

Landgate School Key Stage 1 Science Long Term Planning

<p>Key Stage 1</p>	<p>Key stage 1 Intent: We aim to ensure all our learners have access to the Science National Curriculum by:</p> <ul style="list-style-type: none"> ○ developing scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics. ○ developing understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. ○ ensuring that they are given the opportunity to gain the scientific knowledge required to understand the uses and implications of science, today and for the future according to their abilities. <p>Primary classes participate in weekly Science sessions enabling them to acquire, develop and apply their learning. Primary Science is planned and delivered by the lead/ class teacher.</p> <p>Links - Relationships Education, Relationships and Sex Education (RSE) and Health Education: At key stage 1 the national curriculum for science includes teaching about the main external parts of the body and changes to the human body as it grows from birth to old age, including puberty.</p>	
	<p>Key Stage Opportunities: In Key Stage One Science is delivered through adult directed activities, focused play activities and independent investigation. They follow a range of themes which allow staff to support learners in following their own learning paths. This allows them the opportunity to:</p> <ul style="list-style-type: none"> ○ experience and observe phenomena, looking more closely at the natural and humanly - constructed world around them. ○ be curious, explore and ask questions about what they notice. ○ develop their understanding of scientific ideas. ○ observe changes over a period of time. E.g. different seasons, plant growth. ○ use simple scientific language to communicate about what they have found out and communicate their ideas to a range of audiences in a variety of ways. ○ have first-hand practical experiences ○ access to appropriate secondary sources, such as books, photographs and videos. 	
	<p>Year A</p>	<p>Year B</p>

1	Key Focus:	Plants - Identifying and classifying	Living things and habitats - Keeping Healthy/ Growth
	Key Knowledge/ Vocabulary: (Vocab highlighted in bold)	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ Classify i.e. matching or sorting plants, trees, flowers. ➤ 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. 	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ identifying and classifying ➤ Look at the importance of being healthy. ➤ The effects and benefits of Exercise, including breathing ➤ Eating the right amounts of different types of food, I.e sweets, fruit, vegetables, meat, etc ➤ Hygiene. - Teeth, hands, toileting
	Key Skills:	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Observing ❖ Dissecting/ cutting ❖ Sorting ❖ Classifying <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ Predicting ❖ gathering and recording data. 	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Experiencing ❖ Classifying ❖ Observing ❖ Following instructions. <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data.
	Opportunities:	<p>Possible External Visits: Local parks, Botanical gardens, Garden centres.</p> <p>Activities/ Continuous Provision Ideas: Planting area/ tuff tray, flower drawing/ printing, looking at parts of flowers, collage flowers, leaves and seed sorting.</p> <p>Outdoor Experiences: Use planting equipment in sensory garden, planting in the poly tunnel, collecting/ photographing different plants, Bucket school activities.</p>	<p>Possible External Visits: Local Area/ Outdoor area - physical activities, Walks/ runs, circuit training.</p> <p>Activities/ Continuous Provision Ideas: Clinic, doctors, dentist role play, washing hands, tasting healthy foods,</p> <p>Outdoor Experiences: Exercise/ sports - the effects of exercise on the body, Games including find the healthy foods.</p>

2	Key Focus:	Seasons – Autumn/ Winter	Uses of Everyday Materials - Describe and Identify
	Key Knowledge/ Vocabulary: (Vocab highlighted in bold)	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ observe changes across the two seasons – Autumn/ Winter ➤ observe and describe weather associated with the seasons (Snow, Wind, Rain) and how day length varies (Night ,Day, Daylight) . ➤ Investigate changes of state i.e. snow/ ice/ water/ steam. ➤ Weather/climate ➤ Changes in trees. 	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ To develop vocabulary to describe everyday materials – such as hard, soft, smooth, rough, flexible, ➤ Identifying Materials. Plastic, metal, paper, glass (ensure safety), rocks ➤ The properties of materials such as ability to hold water, repel water, waterproof.
	Key Skills	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Observing/ Experiencing ❖ Investigating ❖ Recording ❖ Scientific vocabulary. <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data. 	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Evaluating ❖ Classifying ❖ Planning ❖ Following instructions. <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data.
Opportunities:	<p>Possible External Visits: Parks, local walks, recreation areas, chill factore, Forests.</p> <p>Activities/ Continuous Provision Ideas: Autumn table, leaf rubbing, clothes sorting, experimenting with water- states of matter, fake snow, ice</p> <p>Outdoor Experiences: Outdoor walks/ Bucket schools - collecting leaves, conkers etc. walking through leaves, make a hedgehog house, Recording weather/ temperatures, snow/ rain art.</p>	<p>Possible External Visits: Science and Industry museum, local area materials hunt.</p> <p>Activities/ Continuous Provision Ideas: comparing materials, using the senses to identify simple properties, sorting materials, tuff tray of sensory materials, a coat for bear, Three little pigs story, Feely boxes.</p> <p>Outdoor Experiences: Identifying materials in the outside world around them. Bucket School Activities - finding, describing and using materials.</p>	

3	Key Focus:	Materials - Uses, Physical Properties and Comparisons.	Seasons – Spring/Summer
	Key Knowledge/ Vocabulary: (Vocab highlighted in bold)	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ 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 physical properties of a variety of everyday materials ➤ compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ Investigate changes across the two seasons - Spring and Summer ➤ observe and describe weather (sunshine, sun, rain, cloudy) associated with the seasons and how day length varies. ➤ Weather/ Climate. ➤ Growth
	Key Skills:	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Simple experiments ❖ Comparing ❖ Observing ❖ Sorting/ classifying <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data. 	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Recording ❖ Classifying ❖ Observing changes ❖ Following instructions. <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data.
Opportunities:	<p>Possible External Visits: Science and Industry museum, local area materials hunt,</p> <p>Activities/ Continuous Provision Ideas: comparing materials, using the senses to identify simple properties, sorting materials, tuff tray of sensory materials, a coat for bear, Three little pigs story, Feely boxes, recycling.</p> <p>Outdoor Experiences: Identifying materials in the outside world around them. Finding different uses for the same material.</p>	<p>Possible External Visits: Parks, Farms, Butterfly house, Garden centres</p> <p>Activities/ Continuous Provision Ideas: Spring table, lambs wool, clothes sorting, life cycles. Frog spawn/ butterflies, recording weather.</p> <p>Outdoor Experiences: Outdoor walks finding flowers, tree buds, etc Bucket School investigative activities.</p>	

	Key Focus:	Animals including humans - Types of Animals.	Plants - Healthy Growth
	Key Knowledge/ Vocabulary: (Vocab highlighted in bold)	<p>To observe, experience, investigate, identify, classify and/or describe...</p> <ul style="list-style-type: none"> ➤ a variety of common animals including fish, amphibians, reptiles, birds and mammals. ➤ The structure of animals – wings, number of legs, Skeletons ➤ identify and name a variety of common animals that are carnivores, herbivores and omnivores 	<p>To observe, experience, investigate, identify, and/or describe...</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.
	Key Skills:	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Recognising/ Identifying ❖ Classifying ❖ Asking simple questions ❖ Following instructions/ criteria <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data. 	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Measuring ❖ Making judgements ❖ Observing ❖ Fine motor skills <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data.
	Opportunities:	<p>Possible External Visits: Zoo, Pet shops, Oakfield pets.</p> <p>Activities/ Continuous Provision Ideas: small world/ tuff tray - farms/ zoos, matching animals and symbols, role play the movement of different animals, sorting types of animals.</p> <p>Outdoor Experiences: Outdoor walks, Creating pictures of animals from natural objects., bird watching – bird nest camera if nesting occurs/ bird table.</p>	<p>Possible External Visits: Local parks, Botanical gardens, Garden centres, local walks.</p> <p>Activities/ Continuous Provision Ideas: Planting area/ tuff tray, flower drawing/ printing, looking at parts of flowers, collage flowers, leaves and seed sorting using pincers.</p> <p>Outdoor Experiences: Use planting equipment in sensory garden, collecting/ photographing different plants. Bucket School Activities.</p>

5	Key Focus:	Living things and their habitats	Materials – Changes
	Key Knowledge/ Vocabulary: (Vocab highlighted in bold)	To observe, experience, investigate, identify, and/or describe... <ul style="list-style-type: none"> ➤ Knowing where animals live, including minibeasts ➤ Locating habitats in the natural world. (Arctic, Rainforests, hedgerows, local habitats) ➤ Why animals live in different habitats? (Food, materials, safety) 	To observe, experience, investigate, identify, and/or describe... <ul style="list-style-type: none"> ➤ Investigating how materials can be changed. (temperature, ➤ The effects of mixing/ combining materials.
	Key Skills:	Working Scientifically Focus Skills - <ul style="list-style-type: none"> ❖ Observing ❖ Classifying ❖ Researching ❖ Gathering information Ongoing Scientific Skills - <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data. 	Working Scientifically Focus Skills - <ul style="list-style-type: none"> ❖ Predicting ❖ Recognising change ❖ Simple questions ❖ Following instructions. Ongoing Scientific Skills - <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data.
	Opportunities:	Possible External Visits: Martin mere, local areas ponds (safety checked), zoo Activities/ Continuous Provision Ideas: small world/ tuff tray - Arctic/ oceans/ UK wild animals/ minibeasts, creating habitats for given animals, making a birds nest, www.rspb.org.uk/fun-and-learning/for-families/family-wild-challenge/activities/pond-dipping/ , Outdoor Experiences: Using minibeast equipment in sensory garden. Observing Birds nest (by camera)/ bird table. Creating/ Investigating bug hotel. Bucket school – create a habitat from items collected or in the bucket.	Possible External Visits: parks, outdoor environment, Activities/ Continuous Provision Ideas: making cakes, corn flour, melting, playdough – stretching, bending twisting stretching. Clay, recycling activities. Bubbles. Outdoor Experiences: Recycling - weaving with leaves/ twigs/ plastic bags, Finding materials outside, Recycling,

	Key Focus:	Animals including humans - The Human body	Animals including humans - Human Growth
	Key Knowledge/ Vocabulary: (Vocab highlighted in bold)	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ identify, name, draw and label the basic parts of the human body. (names of external body parts) ➤ say which part of the body is associated with each sense. (Eyes, sight, ears, hearing, nose, smell, skin, hands, touch, tongue, mouth, taste) 	<p>To observe, experience, investigate, identify, and/or describe...</p> <ul style="list-style-type: none"> ➤ changes to the human body as it grows through birth, baby, child, adult, old age, ➤ Know that humans are mammals and why. Movement, breathing, babies, warm
	Key Skills:	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Simple experiments ❖ Identifying ❖ Observing ❖ Predicting <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data. 	<p>Working Scientifically Focus Skills -</p> <ul style="list-style-type: none"> ❖ Predicting ❖ Recognising Change ❖ Observing ❖ Ordering <p>Ongoing Scientific Skills -</p> <ul style="list-style-type: none"> ❖ observing closely, ❖ using simple equipment ❖ performing simple tests ❖ identifying and classifying ❖ investigating ❖ asking simple questions ❖ predicting ❖ gathering and recording data.
	Opportunities:	<p>Possible External Visits: World Museum – human body, Eureka – human body, dentist, doctors</p> <p>Activities/ Continuous Provision Ideas: role play areas – doctors, tuff trays related to senses, jigsaw humans, sensory tubs, velcro body, visit from a guide dog.</p> <p>Outdoor Experiences: Action games, Bucket school – sensory items to explore outdoors, What can you see, hear, smell, feel?</p>	<p>Possible External Visits: Doctors, Baby clinic, Age UK links.</p> <p>Activities/ Continuous Provision Ideas: Baby clinic, disability devices I.e. wheelchair, blind fold. Visible changes, visit from an elderly person.</p> <p>Outdoor Experiences: Moving as people at different stages of life,</p>