

Suffield Park Infant and Nursery School Progression Map for



Confident, Resilient, Ambitious, Brilliant

Science.

Year Group	Knowledge	Skills	Vocabulary
Plants			
<p>Reception</p>	<p>Range 5</p> <ul style="list-style-type: none"> ▪ To know the names of some plants, natural and found objects e.g. daffodil, stinging nettle, dandelion, bulb, seed, dock leaf. ▪ To develop an understanding of growth, decay and changes over time. ▪ To show care and concern for living things and the environment. <p>Range 6</p> <ul style="list-style-type: none"> ▪ To know similarities and differences with in living things -Makes observations of plants and explains why some things occur, and talks about changes <p>ELG</p> <ul style="list-style-type: none"> ▪ Statutory ELG: The Natural World <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals and plants; 	<ul style="list-style-type: none"> ▪ Observe and identify plants in their local environment (e.g. the woods) or through videos or pictures. ▪ Talk about and ask questions about what they have observed e.g. what happen when you touch a stinging nettle? ▪ Talk about some of the things they have observed such as plants, natural and found objects. ▪ Discuss similarities and differences based on their observations e.g. based on looks, loss of leaves, size of plants etc. ▪ Observe changes over time e.g. watching a plant grow, leaves falling off trees etc. ▪ To look closely at similarities, differences, patterns and change. <ul style="list-style-type: none"> - Read books about plants (fictional and nonfictional) - Create books/ slideshows about the changes of our plants - to use Reception garden safely following rules about what plants can and can't be eaten 	<p>Inside Outside Plants (e.g. stinging nettle, daisy, bluebell, dandelion, daffodil). Animal Natural Growth Decay Change Living Bulb Seed Different Same Tree Leaves Woods Environment</p>
<p>Year 1</p>	<ul style="list-style-type: none"> ✦To know and be able to identify/name a variety of common wild and garden plants, including deciduous and evergreen trees ✦To know, identify and describe the basic structure of a variety of common flowering plants, including trees. 	<p>Observe closely using simple equipment. Using their observations and ideas to suggest answers to questions.</p> <ul style="list-style-type: none"> ✦Observe flowers closely (possible with a magnifying glass). ✦Using the observation to label plant structures (e.g. leaves, flowers, petals, root, bulb, seed, trunk, branch, stem.) ✦Observe the growth of flowers and vegetables preferably that they have planted. 	<p>Wild plants Garden plants Trees (e.g. oak, beech, pine, willow) Deciduous</p>

		<p>✦Use the observations to compare and contrast familiar plants.</p> <p>Identifying and classifying</p> <p>✦Go into the local environment to identify plants and trees (using a identification chart for guidance).</p> <p>✦Group plants and trees and describe why they have grouped them that way.</p> <p>Gather and record data to help in answering questions. Perform simple tests.</p> <p>✦Keep a record of how plants have changed over time (e.g. leaves falling off trees, buds opening) and compare and contrast what they have found out.</p> <p>Ask simple questions and recognise they can be answered in different ways.</p> <p>✦ Use the local environment throughout the year to explore and answer questions about plants growing in their habitat.</p>	<p>Evergreen Leaves Flowers Petals Root Bulb Seed Trunk Branch Stem Buds Autumn Winter Spring Summer Seasons</p>
Year 2	<p>✦To know about, observe and describe how seeds and bulbs grow into mature plants</p> <p>✦To know and describe how plants need water, light and a suitable temperature to grow and stay healthy.</p>	<p>Observe closely using simple equipment. Using observations and ideas to suggest answers to questions.</p> <p>✦Observe the growth of a variety of plants as they change over time from a seed or a bulb.</p> <p>✦Observing similar plants at different stages of growth and describing the changes.</p> <p>Performing simple tests, gathering and recording data to help in answering questions.</p> <p>✦Set up a comparative test to show that plants need light and water to stay healthy.</p> <p>Identifying and classifying</p> <p>✦ Identify that plants grow from a seed or a bulb. Identify the differences between a bulb and a seed.</p> <p>Ask simple questions and recognise they can be answered in different ways.</p>	<p>Seed Bulb Young Seedling Mature Plant Wild flowers Garden flowers Autumn Winter spring Summer Seasons Water Light Suitable Temperature Healthy</p>

✦ Use the local environment throughout the year to explore and answer questions about plants growing in their habitat.

Year Group	Knowledge	Skills	Vocabulary
Animals including humans			
Reception	<p>Range 5</p> <ul style="list-style-type: none"> ▪ To know and be able to talk about some of the things they have observed such as animals. ▪ To develop an understanding of growth, decay and changes over time. ▪ To show care and concern for living things and the environment. <p>Range 6</p> <ul style="list-style-type: none"> ▪ Looks closely at similarities, differences, patterns and change in nature • Knows about similarities and differences in relation to living things • Makes observations of animals and explains why some things occur, and talks about changes <p>ELG</p> <ul style="list-style-type: none"> ▪ Statutory ELG: The Natural World <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals; - 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; 	<ul style="list-style-type: none"> ▪ Observe and identify animals in the local environment (e.g. the Woods) or through videos and pictures. ▪ Talk about and ask questions about what they have observed. ▪ Discuss similarities and differences. E.g. comparing two or more animals based on appearance, what they eat, where they live etc. ▪ Comments and asks questions about aspects of their familiar world such as the place they live or the natural world. <ul style="list-style-type: none"> - to care for class pet- feeding, cleaning, stroking, exercising) - consider animals that live near us and far away (link to blue penguin and tanka tanka topics) 	<p>Animal Living Non-living Growth Change Same Different</p>

	- Understand some important processes and changes in the natural world around them		
Year 1	<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 know and be able to describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals including pets).</p> <p>✦To identify, name, draw and label the basic parts of the human body and say which part is associated with each sense.</p>	<p>Asking simple questions, recognizing they can be answered in different ways. Using their observations and ideas to suggest answers to questions.</p> <p>✦Use the local environment throughout the year to explore and answer questions about animals in their habitat.</p> <p>Identifying and classifying.</p> <p>✦Group animals according to what they eat (herbivore, omnivore, carnivore).</p> <p>✦Group animals according to their type e.g. fish, amphibian, bird, mammals, reptiles.</p> <p>Performing simple tests. Gathering and recording data to help answer questions.</p> <ul style="list-style-type: none"> Using their senses to compare different textures, sounds and smells. <p>Observing closely using simple equipment. Using their observations and ideas to suggest answers to questions.</p> <ul style="list-style-type: none"> Using their observations to compare and contrast animals at first hand or through videos and photographs. 	<p>Animals</p> <p>Fish</p> <p>Amphibians</p> <p>Reptiles</p> <p>Birds</p> <p>Mammals</p> <p>Carnivore</p> <p>Herbivore</p> <p>Omnivore</p> <p>Pets</p> <p>Meat</p> <p>Plants</p> <p>Body</p> <p>Smell</p> <p>Taste</p> <p>Touch</p> <p>Hear</p> <p>Feel</p> <p>See</p> <p>Sight</p> <p>Senses</p>
Year 2	<p>✦To know that animals, including humans, have offspring which grow into adults.</p> <p>✦To know the basic needs of animals, including humans, for survival (water, food and air).</p> <p>✦To know and describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.</p>	<p>Ask simple questions and recognising that they can be answered in different ways. Using their observations and ideas to suggest answers to questions.</p> <p>✦Ask questions about what things animals need for survival and what humans need to stay healthy; and suggesting ways to find answers to their questions.</p> <p>Observing closely using simple equipment.</p> <p>✦Observing, through video or first-hand observation and measurement, how different animals, including humans, grow</p> <p>Identifying and classifying.</p>	<p>Animals</p> <p>Humans</p> <p>Offspring</p> <p>Young</p> <p>Water</p> <p>Food</p> <p>Air</p> <p>Exercise</p> <p>Balanced diet</p> <p>Carbohydrate</p> <p>Fruit</p> <p>Vegetables</p>

		<ul style="list-style-type: none"> ✦Identify animals that grow into adult e.g. egg, chick, chicken egg, caterpillar, pupa, butterfly spawn, tadpole, frog lamb, sheep baby, toddler, child, teenager, adult. ✦Identify the different food groups and group foods based on the food group they belong to e.g. carbohydrates protein etc. 	Protein Dairy Milk Sugar Fats Fish Meat Nuts Eggs Grains Cereals Potatoes
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Year Group	Knowledge	Skills	Vocabulary
Everyday materials			
Reception	<p>Range 5</p> <ul style="list-style-type: none"> ▪ Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces <p>Range 6</p> <ul style="list-style-type: none"> ▪ Develops their own ideas through experimentation with diverse materials, e.g. light, projected image, loose parts, watercolours, powder paint, to express and communicate their discoveries and understanding. - Knows about similarities and differences in relation to materials <p>ELG</p>	<ul style="list-style-type: none"> ✦Ask questions for example, <i>"I wonder what would happen if..."</i>. ✦To notice changes in properties of materials as they are transformed through becoming wet, dry, flaky or fixed. To talk about what is happening, helping them to think about cause and effect. ✦To talk about similarities and differences between materials e.g. hard, soft, flat, bumpy. ✦To use one-handed tools and equipment e.g. makes snips in paper with child scissors. ✦To use simple tools to effect changes to materials. ✦To use simple joining techniques to attach materials. ✦To handle tools, objects, construction and malleable materials safely and with increasing control. 	Paper Sellotape Blue tac Wet Dry Same Different Joining Cut Attach Assembly Build Make Hard Soft Scissors

	<ul style="list-style-type: none"> ▪ Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 		
Year 1	<ul style="list-style-type: none"> ✦ To know and be able 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 know and describe the simple physical properties of a variety of everyday materials ✦ To know and be able to compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>Observe closely, using simple equipment, identifying and classifying.</p> <ul style="list-style-type: none"> ▪ Identify the materials objects are made from. ▪ Group materials based on physical properties such as hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent. <p>Performing simple tests. Using their observations and ideas to suggest answers to questions. Gather and record data to help answer questions. Ask simple questions and recognising that they can be answered in different ways.</p> <ul style="list-style-type: none"> ✦ performing simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket? ...for curtains? ...for a bookshelf? ...for a gymnast's leotard?' 	Materials Wood Plastic Glass Metal Water Rock Physical properties Hard Soft Malleable Non-malleable Bendy Flexible Waterproof Absorbent Soaking. Rough Smooth Dull Shiny Opaque Transparent
Year 2	<ul style="list-style-type: none"> ✦ To identify and compare the suitability of a variety of everyday materials, including wood, 	<p>Identify and Classify</p> <ul style="list-style-type: none"> ✦ Identify and discuss the use of different everyday materials so that they become familiar with how some materials are used for 	Wood Metal Plastic Glass

	<p>metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>✦To know that the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</p>	<p>more than one thing e.g. metal can be used for coins, cans, cars etc.</p> <p>✦Identify the suitability of materials e.g. materials used to make an umbrella needs to be waterproof.</p> <p>Observing closely, using simple equipment. Using their observations and ideas to suggest answers to questions.</p> <p>✦Compare the use of everyday materials in and around the school with materials found in other places.</p> <p>Performing simple tests. Gathering and recording data to help answer questions.</p> <p>✦Investigate which materials can change shape through a force e.g. squashing.</p>	<p>Brick Rock Paper Cardboard Changing Squashing Bending Twisting Stretching Bendy Flexible Malleable Non-malleable</p>
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Year Group	Knowledge	Skills	Vocabulary
Seasonal Changes			

<p>Reception</p>	<p>Range 5</p> <ul style="list-style-type: none"> ▪ To know about aspects of the familiar world, such as the place where they live or the natural world. ▪ To develop an understanding of changes over time. <p>Range 6</p> <ul style="list-style-type: none"> ▪ Looks closely at similarities, differences, patterns and change in nature <p>ELG</p> <ul style="list-style-type: none"> ▪ Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. 	<ul style="list-style-type: none"> ▪ Observe changes over time e.g. the weather, leaves falling off trees. ▪ Talk about and ask questions about what they have observed. ▪ Discuss similarities and differences based on their observations e.g. not all trees leaves have fallen off, different colour leaves. - Compare our environment with other habitats from stories shared 	<p>Weather</p> <p>Cold</p> <p>Hot</p> <p>Rain</p> <p>Snow</p> <p>Sun</p> <p>Wind</p> <p>Clouds</p> <p>Change</p> <p>Autumn</p> <p>Spring</p> <p>Summer</p> <p>Winter</p> <p>Seasons</p>
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Year 1	<p>✦ To know the four seasons.</p> <p>✦ To know and describe weather associated with the seasons and to know that day length varies.</p>	<p>Ask simple questions. Gathering and recording data to help answer questions.</p> <ul style="list-style-type: none"> ▪ Record weather in a chart/table. ▪ Record day length. <p>Observe. Identify and Classify.</p> <ul style="list-style-type: none"> ▪ Children to observe changes during all four seasons e.g. leaves falling, flowers opening, weather becoming hotter/colder. 	<p>Seasons Summer Autumn Winter Spring Day length Sunshine Rain Wind Thunder and lightning Storm Clouds Solstice Day Night</p>
Year 2			

Year Group	Knowledge	Skills	Vocabulary
Living things and their habitats			
Reception			
Year 1			
Year 2	<ul style="list-style-type: none"> ✦ To know the differences between things that are living, dead, and things that have never been alive ✦ To know 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 habitats, including micro- habitats ✦ To know 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. 	<p>Identify and classify</p> <ul style="list-style-type: none"> ✦ Pupils should compare animals in familiar habitats with animals found in less familiar habitats, for example, on the seashore, in woodland, in the ocean, in the rainforest. ✦ Sorting and classifying things according to whether they are living, dead or were never alive ✦ Sort animals into a food chain, depending on whether they are a producer/consumer. <p>Observing closely, using simple equipment. Using their observations and ideas to suggest answers to questions.</p> <ul style="list-style-type: none"> ✦ Observe microhabitats closely (possible with a magnifying glass). ✦ Observe (through video/pictures) and identify how animals have adapted to suit their environment. 	<p>Living Dead Habitats Adaptation Desert Arctic Micro-habitat Animals Plants Food chain Producer Consumer</p>

KS1 Skills are based on the 'Working Scientifically' statement on the National Curriculum. These 'Working Scientifically' skills will also be embedded through half termly investigations.