

In planning and guiding what children learn, practitioners must reflect on the different rates at which children are developing and adjust their practice appropriately. The three Characteristics of Effective Teaching and Learning are: **playing and exploring** - children investigate and experience things, and 'have a go'; **active learning** - children concentrate and keep on trying if they encounter difficulties, and enjoy achievements; **creating and thinking critically** - children have and develop their own ideas, make links between ideas, and develop strategies for doing things. In addition, the prime areas of learning (**PSE, CL, PD**) underpin and are an integral part of children's learning in all areas.

**Nursery – Understanding the World – The World - Science Skills**

Living things and their habitats	Plants	Animals, including humans	Materials
<ul style="list-style-type: none"> <li>• Explore different habitats outdoors, e.g. scent, colour &amp; shape of flowers attracting bees</li> <li>• Observe growth &amp; decay over time</li> <li>• Begin to understand the need to respect &amp; care for the natural environment &amp; all living things</li> <li>• Talk about what they see, using a wide vocabulary</li> <li>• Understand the key features of the life cycle of a butterfly</li> </ul>	<ul style="list-style-type: none"> <li>• Most plants start growing from a seed or bulb</li> <li>• All plants need water &amp; light to grow &amp; survive</li> <li>• Observe plants closely through a variety of means e.g. magnifiers &amp; photographs</li> <li>• Extend vocabulary: leaves, petals, roots, bulb, trunk, branches, stem, garden plants, wild plants, seeds</li> <li>• Use all the senses in hands-on exploration of plants</li> <li>• Understand the key features of the life cycle of a plant</li> </ul>	<ul style="list-style-type: none"> <li>• Observe animals closely through a variety of means e.g. magnifiers &amp; photographs</li> <li>• Look at key stages of development from birth to adult</li> <li>• Name &amp; identify body parts</li> <li>• Observe &amp; describe in words or actions the effects of physical activity on body</li> <li>• Understand the key features of the life cycle of an animal</li> </ul>	<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 e.g. pulleys</li> <li>• Explore &amp; talk about different forces they can feel e.g. stretch, snap, rigid, magnetic repulsion, water pushing up when pushing a boat under it</li> <li>• Talk about the differences between materials and changes they notice e.g. cooking, melting, shadows, floating &amp; sinking</li> <li>• Characteristics of liquids &amp; solids e.g. cooking eggs, melting chocolate</li> </ul>

**Nursery - Understanding the World – The World – Science Knowledge**

Living things and their habitats	Plants	Animals, including humans	Materials
<ul style="list-style-type: none"> <li>• Know about the different seasons &amp; begin to develop their awareness of the effect they have on plants, trees &amp; creatures.</li> <li>• Know where different insects live &amp; why</li> <li>• Know the names of some different flora &amp; fauna</li> <li>• Talk about the life-cycle of a butterfly</li> </ul>	<ul style="list-style-type: none"> <li>• Know some ways to care for plants</li> <li>• Talk about the life-cycle of a plant</li> <li>• Know the names of the basic parts of a plant &amp; tree</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to use a magnifying glass</li> <li>• Know the names of animal babies</li> <li>• Know how humans develop from babies</li> <li>• Know the names of different body parts &amp; what they do</li> <li>• Know how to describe key features of animals &amp; insects</li> <li>• Know that sleep, food, hygiene are important for our health</li> <li>• Know the effects of exercise on the body e.g. heart beats faster, get hotter</li> </ul>	<ul style="list-style-type: none"> <li>• Know the effects of heating &amp; cooling on ingredients e.g. chocolate, ice</li> <li>• Know the different properties of material e.g. wood, plastic, metal</li> <li>• Know which objects will or will not create shadows &amp; why</li> <li>• Know how things work e.g. pull a puppet string to lift an arm</li> <li>• Know how different materials can be manipulated in different ways</li> <li>• Know why some objects float &amp; sink</li> </ul>

**Reception – Understanding the World – The World - Science Skills**

Living things and their habitats	Plants	Animals, including humans	Materials
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<ul style="list-style-type: none"> <li>• Describe what they see, hear &amp; feel whilst outside</li> <li>• Observational drawings of the natural world</li> <li>• Observe how flora &amp; fauna behave differently as the seasons change</li> <li>• Examine change over time</li> <li>• Express opinions on natural &amp; built environments &amp; opportunities to hear different points of view on the quality of the environment. Use words such as busy, quiet, pollution.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe what they see, hear &amp; feel whilst outside</li> <li>• Draw pictures of plants</li> <li>• Understand the effect of changing seasons on the natural world around them</li> </ul>	<ul style="list-style-type: none"> <li>• Shows some understanding that good practices with regard to exercise, eating, drinking water, sleeping &amp; hygiene can contribute to good health</li> <li>• Describe what they see, hear &amp; feel</li> <li>• Identify different parts of their body &amp; animals</li> <li>• Be able to show care and concern for living things</li> <li>• Know the effects exercise has on their bodies</li> <li>• Have some understanding of growth and change</li> <li>• Talk about things they have observed including animals</li> <li>• Observational drawings of animals</li> </ul>	<ul style="list-style-type: none"> <li>• Observe &amp; 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 &amp; a boat floating on water</li> <li>• Use vocabulary to name specific features of the natural world, both natural &amp; man-made</li> <li>• Notice &amp; discuss some patterns around them e.g. the effect of changing seasons</li> </ul>
<b>Reception - Understanding the World – The World – Science Knowledge</b>			
<b>Living things and their habitats</b>	<b>Plants</b>	<b>Animals, including humans</b>	<b>Materials</b>
<ul style="list-style-type: none"> <li>• Discuss how to care for the living things &amp; their habitats e.g. not pick flowers/ disturb homes.</li> <li>• Know and use correct terms e.g. chrysalis, pupa when observing the life cycle of butterfly/ other lifecycles.</li> <li>• Know the names of seasons and some of the changes that occur.</li> </ul>	<ul style="list-style-type: none"> <li>• Know what a plant needs to help it to grow- water, light and warmth.</li> <li>• Know how a plant changes- A seed produces roots to allow water to get into the plant and shoots to produce leaves to collect the sunlight.</li> <li>• Name and describe some plants</li> <li>• Know and utilise vocabulary: blossom, buds, bulb, evergreen, deciduous</li> <li>• Know some of the ways trees/ plants change with the seasons.</li> </ul>	<ul style="list-style-type: none"> <li>• Know some ways to exercise.</li> <li>• Know why it is important to sleep.</li> <li>• Know how to make healthy eating habits/ the importance of a balanced diet e.g. not too much sugar and the importance of eating a variety of food.</li> <li>• Know the names of both human and some animal body parts.</li> </ul>	<ul style="list-style-type: none"> <li>• Know some man made and natural materials.</li> <li>• Know why some processes occur e.g. ice melting.</li> <li>• Know vocabulary to describe various textures.</li> </ul>
<b>Key Vocabulary</b>			
<p>Science, experiment, test, fair, why, senses, world, plants – leaf, stem, root, shoots, flower, bulb, buds, blossom, deciduous, evergreen, animals, humans, materials - waterproof, natural, change, growth, decay, environment, busy, quiet, pollution, heavy, light, float, sink, stretch, snap, magnetic, baby, toddler, child, teenager, adult, egg, caterpillar, chrysalis, pupa, bark, stick, branch, seasons, melt, liquid, solid, texture vocab; hard, soft, rough, smooth, bumpy, baby animal names; kitten, puppy, foal, calf etc, healthy, exercise, animal body parts; snout, whiskers, tail, feathers, beak, prickles, horns, hooves.</p>			

### Statutory Educational Programme for Understanding the World: EYFS

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

**\*Please also refer to the Statutory Educational Programmes for Personal Social Emotional Development, Physical Development and Communication and Language\***