

Biddick Hall Infant & Nursery School Science Progression Document



Across EYFS children will be learning to:

- Ask questions to find out more and to check what has been said to them.
 - Articulate their ideas and thoughts in well-formed sentences.
 - Describe events in some detail.
 - Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen.
 - Use new vocabulary in different contexts.
 - Use a wide vocabulary.
 - Know and talk about the different factors that support their overall health and wellbeing:
 - regular physical activity
 - healthy eating
 - toothbrushing
 - sensible amounts of 'screen time'
 - having a good sleep routine
 - being a safe pedestrian
- Explore the natural world around them.
 - Describe what they see, hear and feel while they are outside.
 - Recognise some environments that are different to the one in which they live.
 - Understand the effect of changing seasons on the natural world around them.

AUTUMN		Knowledge End Points	Skills End Points	Local context and key resources	Key Vocab	End Points Challenge For Higher Achievers	Supporting End Points For SEND
<p>Seasonal Changes</p> <p>A Park Keeper through the Seasons</p> <p>(Autumn-Summer)</p>	Year 1	<ul style="list-style-type: none"> • To observe changes across the four seasons • To observe and describe weather associated with the seasons and how day length varies 	<ul style="list-style-type: none"> • To observe closely using simple equipment • To use observations/ideas to suggest answers to questions • gathering and recording data to help in answering questions 	Autumn and Summer Visit to Marine Parks School Grounds treetoolsforschools.org.uk	summer, winter, spring, autumn, day, daytime, day length, wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold, plants, animals	Over time and in a range of contexts, pupils can: Recall and explain their knowledge Ask relevant questions. set up simple practical enquiries, comparative and fair tests. Make accurate measurements using standard units, using a range of equipment, for example thermometers.	Pupils can: Talk about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one to another.
<p>Animals, including Humans</p>	Year 1	<ul style="list-style-type: none"> • To identify, name, draw and label the basic parts of the human body and say which 	<ul style="list-style-type: none"> • observe closely, using simple equipment 		taste, smell, vision, touch and hearing.		

<i>This is Me!</i>		part of the human body is associated with each sense.	<ul style="list-style-type: none"> gathering and recording data to help in answering questions 		Main body parts including head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth	<p>Gather, record, classify and presenting data in a variety of ways to help in answering questions</p> <p>Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables.</p> <p>Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.</p>	<p>They make observations of animals and plants and explain why some things occur, and talk about changes.</p> <p>Understanding is shown through · investigative, experiential learning, discussing what is seen and discovered using their words, pictures and actions How to achieve this:</p>
<i>Animals, including Humans</i> <i>I'm a Survivor!</i>	Year 2	<ul style="list-style-type: none"> To notice that humans have offspring that grow into adults To find out about and describe the basic needs of humans for survival To describe the importance for humans of exercise, eating the right amounts of different food and hygiene. 	<ul style="list-style-type: none"> observe closely, using simple equipment ask simple questions and use secondary sources of information 	PE Coach South Tyneside Catering Service	juvenile, adult, teenager, baby, child, parent, air, oxygen, grow, life cycle, offspring, survival, exercise, hygiene, nutrition		
<i>Animals, including Humans</i> <i>Local Wildlife Society</i>	Year 1	<ul style="list-style-type: none"> To identify and name a variety of common animals including: fish, amphibians, reptiles, birds and mammals To describe and compare the structure of a variety of common animals. (fish amphibians, reptiles, birds and mammals including pets) 	<ul style="list-style-type: none"> observe closely, using simple equipment identify and classify/ask simple questions identifying and classifying gathering and recording data to help in answering questions 	Visit to Station Burn and Colliery Wood	Kingfisher, water vole, grey partridges, great diving beetles, frogs, dragonflies, thrushes, warblers Fins, scales, gills, cold-blooded, warm-blooded, eggs, feathers, wings, beak	<p>Use results to draw simple conclusions and suggest improvements,</p> <p>Ask questions and make predictions for setting up further tests.</p> <p>Identify differences, similarities or changes related to simple scientific ideas and processes.</p> <p>How to achieve this: Adapt questioning around the children's results to encourage the higher achievers to recognise that they can answer in different ways.</p> <p>Encourage self-assessment. Have you answered the enquiry? How do you know?</p>	<p>Ask simple questions with multi-choice answers to support children's reasoning skills.</p> <p>Pre-teach lesson where children are introduced to key scientific vocabulary that will be used within the science lesson to ensure that they understand what is being discussed. Scientific vocabulary mats, wall displays and tool kits available.</p> <p>Work as a team to set up and complete a scientific enquiry.</p> <p>Have questions written on worktops</p>

<p>Animals, including Humans</p> <p>Living things and their habitats</p> <p>The World Homing Society</p>	<p>Year 2</p>	<ul style="list-style-type: none"> • To notice that animals, have offspring that grow into adults • To find out about and describe the basic needs of animals for survival • To identify and name a variety of animals in their habitats • To 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 	<ul style="list-style-type: none"> • identify and classify/ask simple questions • identifying and classifying • gathering and recording data to help in answering questions 	<p>Visit to Great North Museum: Hancock</p>	<p>Animals, offspring, young, parent Habitats, food, food chain, sun, grass, food from land and water, cattle, crops shellfish, allotment</p>	<p>What have you observed? Can you explain that to a friend so that they understand your findings?</p> <p>Correct scientific vocabulary and encourage children to explain scientific vocabulary to their friends.</p> <p>Promote engagement in extracurricular STEM activities</p>	<p>to encourage children to stay on task. What can you see? What can you hear? What can you smell? What are you observing?</p>
<p>Everyday Materials</p> <p>Toys</p>	<p>Year 1</p>	<ul style="list-style-type: none"> • To distinguish between an object and the material from which it is made. • To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. • To describe 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 	<ul style="list-style-type: none"> • identifying and classifying • gathering and recording data to help in answering questions 	<p>Materials song</p>	<p>Materials, wood, metal, plastic, glass, paper, fabric, waterproof, strong, soft, hard, fragile, group, sort</p>		

<p>Uses of Everyday Materials</p> <p>Toy Testers</p>	<p>Year 2</p>	<ul style="list-style-type: none"> • identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular use. • to find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching 	<ul style="list-style-type: none"> • observe closely, using simple equipment • identify and classify/ask simple questions • 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>Materials, properties, compare, changing shape, stretch, twist, bend, squash</p>		
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SPRING		Knowledge End Points	Skills End Points	Local context and key resources	Key Vocab	End Points Challenge For Higher Achievers	Supporting End Points For SEND
Plants Tree Officers	Year 1	<ul style="list-style-type: none"> To identify and name a variety of common wild and garden plants including deciduous and evergreen trees. To identify and describe the basic structure of a variety of common flowering plants including trees. 	<ul style="list-style-type: none"> observe closely using simple equipment. identifying and classifying 	<p>Trees in school grounds –</p> <p>Silver birch, willow, apple tree, cherry blossom, maple, hazelnut, hawthorn</p> <p>treetoolsforschools.org.uk</p> <p>Forest School</p>	<p>Tree, branches, twigs, leaf, leaves, root, plants, deciduous, evergreen, stem, trunk</p> <p>Beech, Oak, silver birch, horse chestnut, willow, apple tree, cherry blossom, maple tree, hazelnut, hawthorn, sycamore, fir, pine, spruce, holly</p>		
Plants Garden Designing	Year 2	<ul style="list-style-type: none"> To observe and describe how bulbs grow into mature plants To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy 	<ul style="list-style-type: none"> observe using simple equipment To ask questions recognising they can be answered in different ways To gather/record data to help answer questions 	School Planters	water, light, soil, bulb, root, stem, flower, leaves, seeds, seedlings, temperature, suitable, equipment		

SUMMER		Knowledge End Points	Skills End Points	Local context and key resources	Key Vocab	End Points Challenge For Higher Achievers	Supporting End Points For SEND
Seasonal Changes A Park Keeper through the Seasons (Autumn-Summer)	Year 1	<ul style="list-style-type: none"> To observe changes across the four seasons To observe and describe weather associated with the seasons and how day length varies 	<ul style="list-style-type: none"> observe closely using simple equipment use observations/ideas to suggest answers to questions gather and record data to help in answering questions 	Autumn and Summer Visit to Marine Parks School Grounds treetoolsforschools.org.uk	summer, winter, spring, autumn, day, daytime, day length, wind, rain, snow, hail, sleet, fog, sun, hot, warm, cold, plants, animals		
Plants Sanctuary Zoo	Year 1	<ul style="list-style-type: none"> To identify and name a variety of common wild and garden plants including deciduous and evergreen trees. To identify and describe the basic structure of a variety of common flowering plants, including trees 	<ul style="list-style-type: none"> observe closely using simple equipment use observations/ideas to suggest answers to questions 	Forest School Year 1 garden	Nettles, daisy, brambles, fuschia, lavender, pansy, rose, sunflower, buttercup, dandelion, daffodil, ivy		
Plants The Buzz about Bees –	Year 2	<ul style="list-style-type: none"> To find out and describe how seeds and bulbs grow into mature plants 	<ul style="list-style-type: none"> observe using simple equipment 	Forest School	Seeds, seedlings, sprout, stem, leaf, pollen, stigma, petal, bud, flower		

Bee Sanctuary			<ul style="list-style-type: none"> • use their observations/ideas • suggest answers to questions 	Year 1 garden			
Animals, including humans Sanctuary Zoo	Year 1	<ul style="list-style-type: none"> • To identify and name a variety of common animals including: fish, amphibians, reptiles, birds and mammals • To describe and compare the structure of a variety of common animals. (fish amphibians, reptiles, birds and mammals including pets) • To identify and name a variety of common animals that are carnivores, herbivores and omnivores 	<ul style="list-style-type: none"> • ask simple questions and recognise that they can be answered in different ways. • identifying and classifying 	Animal Encounters	owl, spider, frog, skunk, snail, snake, rabbit, lion, eagle, hedgehog, fox, horse, shark,		
The Farmer's Hedgerow Living things and their habitats	Year 2	<ul style="list-style-type: none"> • To explore and compare the differences between things that are living, dead, and things that have never been alive • To identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other. • To identify and name a variety of plants and animals in their micro-habitats • To describe how animals obtain their food from plants 	<ul style="list-style-type: none"> • observe closely, using simple equipment • identify and classify/ask simple questions • 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 	Forest School School grounds - hawthorn, rose bush	living, dead, never alive, breathe, move, drink, grow, habitats, micro-habitats, food, food chain, sun, grass, cow, human, alive, healthy, logs, leaf litter, shelter, warm, cold, dry, damp, wet, bright, shade, dark, environment, camouflage, survive, predator, prey		

		and other animals, using the idea of a simple food chain, and identify and name different sources of food					
Plants Continuous Provision <i>(Bulbs and seeds are planted in planters in and outside the classroom, these are cared for by the pupils, seedlings will be replanted outside)</i>	Year 2	<ul style="list-style-type: none"> • To observe and describe how bulbs grow into mature plants • To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy 	<ul style="list-style-type: none"> • observe closely, using simple equipment • performing simple tests • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions 				