

## Progression of Knowledge for Science at Meadowhead

This is what we as teachers at Meadowhead expect children to learn in each year group- we continue to build on prior knowledge

**National Curriculum statements in red are from other linked topics.**

### Plants

<b>Birth to three</b>	<ul style="list-style-type: none"> <li>• Explore natural materials, indoors and outside.</li> </ul>
<b>Nursery</b>	<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>• 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> </ul>
<b>Reception</b>	<ul style="list-style-type: none"> <li>• Draw information from a simple map. (Reception – Living things and their habitats)</li> <li>• Explore the natural world around them. (Reception – Living things and their habitats)</li> <li>• Describe what they see, hear and feel whilst outside. (Reception – Living things and their habitats)</li> <li>• Recognise some environments that are different to the one in which they live. (Reception – Living things and their habitats)</li> <li>• Understand the effect of changing seasons on the natural world around them. (Reception – Seasonal changes)</li> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees.</li> <li>• Identify and describe the basic structure of a variety of common flowering plants, including trees.</li> </ul>
<b>Year 2</b>	<ul style="list-style-type: none"> <li>• Observe and describe how seeds and bulbs grow into mature plants.</li> <li>• Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.</li> <li>• Identify and name a variety of plants and animals in their habitats, including microhabitats. (Y2 - Living things and their habitats)</li> </ul>
<b>Year 3</b>	<ul style="list-style-type: none"> <li>• Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.</li> <li>• Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.</li> <li>• Investigate the way in which water is transported within plants.</li> <li>• Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.</li> </ul>

## Living things and their habitats

<b>Birth to three</b>	<ul style="list-style-type: none"> <li>• Explore natural materials, indoors and outside.</li> </ul>
<b>Nursery</b>	<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>• Begin to understand the need to respect and care for the natural environment and all living things.</li> </ul>
<b>Reception</b>	<ul style="list-style-type: none"> <li>• Draw information from a simple map.</li> <li>• Explore the natural world around them.</li> <li>• Describe what they see, hear and feel whilst outside.</li> <li>• Recognise some environments that are different to the one in which they live.</li> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees. (Y1 - Plants)</li> <li>• Identify and describe the basic structure of a variety of common flowering plants, including trees. (Y1 - Plants)</li> <li>• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals. (Y1 - Animals including humans)</li> <li>• Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals including humans)</li> <li>• Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets). (Y1 – Animals, including humans)</li> <li>• Observe changes across the four seasons. (Y1 - Seasonal change)</li> </ul>
<b>Year 2</b>	<ul style="list-style-type: none"> <li>• Explore and compare the differences between things that are living, dead, and things that have never been alive.</li> <li>• Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.</li> <li>• Identify and name a variety of plants and animals in their habitats, including microhabitats.</li> <li>• Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.</li> <li>• Notice that animals, including humans, have offspring which grow into adults. (Y2 - Animals including humans)</li> </ul>
<b>Year 3</b>	<ul style="list-style-type: none"> <li>• Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. (Y3 - Plants)</li> </ul>

## Animals, including humans

<b>Birth to three</b>	<ul style="list-style-type: none"> <li>• Explore natural materials, indoors and outside.</li> <li>• Make connections between the features of their family and other families.</li> <li>• Notice differences between people.</li> </ul>
<b>Nursery</b>	<ul style="list-style-type: none"> <li>• Use all their senses in hands-on exploration of natural materials.</li> <li>• Begin to make sense of their own life-story and family's history.</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> </ul>
<b>Reception</b>	<ul style="list-style-type: none"> <li>• Talk about members of their immediate family and community.</li> <li>• Name and describe people who are familiar to them.</li> <li>• Recognise some environments that are different to the one in which they live.</li> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.</li> <li>• Identify and name a variety of common animals that are carnivores, herbivores and omnivores.</li> <li>• Describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets).</li> <li>• Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense.</li> </ul>
<b>Year 2</b>	<ul style="list-style-type: none"> <li>• Notice that animals, including humans, have offspring which grow into adults.</li> <li>• Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).</li> <li>• Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.</li> <li>• Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. (Y2 - Living things and their habitats)</li> </ul>
<b>Year 3</b>	<ul style="list-style-type: none"> <li>• Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.</li> <li>• Identify that humans and some other animals have skeletons and muscles for support, protection and movement.</li> </ul>

## Seasonal changes

<b>Birth to three</b>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Nursery</b>	<ul style="list-style-type: none"> <li>• Understand the key features of the life cycle of a plant and an animal. (Nursery – Plants &amp; Animals, excluding humans)</li> </ul>
<b>Reception</b>	<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>• Understand the effect of changing seasons on the natural world around them.</li> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• Observe changes across the four seasons.</li> <li>• Observe and describe weather associated with the seasons and how day length varies.</li> </ul>

## Materials

<b>Birth to three</b>	<ul style="list-style-type: none"> <li>• Explore materials with different properties.</li> <li>• Explore natural materials, indoors and outside.</li> </ul>
<b>Nursery</b>	<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 the differences between materials and changes they notice.</li> </ul>
<b>Reception</b>	<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> </ul>
<b>Year 1</b>	<ul style="list-style-type: none"> <li>• Distinguish between an object and the material from which it is made.</li> <li>• Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.</li> <li>• Describe the simple physical properties of a variety of everyday materials.</li> <li>• Compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>
<b>Year 2</b>	<ul style="list-style-type: none"> <li>• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.</li> <li>• Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.</li> </ul>
<b>Year 3</b>	<ul style="list-style-type: none"> <li>• Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. (Y3 - Rocks)</li> <li>• Describe in simple terms how fossils are formed when things that have lived are trapped within rock. (Y3 - Rocks)</li> <li>• Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials. (Y3 - Forces and magnets)</li> </ul>