

Learning in EYFS – Science

Science				
Area of EYFS Curriculum (Development Matters)		Learning Intentions	What learning looks like:	Topic Themes
Nursery	Communication and Language	<ul style="list-style-type: none"> Understand ‘why’ questions, like: “Why do you think the caterpillar got so fat?” 	<ul style="list-style-type: none"> Shared book-reading is a powerful way of having extended conversations with children. It helps children to build their vocabulary. Offer children lots of interesting things to investigate, like different living things. This will encourage them to ask questions. 	
	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Make healthy choices about food, drink, activity and toothbrushing. 	<ul style="list-style-type: none"> Talk to children about why it’s important to wash their hands carefully and throughout the day, including before they eat and after they’ve used the toilet etc. 	
	Understanding the World	<ul style="list-style-type: none"> 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. Begin to make sense of their own life-story and family’s history. 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. 	<ul style="list-style-type: none"> Provide interesting natural environments for children to explore freely outdoors. Make collections of natural materials to investigate and talk about. Suggestions: <ul style="list-style-type: none"> contrasting pieces of bark different types of leaves and seeds different types of rocks different shells and pebbles from the beach Provide equipment to support these investigations. Suggestions: magnifying glasses or a tablet with a magnifying app. Encourage children to talk about what they see. Model observational and investigational skills. Ask out loud: “I wonder if...?” Plan and introduce new vocabulary, encouraging children to use it to discuss their findings and ideas. Spend time with children talking about photos and memories. Encourage children to retell what their parents told them about their life-story and family. Show and explain the concepts of growth, change and decay with natural materials. Suggestions: <ul style="list-style-type: none"> plant seeds and bulbs so children observe growth and decay over time observe an apple core going brown and mouldy over time help children to care 	

		<ul style="list-style-type: none"> • Talk about the differences between materials and changes they notice. 	<p>for animals and take part in first-hand scientific explorations of animal life cycles, such as caterpillars or chick eggs.</p> <ul style="list-style-type: none"> • Plan and introduce new vocabulary related to the exploration. • Encourage children to use it in their discussions, as they care for living things. Encourage children to refer to books, wall displays and online resources. This will support their investigations and extend their knowledge and ways of thinking. • Draw children’s attention to forces. Suggestions: <ul style="list-style-type: none"> • how the water pushes up when they try to push a plastic boat under it • how they can stretch elastic, snap a twig, but cannot bend a metal rod • magnetic attraction and repulsion Plan and introduce new vocabulary related to the exploration and encourage children to use it. • Provide children with opportunities to change materials from one state to another. Suggestions: <ul style="list-style-type: none"> • cooking – combining different ingredients, and then cooling or heating (cooking) them • melting – leave ice cubes out in the sun, see what happens when you shake salt onto them (children should not touch to avoid danger of frostbite) • Explore how different materials sink and float. • Explore how you can shine light through some materials, but not others. Investigate shadows. • Plan and introduce new vocabulary related to the exploration and encourage children to use it. 	
Reception	Communication and Language	<ul style="list-style-type: none"> • Learn new vocabulary. • 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 	<ul style="list-style-type: none"> • Identify new vocabulary before planning activities, for example, changes in materials: ‘dissolving’, ‘drying’, ‘evaporating’; • Bring in objects, pictures and photographs to talk about, for example vegetables to taste, smell and feel. Discuss which category the word is in, for example: “A cabbage is a kind of vegetable. It’s a bit like a sprout but much bigger”. Have fun saying the word in an exaggerated manner. 	

		<p>how things work and why they might happen.</p> <ul style="list-style-type: none"> • Use new vocabulary in different contexts. 	<ul style="list-style-type: none"> • Show genuine interest in knowing more: “This looks amazing, I need to know more about this.” Think out loud, ask questions to check your understanding; make sure children can answer who, where and when questions before you move on to why and ‘how do you know’ questions: “I wonder why this jellyfish is so dangerous? Ahh, it has poison in its tentacles.” • Help children build sentences using new vocabulary by rephrasing what they say and structuring their responses using sentence starters. Narrate your own and children’s actions: “I’ve never seen so many beautiful bubbles, I can see all the colours of the rainbow in them.” • Suggestion: ask open questions - “How did you make that? Why does the wheel move so easily? What will happen if you do that?” • Encourage children to talk about a problem together and come up with ideas for how to solve it. Give children problem solving words and phrases to use in their explanations: ‘so that’, ‘because’, ‘I think it’s...’, ‘you could...’, ‘it might be...’ • Explain new vocabulary in the context of story, rather than in word lists 	
	<p>Personal, Social and Emotional Development</p>	<ul style="list-style-type: none"> • Know and talk about the different factors that support their overall health and wellbeing: <ul style="list-style-type: none"> - regular physical activity - healthy eating - toothbrushing - sensible amounts of ‘screen time’ - having a good sleep routine - being a safe pedestrian 	<ul style="list-style-type: none"> • Talk with children about exercise, healthy eating and the importance of sleep. • Use picture books and other resources to explain the importance of the different aspects of a healthy lifestyle. • Explain to children and model how to travel safely in their local environment, including: staying on the pavement, holding hands and crossing the road when walking, stopping quickly when scootering and cycling, and being sensitive to other pedestrians. 	
	<p>Understanding the World</p>	<ul style="list-style-type: none"> • Explore the natural world around them. • Describe what they see, hear and feel while they are outside. • Recognise some environments that are 	<ul style="list-style-type: none"> • Provide children with have frequent opportunities for outdoor play and exploration. • Encourage interactions with the outdoors to foster curiosity and give children freedom to touch, smell 	

		<p>different to the one in which they live.</p> <ul style="list-style-type: none">• Understand the effect of changing seasons on the natural world around them.	<p>and hear the natural world around them during hands-on experiences.</p> <ul style="list-style-type: none">• Create opportunities to discuss how we care for the natural world around us.• Offer opportunities to sing songs and join in with rhymes and poems about the natural world.• After close observation, draw pictures of the natural world, including animals and plants.• Observe and interact with natural processes, such as ice melting, a sound causing a vibration, light travelling through transparent material, an object casting a shadow, a magnet attracting an object and a boat floating on water.• Encourage focused observation of the natural world.• Listen to children describing and commenting on things they have seen whilst outside, including plants and animals.• Encourage positive interaction with the outside world, offering children a chance to take supported risks, appropriate to themselves and the environment within which they are in.• Name and describe some plants and animals children are likely to see, encouraging children to recognise familiar plants and animals whilst outside.• Teach children about a range of contrasting environments within both their local and national region.• Model the vocabulary needed to name specific features of the world, both natural and made by people.• Share non-fiction texts that offer an insight into contrasting environments.• Listen to how children communicate their understanding of their own environment and contrasting environments through conversation and in play.• Guide children's understanding by draw children's attention to the weather and seasonal features.	
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Early Learning Goal – End of Reception	Communication and Language	Listening, Attention and Understanding	Pupils at a Good Level of Development in EYFS will: <ul style="list-style-type: none"> • Make comments about what they have heard and ask questions to clarify their understanding. 	
	Personal, Social and Emotional Development	Managing Self	<ul style="list-style-type: none"> • Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. 	
	Understanding the World	The Natural World	<ul style="list-style-type: none"> • 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 in the natural world around them, including the seasons and changing states of matter. 	