** We offer certain experiences throughout our provision from TWOs to Reception, allowing children to revisit and build on their learning. The provision is progressive - experiences are developmentally appropriate at each stage, and step up in levels of challenge/language/vocabulary as children move through the year groups.

Examples of adult role during continuous provision

Introduce vocabulary to enable children to talk about their observations and experiences

Pose open ended questions "how can we... what would happen if..." to encourage exploration and prediction

<b>Key Vocabulary</b>	Seasonal change	Animals including humans	Plants	Everyday materials	Light/forces/space
	<b>Concept vocab</b> Spring, summer, autumn, winter, hot, cold Weather vocab – rain, wind, snow, ice	<b>Concept vocab</b> Body parts – head, neck, arms, legs, elbows, knees, face, ears, eyes, nose, hair, mouth, teeth  Animal names & body parts – ears, tail, chrysalis, cocoon, caterpillar, butterfly	<b>Specific vocab</b> Names of flowers and trees found in outdoor area – daisy, dandelion, daffodil, tulip, oak, plane, lime, ash, oak  <b>Concept vocab</b> Plant parts – root, stem, leaf Bulb, seed	Hard/soft, stretchy, rough/smooth, bendy  <b>Concept vocab</b> Melt, change	Earth, moon, sun, mars, Saturn  <b>Concept vocab</b> Attract, repel