

## Subject Curriculum Intent

<b>Subject:</b>	Science
<b>Subject Lead:</b>	Hannah Donaldson
<b>Curriculum Purpose</b>	The science curriculum aims to <b>help children develop basic scientific ideas and understanding about the biological and physical aspects of the world</b> , and the processes through which they develop this knowledge and understanding
<b>Curriculum Aims</b>	<p>At Westende Junior School, we recognise the importance of science in every aspect of daily life. As one of the core subjects taught in Primary Schools, we give the teaching and learning of science the prominence it requires.</p> <p>The Scientific area of learning is concerned with increasing pupils' knowledge and understanding of our world, and with developing skills associated with science as a process of enquiry. It will develop the natural curiosity of the child, encourage respect for living organisms as well as the physical environment, and provide opportunities for critical evaluation of evidence.</p> <p>In conjunction with the aims of the National Curriculum, our science teaching offers opportunities for children to:</p> <ul style="list-style-type: none"> <li>• develop scientific knowledge and conceptual understanding</li> <li>• develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them;</li> <li>• be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.</li> <li>• develop the essential scientific enquiry skills to deepen their scientific knowledge.</li> <li>• Use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including I.C.T., diagrams, graphs and charts.</li> <li>• Develop a respect for the materials and equipment they handle with regard to their own, and other children's safety.</li> <li>• Develop an enthusiasm and enjoyment of scientific learning and discovery.</li> </ul> <p>The National Curriculum will provide a structure and skill development for the science curriculum being taught throughout the school, which is now linked, where possible, to the year group topics to provide a more creative curriculum, which reflects a balanced programme of study.</p> <p>Here at Westende Junior school, children have weekly lessons in science, using various methods of study and resources. Additional opportunities are provided in science, such as Science weeks/days in school and educational visits linked to the science curriculum, such as visits to 3M and Marwell Zoo</p>

	<p>We endeavour to ensure that the Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences.</p>	
<p><b>Curriculum Overview</b></p>	<p>In Year 3, the children will learn about:</p> <ul style="list-style-type: none"> <li>• Rocks (fossils and soils)</li> <li>• Light (reflection and shadows)</li> <li>• Magnets &amp; Forces (magnetic materials, attracting and repelling)</li> <li>• Life Cycles (plants)</li> <li>• Animals including humans (skeletons, muscles and nutrition)</li> <li>• Habitats (homes and food chains)</li> </ul> <p>In Year 4, the children will learn about:</p> <ul style="list-style-type: none"> <li>• Habitats (classification keys)</li> <li>• Sound (vibration, pitch and volume)</li> <li>• Electricity (simple circuits, insulators and conductors)</li> <li>• Animals including humans (digestion, teeth and food chains)</li> <li>• States of matter (changes of state, evaporation and condensation)</li> </ul> <p>In Year 5, the children will learn about:</p> <ul style="list-style-type: none"> <li>• Earth and Space (Earth, Sun, Moon and the Solar System)</li> <li>• Forces (gravity, air resistance, water resistance and friction)</li> <li>• Materials (dissolving, separating materials, reversible and irreversible changes)</li> <li>• Living things and their habitats (life cycles and reproduction in humans and plants)</li> <li>• Animals including humans (human development from birth to old age)</li> </ul> <p>In Year 6, the children will learn about:</p> <ul style="list-style-type: none"> <li>• Electricity (voltage and power in circuits, circuit components, symbols and diagrams)</li> <li>• Light (how it travels, how we see, shadows)</li> <li>• Evolution and inheritance (how living things have changed over time, fossils, dinosaurs, adaptation to environment)</li> <li>• Living things and their habitat (classification, characteristics of plant and animal groups)</li> <li>• Animals including humans (circulatory system, diet and exercise, healthy living)</li> </ul>	
<p><b>Link to Key Competencies</b></p>	<p><b>Character</b></p>	<p>Science allows pupils the chance to develop their initiative by creating their own questions, lead or work in a group to plan and organise investigations and communicate their results through presentations or writing. It also requires resilience as evaluating is a key working scientifically process. Science also covers many moral issues e.g. genetically modified crops and global warming. Children are informed about the world and so able to help with social change issues. Working scientifically enables our children to become critical thinkers</p>

	<p><b>Communication</b></p>	<p>During each lesson, topic specific vocabulary mats are used to assist the children in developing the use of the correct scientific vocabulary when listening, discussing or writing about science. Topic books are available in the classroom so the children can read around the subject. When studying each topic, each year group completes a reading comprehension on their science topic, which frequently also requires the reading of data, linking maths, literacy and science. Throughout each lesson, regular opportunities are given to discuss ideas, make and learn from mistakes, work collaboratively, develop oracy skills and a growth mind-set.</p>
	<p><b>Community</b></p>	<p>Within the classroom, a community feel is achieved as science is taught in mixed-ability class groups, where the focus is on all pupils working together on the same lesson content at the same time. Where appropriate, scaffolding is used in order to support and challenge pupils and ensure all key concepts are fully understood. Warmups are used to recall prior knowledge from previous years or earlier in the unit and to engage in rich discussion. Using discussion and questioning as a key teaching tool, oracy is promoted and celebrated as well as cross curricular links being made in maths and topic where appropriate.</p> <p>A good knowledge of the science curriculum and a secure grasp how to work scientifically will support a wide variety of career paths e.g. medicine, engineering, astrophysics and space technology, marine biology and food sciences.</p>
	<p><b>Citizenship</b></p>	<p>Understanding, exploring and respecting how our planet works is essential in the 21st century. As climate change and its various effects on the Earth become more and more evident, we need to reflect on how previous human actions have caused harm. Our children need to be equipped and empowered to act as responsible global citizens.</p>