

### **Understanding the World - Science (Development Matters 2021)**

Understanding the world involves guiding children to make sense of their physical world and their community. The frequency and range of children's personal experiences increases their knowledge and sense of the world around them – from visiting parks, libraries and museums to meeting important members of society such as police officers, nurses and firefighters. In addition, listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world. As well as building important knowledge, this extends their familiarity with words that support understanding across domains. Enriching and widening children's vocabulary will support later reading comprehension.

#### **3 – 4 Years Old**

Explore how things work.	Provide mechanical equipment for children to play with and investigate. Suggestions: wind-up toys, pulleys, sets of cogs with pegs and boards.
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.	Show and explain the concepts of growth, change and decay with natural materials. Suggestions: • 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 for animals and take part in first-hand scientific explorations of an animal life cycles, such as caterpillars or chick eggs. 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.
Explore and talk about different forces they can feel.	Draw children's attention to forces. Suggestions: • 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.
Talk about the differences between materials and changes they notice.	Provide children with opportunities to change materials from one state to another. Suggestions: • 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.

#### **Children in Reception**

Explore the natural world around them.	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 and hear the natural world around them during hands-on experiences. 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.
Describe what they see, hear and feel whilst outside.	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.
Understand the effect of changing seasons on the natural world around them.	Guide children's understanding by draw children's attention to the weather and seasonal features. Provide opportunities for children to note and record the weather. Select texts to share with the children about the changing seasons. Throughout the year, take children outside to observe the natural world and encourage children to observe how animals behave differently as the seasons change. Look for children incorporating their understanding of the seasons and weather in their play.

#### **ELG: The Natural World**

Children at the expected level of development will: - 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.