

Scientific skills in EYFS

In Nursery and Reception Science is not taught as a discrete subject and skills can be found in the Understanding of the World (The Natural World) area of learning in the Early Years Statutory Framework 2021 and the Development Matters document 2021.

In Nursery, children will be given opportunities to explore how things work by providing mechanical equipment for children to play with and investigate such as wind-up toys, pulleys, sets of cogs with pegs and boards. Through our outside garden area, forest school and other planned opportunities, children in Nursery will plant seeds and care for growing plant, begin to understand key features of a lifecycle of a plant and the need to respect and care for the natural environment. Nursery children will explore and talk about different forces they can feel, and adults will draw children's attention to forces and plan for and model appropriate language. For example talking about the force of water during water play, or describing a magnet attracting or repelling objects. Staff will plan for and introduce new vocabulary related to the differences between materials and the changes they notice. Provision will be made for children to experience change of material from one state to another. For example through cooking, observing the changes by heating and cooling, through melting ice cubes in the sun. Children will explore the concept of floating and sinking, light and shadow through planned play opportunities

In Reception will be given opportunities through planned lessons, and experiences in our outdoor garden area and forest school, to explore the natural world around them. Provision will be made for children to have frequent opportunities for outdoor play and exploration in our outside learning environment, outdoor garden and forest school areas. Staff will 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. Our outstanding outdoor provision creates opportunities to discuss how we care for the natural world around us. Staff will offer opportunities to sing songs and join in with **rhymes and poems** about the natural world in our **daily song and rhyme sessions**. After **close observation**, for example of caterpillars in the classroom or Autumn leaves, **children will draw pictures of the natural world**, including animals and plants. Children will be able to observe and interact with natural processes through careful planning and delivery, such as **ice melting, a sound causing a vibration, an object casting a shadow, a magnet attracting an object and a boat floating on water, the force of blowing through a straw or the waterproofness of certain materials**. Reception children will be able to contrast different local environments with other environments such as an **African savannah or a UK coastal town or woodland and be taught appropriate vocabulary relating to these contrasting environments**. Opportunities for this will be delivered through stories, photographs and actual exploration of a natural setting. Reception children will have an understanding of the effect of **changing seasons on the natural world around them and changes in weather**. This will be delivered through planned lessons, **seasonal walks and explorations of the school grounds**, forest school and EYFS garden, stories and information books. **New vocabulary** relating to weather and seasons will be introduced and modelled by staff. Children should be encouraged to explore the new vocabulary in play opportunities.

The ELG's relating to scientific concepts and skills are:

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.

Key topics in developing Scientific knowledge and skills are: All about Me, Autumn, space, Spring and Lifecycles, Jack and the Beanstalk, *Africa*, *Holidays*

Key Vocabulary includes: seasons, weather, Autumn, Spring, Winter, Summer, frost, ice, melt, freeze, lifecycle, caterpillar, cocoon, adult, baby, child, teenager, magnet, push, pull, force, change, grow, words to describe materials explored by children, animal, insect, plant, human, leaf, flower, stem.

- Words in blue indicate direct links with the Year 1 curriculum.
- Words in red indicate direct links with other Science and non-Science units throughout school.