

Overdale Infant School: Science - Progression Map



Intent

- For children to see themselves as scientists (science capital)
- To have the skills to be able to work scientifically.
- To understand and explore the natural world.
- To be curious about the world around them.
- To have the scientific vocabulary to engage with the world around them.

Development Matters		National Curriculum Year 1	National Curriculum Year 2
Understanding the World – Preschool <ul style="list-style-type: none"> • Explore how things work. • Plant seeds and care for growing plants. • Understand the key features of the life cycle of a plant and an animal. • Begin to understand the need to respect and care for the natural environment and all living things • Explore and talk about different forces they can feel. • Talk about the differences between materials and changes they notice. • Use all their senses in hands-on exploration of natural materials. • Explore collections of materials with similar and/or different properties. • Talk about what they see, using a wide vocabulary 	Understanding the World – Reception Children in Reception <ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel whilst 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. 	Pupils should be taught about: <ul style="list-style-type: none"> • Working scientifically • Plants • Animals, including humans • Everyday materials • Seasonal changes 	Pupils should be taught about: <ul style="list-style-type: none"> • Working scientifically • Plants • Animals, including humans • Uses of everyday materials • Living things and their habitats

	Pre-school	Reception	Year 1	Year 2
Working Scientifically	<ul style="list-style-type: none"> Show curiosity about objects, events and people Use all their senses in hands-on exploration of the world around them. Know that different things work in different ways. Understand that if they do something (cause) there might be an effect. Experience a wide range of different of mechanical objects/objects that can be manipulated. Try different ways to make an object work, starting to be systematic. Explore a wide range of materials and processes. 	<ul style="list-style-type: none"> Continue to show curiosity about objects, events and people and begin to explain why some things occur Know that they can test their ideas. Observe and explore the world around them and describe what they see, hear, feel, taste and touch. Notice and talk about similarities, differences and change. Ask questions about what they observe and why things happen. Use recently introduced (scientific) vocabulary appropriately Use simple equipment and tools carefully. 	<ul style="list-style-type: none"> Use their senses to observe and describe Begin to use simple scientific vocabulary Sort and classify Ask questions and begin to suggest their own ideas and ways that questions can be answered Perform simple tests and gather data Use simple equipment e.g. magnifying glasses Draw and label simple pictures and diagrams to communicate their learning 	<ul style="list-style-type: none"> Continue to use their senses to observe and describe including observing changes over time Use simple scientific vocabulary to communicate their ideas and findings Sort, classify and compare Ask questions and understand that they can be answered in different ways Set up and conduct simple comparative tests Gather and record data and use this to answer questions

Plants	<ul style="list-style-type: none"> To know that plants change. To understand that we need to look after plants for them to stay alive. To know very basic vocabulary about plants. 	<ul style="list-style-type: none"> To know that plants are living things. To know that plants grow. To know the name of some familiar plants. To know some parts of a plant (<i>leaf, flower, trunk</i>). To know that we have to care for plants. 	<ul style="list-style-type: none"> To recognise and name a variety of common wild and garden plants. To understand the terms deciduous and evergreen in terms of trees. To understand the basic structure of flowering plants, including trees. To know the names of the parts of flowering plants. 	<ul style="list-style-type: none"> To name the different stages of a plant lifecycle starting with a seed. To name the different stages of a plant lifecycle starting with a bulb. To understand the differences between the stages of a plant life cycle. To know that plants need water, light and a suitable temperature to grow and stay healthy.
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<p style="text-align: center;">Animals, including humans</p>	<ul style="list-style-type: none"> • To be aware that they have a body. • To notice some simple similarities and differences between different bodies. • To notice changes that show that they are growing/getting older (<i>e.g. having birthdays, moving schools</i>). • To know some names of common pets, farm animals and jungle animals. • To notice that animals change (<i>e.g. notice that there are 'baby' animals, recognise that the hungry caterpillar changes into the butterfly</i>). • To know that animals need to eat food. • To understand that we should look after all living things. • To notice that we can find animals in specific places (<i>e.g. if you lift up a log you might find a minibeast, if you look in the trees you might see a bird</i>). 	<ul style="list-style-type: none"> • To know that humans have bodies. • To know that there are similarities and differences between bodies. • To know that people are animals. • To know the names of some familiar animals. • To know that animals grow and change (<i>get bigger and look different</i>). • To know that familiar animals eat different things (<i>e.g. meat and plants</i>). • To know we have to care for animals. 	<ul style="list-style-type: none"> • To name the basic parts of the body. • To know the name of the 5 senses and understand what their purpose is. • To know which part of the body is associated with each sense. • To know the names of a range of common animals. • To understand the terms carnivore, herbivore and omnivore • To know that there are 5 main animal groups and understand their characteristics (<i>e.g. warm/cold blooded, eggs, lungs/gills, fur/feathers/scales</i>). • To know the names of the parts of a variety of common animals. 	<ul style="list-style-type: none"> • To know that to survive, animals have the basic needs of water, food and air. • To recognise that certain things keep humans healthy. • To name different things humans can do to stay healthy: exercise, eat the right amounts of different foods, drink plenty of water, sleep, clean hands, bodies and teeth. • To name the different stages of the human and another animal's lifecycle. • To understand the differences between the stages of the life cycle.
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Materials	<ul style="list-style-type: none"> • To notice different materials and use basic vocabulary to talk about what I can see. • To notice when materials change. 	<ul style="list-style-type: none"> • To know the name of a variety of everyday objects. • To understand there is cause and effect (<i>ice melting, shadows, floating & sinking</i>). 	<ul style="list-style-type: none"> • To know the names of a range of common materials. • To know the name of an object and what it is made from. • To know the names of the physical properties of materials. 	<ul style="list-style-type: none"> • To understand how each key material's properties make it suitable for different purposes. • To understand that some materials can be changed in different ways. • To understand the terms: squashing, bending, twisting and stretching.
Weather/Seasonal changes	<ul style="list-style-type: none"> • To know that there are different types of weather. • To know the weather and seasons impact on the way animals behave (<i>e.g. people wear a coat in the winter but not in the summer</i>). 	<ul style="list-style-type: none"> • To know there are different types of weather. • To know the weather and seasons impact on the way animals behave (<i>people wear a coat in winter as it is cold</i>). 	<ul style="list-style-type: none"> • To know the name of the 4 seasons. • To understand the characteristics of the 4 seasons. • To understand how day length varies across the 4 seasons. 	

<p>Living things and their habitats</p>	<ul style="list-style-type: none"> To notice that we can find animals in specific places (<i>e.g. if you lift up a log you might find a minibeast, if you look in the trees you might see a bird</i>). 	<ul style="list-style-type: none"> To talk about how we can care for the natural environment, including plants and animals. 		<ul style="list-style-type: none"> To understand what it means for something to be living, dead or never alive. To be able to understand different food chains, relating to specific habitats. To name different sources of food within a food chain. To understand the human role in a food chain. To understand what a habitat is. To name a variety of key habitats. To know the climate and environment of key habitats. To name some animals and plants within each key habitat. To understand the suitability of habitats for these animals and plants. To recognise that plants and animals within a habitat depend on each other. To understand what a micro-habitat is. To name a variety of animals and plants in the local environment.
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