

Curriculum Statement for Science



Intent	<p>At Hayton School, we believe that the best science teaching fosters and develops pupils' curiosity in the subject whilst challenging all pupils to think and work scientifically and develop an in-depth understanding of the key knowledge, skills and subject specific vocabulary of each of the science objectives. For our pupils to achieve well in science, they need to acquire the necessary scientific knowledge and also be able to experience a range of engaging and purposeful scientific enquiry in order to help them to answer scientific questions about the world around them.</p> <p>Through high-quality science teaching, we aim to help our pupils understand how major scientific ideas have played, and continue to play a vital role in society, enabling progress and change. Moreover, we aim to prepare our pupils for life in an increasingly scientific and technological world and promote future careers in Scientific and technological fields.</p>			
	Vocabulary	Knowledge and Skills	Progression	Concepts
	<p>Our intentions for vocabulary in Science is to expose all pupils to year group specific scientific language taking from our school's knowledge and skills progression document. Teachers will share with the pupils the vocabulary that will be required to be used at the start of the lesson. Pupils will be expected to use the vocabulary both verbally and in written form to discuss, reason and communicate about Science.</p>	<p>The intentions of Science in school is to create a knowledge and skill led Science Curriculum. Throughout their time at Hayton School, pupils will be given regular opportunities to practice and apply their scientific skills. Pupils will be able to draw upon their Science knowledge, both in Science and across subjects in our curriculum (Knowledge led and engagement) through a range of practical, collaborative and written work.</p>	<p>Teachers will plan lessons that cover the knowledge and skills that are expected for each year group. Teachers planning and teaching will ensure they are covering the National Curriculum programmes of study for each year group plus the ELGs, knowing what has been taught the previous year and what are the next steps in Knowledge and skills for the next year group. Teachers will use Science progression documents to plan lessons that build upon knowledge and skills and ensure there is a deep understanding so that all children master the learning.</p>	<p>In science, pupils need their knowledge to be organised around the most important scientific concepts. An ambitious curriculum therefore needs to identify the most important concepts for pupils to learn. It must also teach pupils how these concepts are related so that, over time, the logical structure of each scientific discipline is made explicit.</p> <p>Pupils need to develop an extensive and connected knowledge base. When pupils learn new knowledge, it should become integrated with the knowledge they already have.</p>

Implementation	Inclusive Teaching and Learning	Subject Coverage/ Curriculum	Resources	SMSC
	<p>The school aims to encourage all pupils to reach their full potential through provision of varied opportunities. Pupils with special education needs will work on the same topics at different rates and levels through open ended tasks matched to individual abilities and needs. Exceptionally able pupils will be given differentiated tasks, which will enable them to tackle more complex issues and understand more difficult concepts. All children will be given equal access to Science irrespective of social class, gender, culture, race, disability, or learning difficulties. Respect and tolerance for all cultures will be promoted through the study of Science.</p>	<p>Science will be planned and taught as an independent subject through separate units of work. Where possible, teachers will link their units of work within Science to the topic they are exploring within the rest of the curriculum. Teachers plan according to a topic and are guided by the elements laid out in the Chris Quigley and National Curriculum. Teachers will also ensure that children are given the opportunity to work in a cross-curricular way when possible. Units of work are planned using the key questions of the unit of work with each lesson then exploring the question as an objective.</p>	<p>Science resources are stored in the large cupboard opposite Reception and Nursery.</p> <p>We also loan resources from William Howard where possible.</p> <p>The subject leader must be informed of any changes regarding science resources i.e missing or broken resources and/or when new or replacement resources are required.</p>	<p>Science is using evidence to make sense of the world. It has the ability to make us feel both enormously insignificant (compared to the scale of the visible universe) and enormously significant (we are genetically unique). As teachers, we encourage pupils to be both open minded (generating a hypothesis) and critical (demanding evidence) and to use their understanding of the world around them in a positive manner. In Science lessons, pupils consider the social impact (both positive and negative) of science and technology. In Science lessons, we explore and celebrate research and developments that take place in many different cultures, both past and present.</p>
	Local Context	Adaptations & Prioritisation	Evidencing Teaching and Learning	Assessment and Monitoring
<p>Pupils are taught about the local environment and are given opportunities to investigate and make links to the wider world. Children are encouraged to discover science through different external stimuli (trips, visitors and strong links to our locality).</p>	<p>Within their Science planning, teachers will consider the disrupted schooling in the past two academic years. Key knowledge that has been missed will be addressed and revisited to secure firm foundations before moving onto new learning.</p>	<p>Each Science unit will have a Knowledge Organiser that details the knowledge the children will need to know by the end of the unit of work. Teachers will use the document to map coverage and the children will use the Knowledge Organisers as a teaching resources to support their acquisition of Science knowledge. Children will record their Science work in their Science book, through a combination of written work, worksheets and photographic evidence. All children will be encouraged to represent their Scientific thinking, concepts and methods in a variety of ways.</p>	<p>Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities. Feedback is given on children's learning in line with our marking and feedback policy.</p> <p>Teachers assess Science using Chris Quigley milestones.</p>	

Early Years Curriculum Overview	Primary Curriculum Overview
<p>Early Learning Goal – Communication and language: Speaking Children recount experiences and imagine possibilities, often connecting ideas. They use a range of vocabulary in imaginative ways to add information, express ideas or to explain or justify actions or events.</p> <p>Early Learning Goal – Physical development: Health and self-care Children know about, and can make healthy choices in relation to, healthy eating and exercise.</p> <p>Early Learning Goal – Mathematics: shape, space and measures Children estimate, measure, weigh and compare and order objects and talk about properties, position and time.</p> <p>Early Learning Goal –Understanding the world: The World Children know that the environment and living things are influenced by human activity. They can describe some actions, which people in their own community do, that help and maintain the area they live in. They know the properties of some materials and can suggest some of the purposes they are used for. They are familiar with basic scientific concepts such as floating, sinking, experimentation.</p>	<p>Year 1 - Materials, humans and animals, seasonal changes, plants, animals, light and sound</p> <p>Year 2 - Materials, humans and animals, living things and their habitats, plants, electricity, the environment.</p> <p>Year 3 - Light, sound, rocks, evolution and inheritance, animals and humans, teeth and nutrition</p> <p>Year 4 - Forces and magnets, the earth and beyond, materials and their properties: solid, liquids, gases, green plants, electricity, habitats and classification.</p> <p>Year 5 - Space, living things, forces, materials, sound, Animals including Humans</p> <p>Year 6 - Light, electricity, living things, humans and animals: circulatory system, evolution and inheritance, sustainability.</p>

Impact	Pupil Voice	Knowledge	Skills	Culture Capital & British Values	Assessment and Monitoring
	At Hayton School, we recognise that our children and young can offer unique perspectives on what it is like to be part of a Science lesson; involving them in decision-making creates a meaningful change and better academic outcomes, as well as facilitating a sense of empowerment and inclusion.	Children meet and exceed national expectations for learning and develop as rounded individuals. They develop a love of knowledge and of learning, unafraid of getting things wrong. They make links between learning areas and are interesting and interested people. Children can confidently and securely talk about their learning and understanding using the scientific language to explain their ideas and can independently apply the knowledge to new learning in unfamiliar situations.	All children will have the skills and the resilience to solve problems by applying skills linked to Science to a variety of situations with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios.	Our children face unique economic, environmental, and humanitarian challenges. The problem solving required to address these challenges requires solutions that have never been thought of before. In order to tackle these problems, our teachers must challenge the traditional problem-solving methodologies in science lessons and encourage new problem-solving strategies.	Leaders monitor the effectiveness of teaching frequently through lesson observations, book scrutinies and pupil voice. The Science subject leader has a clear role and overall responsibility for the progress of all children in Science throughout school. Working with SLT, key data is analysed and regular feedback is provided and discussed at pupil progress meetings to inform on progress and future actions.
By the end of the Early Years Foundation Stage, Key Stage 1 and Key Stage 2, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant Science programme of study.					