

How is the science curriculum organised?

The science curriculum is organised around Biology, Physics and Chemistry with working scientifically embedded across all of the unit of work. Working scientifically is ever present within the curriculum design ensuring the children have the disciplinary knowledge required to think and work as a scientist.

How are key strands of learning used?

The key strands within the science curriculum add a further layer of knowledge and understanding to the children's learning. Carefully selected strands provide the children with cumulative knowledge over time around key aspects. This cumulative knowledge will allow the children to understand wider themes to a greater level, being able to reason with thoughts and language. This allows the children to engage in topics of conversation and feel confident with their own knowledge and understanding of these areas. It is through these key strands of learning that the children will be able to recognise and link to other subjects.

Science						
	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
KS1 Cycle A	Living Things and their Habitats		Materials (y1)	Material (y2)	Plants (y1)	Plants (y2)
KS1 Cycle B	Animals, including Humans (y1)	Animals, including Humans (y2)	Animals, including Humans (y1)	Animals, including Humans (y2)	Seasonal Change	
LKS2 Cycle A	Living Things and their Habitats	States of Matter	Animals, including Humans (y3)	Animals, including Humans (y4)	Electricity	
LKS2 Cycle B	Rocks	Light	Forces and Magnets	Sound	Plants	

KS1.CA.T3	Area of study: Seasonal Change Unit aims / outcome: <ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons and how day length varies. 	
Geographical concepts to organise knowledge: Physics- studies matter and motion and how it interacts with energy and forces.		
Working Scientifically- disciplinary knowledge required to think and work as a scientist		
Key strands of learning:		
Hierarchical Strands: (see progression) e.g. plants (Build year on year)	Cumulative Strands: e.g. environment (key features throughout NC)	
Learning in Reception: To know some important processes and changes in the natural world around them, including the seasons and changes in their personal environment. To 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. To explore the natural world around them, making observations and drawing pictures of animals and plants.	Tier 2 <u>New</u> Seasons Weather Day length vary <u>Review –</u> Rain Snow Sunshine cloudy	Tier 3 <u>New</u> <u>Review</u>
NC objective:	Vocabulary and crucial knowledge:	
<ul style="list-style-type: none"> • Observe changes across the four seasons • Observe and describe weather associated with the seasons 	<u>Context of study:</u> Seasonal Change is the only area of Physics that KS1 will visit during their science learning. This topic will follow on from learning in reception about the weather through forest school sessions and the idea of the world around them. Children will understand the importance of water from their learning around what plants, animals and humans need to survive in (KS1.CA.T3) and (KS1.CB.T1 and T2). Children should already be able to talk about the different times of year and what happens to the plants and trees that they see around them. Children should know that babies are born and new plants grow in spring time and not in winter (KS1.CB.T1). During their topic on plants (KS1.CA.T3) children will have learnt about	

<p>and how day length varies.</p>	<p>leaves falling off trees as they discussed evergreen and deciduous trees as well as garden and wild plants.</p> <p><u>Crucial Knowledge:</u></p> <p>To know that there are four seasons throughout the year: spring, summer, autumn and winter.</p> <p>To know that the weather is generally warmer in spring and summer and cooler in autumn and winter.</p> <p>To know the different types of weather we can have in this country: rain, snow, sleet, hail, cloud, sun, fog, thunder and lightning, haze, mist.</p> <p>To understand that days are longer in length in the summer than in the winter because the earth tilts on its axis closer to the sun.</p> <p>To understand in winter the earth tilts the other way which is why it goes darker earlier and the nights are longer.</p> <p>To know in spring days get longer, new plants grow, many animals have babies.</p> <p>To know that in summer day time is the longest, weather is warmest and the trees are full of leaves.</p> <p>To know that in autumn time it starts to get darker earlier, leaves change colour and leaves begin to fall off.</p> <p>To know that in winter the weather is colder, the trees have no leaves and light in the day is at its shortest.</p> <p>To know that it is not safe to look directly at the sun even when wearing dark glasses.</p> <p>To know what clothing items would be needed for the different seasons, for example glasses, sun hats, woolly hats, scarfs, coats, boots.</p> <p><u>Working Scientifically:</u></p> <p><u>Observing changes over time/ Pattern Seeking</u></p> <p>The children will think about the changes they say during the different seasons of the school year.</p> <p>How will I be a scientist?</p> <ul style="list-style-type: none"> • Observe: changes in each season throughout the year. • Record: the changes that happen in a diary, table or chart as well as changes to the weather. • Report: what happens in the world around me, including the day length as the seasons change.
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