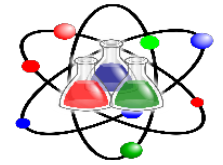


## Science (Understanding of the world)



### Intent

Children will develop their natural curiosity and understanding of the world around them by exploration and investigation. They will be provided with inspiring and open-ended activities and opportunities which will support and encourage scientific enquiry and creative thinking.

<p><b>Aspiration</b></p> <p>Parent event – space theme based on the book are we nearly there yet?</p> <p>Invite a scientist / STEM professional in to talk to the children.</p>	<p><b>Partnership with parents</b></p> <p>Parents are invited to join children in hearing the story, are we nearly there yet? and watching the video clip of the space robots, then invited to create their own with their children (Reception). Parents invited to join on an Autumn walk exploring natural environment (Nursery)</p>	<p><b>Inspiration / cultural enrichment</b></p> <p>Children will be inspired by scientific achievement and learn about significant figures such as Valentina Tereshkova – the first lady of space, Isaac Newton, Charles Darwin.</p>
<p><b>The big picture</b></p> <p>Throughout the Early Years children will be introduced to scientific concepts through play and encouraged to think scientifically and use scientific vocabulary. In preparation for the programmes of study to follow in key stage 1, Hands on experiences will allow them to explore materials and the world around them noticing similarities and differences. The children will have conversations and make observations as they move through the different seasons. The children will learn about the human body and various life cycles including those of plants and animals. The children will learn new vocabulary which they will later build upon in Year 1.</p>	<p><b>Development Matters Links</b></p> <p><u>3/4</u></p> <ul style="list-style-type: none"> <li>Use all their senses in hands-on exploration of natural materials.</li> <li>Explore collections of materials with similar and/or different properties.</li> <li>Talk about what they see, using a wide vocabulary.</li> <li>Explore how things work.</li> <li>Plant seeds and care for growing plants.</li> <li>Understand the key features of the life cycle of a plant and an animal.</li> <li>Begin to understand the need to respect and care for the natural environment and all living things.</li> <li>Explore and talk about different forces they can feel.</li> <li>Talk about the differences between materials and changes they notice.</li> </ul> <p><b>Reception / ELG</b></p> <ul style="list-style-type: none"> <li>Explore the natural world around them.</li> <li>Describe what they see, hear and feel whilst outside.</li> <li>Explore the natural world around them, making observations and drawing pictures of animals and plants.</li> <li>Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter</li> </ul>	<p><b>N C Links</b></p> <p><u>Year 1</u></p> <p><u>Plants</u> Pupils should be taught to: 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> <p><u>Animals, including humans</u> Pupils should be taught to: identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals describe 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> <p><u>Everyday materials</u> Pupils should be taught to: 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> <p><u>Seasonal changes</u> Pupils should be taught to: observe changes across the 4 seasons observe and describe weather associated with the seasons and how day length varies</p>
<p><b>Topic Specific Vocabulary</b></p> <p>Human, adult, child, infant, baby, eggs, hatchlings of body parts, the senses, grow, age, friction, ramp, force, push, pull, roll, speed, fast, slow, balance, slope, steep, flat, plastic, wood, metal, glass, liquid, texture, change, rough, smooth, transparent, clear, names of common flowers and trees and their parts, seed, decay, rot, ice, steam, melt, add, mix, freeze, float, sink, season, weather toys, habitat, wild, domestic, sort, group, classify, health, clean, lifestyle, earth, space, waterproof, predict, measure</p>	<p><b>Knowledge / skills</b></p> <p>To understand the key features of the life cycle of a human, plant and animal. To use all of their senses to investigate materials, natural and manmade and their properties. To explore forces through investigation using scientific language, including suggesting changes and making inferences To know the names of some common trees and flowers and their parts. To know that seasons effect the natural world To recognise and discuss changes of state such as melting, freezing, cooking, seasonal changes. Observe the natural world and know how to care for living things Compare the habitats of insects and animals and know that animals evolved over millions of years</p>	<p><b>Endpoints</b></p> <p><b>Children will:</b> Understand and order the stages of a life cycle (butterfly, chicken, human) Begin to group animals and justify classification Understand the importance of looking after living things in our immediate environment Observe the world and describe what they see, write and draw findings Understand how seasons effect the natural world Recognise and describe changes of state Investigate how things work and make predictions (suggest what might happen if ...) Compare habitats of different living things</p>
<p><b>Indoor Environment / Continuous Provision</b></p> <p>Children will have lots of opportunity to explore, investigate and observe the world around them to encourage scientific enquiry and discovery. It will be a part of everything they do. They will take part in physical exploration both adult and child led, open ended and using a variety of materials. They will experience water, sand and malleable materials and be encouraged to observe, experiment, predict and test in all areas of the indoor environment.</p>		<p><b>Outdoor Environment / Continuous Provision</b></p> <p>Children will be encouraged to notice and observe the natural environment, be able to explore freely and investigate a range of natural materials. They will observe and help take care of the plants and wildlife, notice, experience and react to weather. Build ramps, transport materials, measure and construct on a bigger scale.</p>