

Progression Guidance for Science from Early Years

Background:

Aspects of Science are found within Understanding the World predominantly within The Natural World ELG. In addition, aspects of the Maths Education programme relation to measures also link to Science too. The Characteristics of Effective Learning are threaded through all aspects of learning and are the essential ways in which children learn within Class R. The following table shows how the early learning goals link to the KS1 – namely the Y1 Subject Content for Science.

Education Programme	Related Early Learning Goals	What this looks like in Class R	KS1 Subject Content / National Curriculum Aims
<p>Understanding the World</p> <p>Maths</p> <p>Communication and Language</p>	<p>The World</p> <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. <p>Maths Education Programme states:</p> <ul style="list-style-type: none"> ▪ In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It <p>Listening and Attention</p> <ul style="list-style-type: none"> ▪ Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions; ▪ Make comments about what they have heard and ask questions to clarify their understanding; <p>Speaking</p> <ul style="list-style-type: none"> ▪ Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; ▪ Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, 	<ul style="list-style-type: none"> ▪ Regular visits to the woods where children explore the natural world and begin to recognise changes in the seasons through what happens in the woods. ▪ Daily outdoor Learning Through Play where the weather is always discussed, what we can see happening around us linked to seasons as well. ▪ Range of non-fiction books linked to Earth, fossils, geographical features, plants, animals, human body ▪ First-hand experience of following the lifecycle of a tadpole to a frog with tadpoles in a tank in the classroom which includes learning how to take care of them. This includes some taught content through adult input about lifecycles. ▪ First-hand experience of following the lifecycle of a butterfly from caterpillar to butterfly including releasing them into the wild and taking care of them. ▪ Plant bulbs in Autumn and watch them grow in Spring, discussing the different parts of a plant. ▪ Plant seeds for sunflowers and broad beans to watch how they develop and learn the different parts of a plant. ▪ Access to a range of bug boxes, magnifying glasses, pooters, ID guides, mini beast guides to discover and identify insects and other mini beasts in the setting as well as in the woods. ▪ Access to a range of resources outside in the water resources / sand / mud kitchen to exploring measuring and floating and sinking. ▪ Access to large loose parts to explore different aspects of forces and materials should the children's interests lead this way. ▪ A range of materials throughout the setting for the children to explore their texture and properties where a child's interest leads this way. ▪ Through Scarf, our PSHE resource and more specifically the SRE unit, children are taught about the different reproductive parts of the human body and the lifecycle of humans. ▪ Children are encouraged to ask questions about anything that interests them and with the support / scaffolding and challenge of an adult, these are answered using iPads with Google as a research tool or visits to the library to find relevant books to follow a child's line of enquiry. 	<p>Working Scientifically</p> <p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes, and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ asking simple questions and recognising that they can be answered in different ways ▪ observing closely, using simple equipment ▪ performing simple tests ▪ identifying and classifying ▪ using their observations and ideas to suggest answers to questions ▪ gathering and recording data to help in answering questions. <p>Plants</p> <ul style="list-style-type: none"> ▪ 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>Animals, including humans</p> <ul style="list-style-type: none"> ▪ identify and name a variety of common animals including fish, amphibians, reptiles, birds, and mammals ▪ identify and name a variety of common animals that are carnivores, herbivores, and omnivores ▪ describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds, and mammals, including pets) ▪ identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. <p>Everyday Materials</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>Seasonal Changes</p> <ul style="list-style-type: none"> ▪ observe changes across the four seasons

	<p>non-fiction, rhymes and poems when appropriate;</p> <ul style="list-style-type: none">▪ Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.		<ul style="list-style-type: none">▪ observe and describe weather associated with the seasons and how day length varies.
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