



Hamp Nursery and Infants School

**Science
Policy
2026/27**

Introduction

At Hamp Nursery and Infants School our curriculum has been developed to meet the requirements of the National Curriculum for Key Stage 1 (2014) and the Early Years Foundation Stage Statutory Framework (2024) for Nursery and Reception. It includes not only the formal requirements of the National Curriculum but also a range of extra activities that the school organises in order to enrich and enhance the experiences and learning of our children in their local context. It also includes the "hidden curriculum" or what the children learn from the way they are treated and expected to behave.

We believe that children learn best when their learning is fun and meaningful. Our curriculum has been planned to ensure children acquire both substantive scientific knowledge and disciplinary knowledge through developing scientific enquiry skills. It is a cross-curricular approach centred around each Literacy Tree story, with a specific question heading to stimulate curiosity and interest, while ensuring that science learning is taught progressively and explicitly. It is carefully structured to ensure the progression of knowledge and skills, with opportunities planned for children to build upon prior learning and firmly embed both knowledge and scientific skills, helping our children to develop a lifelong love of learning and curiosity about the world around them.

We nurture our children on their journey and encourage them to be creative, unique, open-minded and independent individuals, respectful of themselves and of others in our school, our local community and the wider world. We take our responsibility to prepare children for life in modern Britain very seriously and ensure that the fundamental British Values are introduced, discussed and lived out through the ethos and work of our school. We are fully inclusive at Hamp Nursery and Infants School and highly value the individuality of all our pupils and staff. Our curriculum has the flexibility to ensure all our children can become successful lifelong learners able to make a positive contribution to society and future generations.

Rationale

Science makes an important contribution to many aspects of everyday life. Children are naturally curious about the world around them and, by providing opportunities to investigate, explore and ask questions, we can develop their scientific knowledge, understanding and skills.

At Hamp Nursery and Infants School our aims are:

- To build upon and develop our children's natural curiosity about the world around them.
- To provide purposeful opportunities for exploration and investigation through which children develop scientific knowledge, understanding and skills.
- To encourage children to ask questions, make observations, identify similarities and differences and talk about what they discover.
- To develop children's skills in working scientifically through practical, meaningful experiences.
- To develop and use appropriate scientific vocabulary, supporting children to communicate their ideas and findings clearly.

Curriculum Intent

It is our intention at Hamp Nursery and Infants School that children develop their scientific knowledge and skills through exploration and scientific enquiry. We aim to build upon our children's natural curiosity, encouraging them to explore, observe, investigate and ask questions about the world around them. We aim to develop children's speaking and listening skills through the use of appropriate scientific vocabulary and provide meaningful opportunities to make effective use of our indoor and outdoor environments.

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to

recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave and analyse causes.

Within our curriculum, we provide opportunities for children to revisit and embed prior learning and to build upon and deepen their scientific knowledge and skills. Learning is carefully sequenced to support progression and enables children to make connections between new learning and what they already know.

Curriculum Implementation

By the end of each key stage, pupils are expected to know, apply and understand the knowledge, skills and processes specified in the relevant programme of study. In addition, we provide experiences and specific learning opportunities that meet the needs of our pupils and make learning meaningful within the context of their lives and local environment.

Our curriculum is planned around our Literacy Tree stories, with questions used to stimulate curiosity and make meaningful links across different areas of the curriculum. Science is taught explicitly within this approach, ensuring that children develop both their scientific knowledge and their skills in working scientifically through practical exploration, observation, investigation and discussion.

Learning is carefully sequenced to build upon what children already know and can do. Children are provided with regular opportunities to revisit prior learning, use and develop scientific vocabulary, make connections and apply their knowledge and skills in different contexts. This supports children in securely embedding their learning and becoming confident, curious and increasingly independent learners.

EYFS

In order to support progression through the school, EYFS practitioners provide opportunities for children to explore a range of scientific ideas and experiences including:

- Plants and the natural environment
- Animals, including domestic and wild animals
- Ourselves and our bodies
- The four seasons and seasonal change
- Light and dark
- Forces and movement, for example pushes and pulls, floating and sinking
- Materials and their properties

In the Early Years Foundation Stage, scientific learning is primarily developed through the Understanding the World area of learning, particularly *The Natural World*. Practitioners provide children with frequent opportunities to explore the natural world around them, make observations, notice similarities, differences, patterns and change, and talk about what they experience. Learning is supported through purposeful adult interactions, planned experiences and continuous provision, while maintaining the flexibility to respond to children's interests and experiences.

Children are given opportunities to develop the foundations of working scientifically through first-hand, practical experiences. They are encouraged to explore, ask questions, observe closely, make simple predictions and talk about what they notice and discover. Children are supported to communicate and record their ideas in developmentally appropriate ways, including through talk, drawings, photographs and simple written recordings where appropriate. Practitioners introduce and model appropriate scientific vocabulary and provide real objects, practical resources and experiences to support children's understanding.

Key Stage 1

The statutory areas of science taught in Year 1 and Year 2 are:

Year 1

- Plants
- Animals, including humans
- Everyday materials
- Seasonal changes

Year 2

- Living things and their habitats
- Plants
- Animals, including humans
- Uses of everyday materials

Working scientifically is taught throughout these areas and is embedded within the teaching of science rather than taught as a separate strand. Children are provided with opportunities to ask simple questions, observe closely, perform simple tests, identify and classify, use their observations and ideas to suggest answers to questions, and gather and record data to help answer questions.

The progression of scientific knowledge and skills from EYFS through to Year 2 is set out within the school's Science Curriculum and Progression Map. This identifies the key knowledge, vocabulary and Working Scientifically skills that children will develop over time and demonstrates how learning builds upon children's previous experiences. Our further detailed curriculum mapping also identifies where science is taught through our Literacy Tree texts and wider curriculum. These meaningful contexts are used to stimulate curiosity and provide opportunities for children to apply their scientific knowledge and skills, while ensuring that the statutory science curriculum is taught explicitly and progressively.

	Reception	Year 1	Year 2
Working scientifically	• Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class. • Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	• Make observations • Explore and investigate characteristics • Describe using different senses • Uses appropriate vocabulary in group and individual discussions • Begin to answer questions • Begin to explain what they know • Complete records by filling out and drawing including charts, tables, diagrams and pictures • Uses simple equipment e.g. magnifying glasses • Perform tests • Sort in different ways • Begin to notice patterns and relationships	• Make detailed observations • Explore and investigate characteristics to compare and contrast characteristics • Describe using different senses, knowledge and own ideas in full sentences • Uses subject specific vocabulary in group • Answer a range of different types of questions including how and why • To make own choices for how to record and communicate findings • To make predictions and explore own ideas • Find things out using secondary sources Explain what they know • Gather data and keep records in a range of ways including charts, tables, diagrams and pictures some over time • To identify need for and use equipment appropriately • To perform a simple test, explaining what they have found out and how they found it out • Sort and classify given reasons for choices • Talk about pattern and relationship • Explore questions making sensible suggestions for how to find out.

Plants	- Explore the natural world around them, making observations and drawing pictures of animals and plants. - Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	- Name a variety of wild and garden plants - Name a variety of evergreen trees - Name the parts of a flower (e.g. flowers, blossom, petals, fruit, roots, bulb, seed, stem) - Describe the structure of a flower - Name the parts of a tree (e.g. roots, trunk, branches, bark) - Describe the structure of a tree	- Observe and describe how seeds and bulbs grow into mature plants - Observe and understand why plants need water, light and suitable temperature to grow and stay healthy
Animals, including humans	- Explore the natural world around them, making observations and drawing pictures of animals and plants. - Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.	- Name a variety of common animals including fish, amphibians, reptiles, birds and mammals - Name a variety of common animals that are carnivores, herbivores and omnivores - Describe and compare the external features of common animals including fish, amphibians, reptiles, birds and mammals - Name, draw and label the basic parts of a human body (e.g. head, neck, arms, legs) - Name each body part associated with each sense - Compare different textures, sounds and smells - Use observations to compare and contrast and use them to identify and group animals by what they eat	- Match offspring to animals including humans - Find out and describe the basic needs of animals including humans for survival (water, food and air) - Describe the importance of human exercise, eating the right amounts of different types of food and hygiene - Make observations of growth - Explore and compare the differences between things that are living, dead and things that have never been alive
Everyday materials	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	- Name objects and the materials they are made from - Name everyday materials - Identify everyday materials including wood, plastic, glass, metal, water and rock - Describe simple properties of everyday materials - Compare the properties of everyday materials - Group materials based on properties - Explore and experiment the suitability of materials for purpose - Perform simple tests to explore suitability	- Identify suitability of everyday materials - Compare suitability of everyday materials including wood, metal, plastic, glass, rock, brick, paper, cardboard - Find out how shapes of solid objects from made from some materials can be changed e.g. squashing, bending - Identify different uses of the same materials e.g. Coins/ cans - Discuss that the same objects can be made from different materials e.g. spoon- metal or wood - Find out about people who have developed useful materials e.g. John Dunlop, Charles Macintosh - Compare uses of everyday materials in different environments
Seasonal changes	Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	- Name the four seasons - Identify features of each season - Observe changes across the four seasons: Autumn, Winter, Spring, Summer - Name different weather types - Talk about changes in weather - Observe changes in weather across the four seasons - Record changes in weather - Record changes in seasons - Discuss day length as season change	

Living things and their habitats	• Explore the natural world around them, making observations and drawing pictures of animals and plants. • Know some similarities and differences between the natural world around them and contrasting environments, drawing on their experiences and what has been read in class.		• Name common habitats and the animals that live there (including Microhabitats) • Describe how habitats provide for basic • needs of plants and animals • Compare different habitats • Describe how animals obtain food from plants and other animals, exploring the use of a food chain • Name different sources of food
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Curriculum Impact

By implementing this science curriculum, our pupils will become confident and curious scientists. They will develop the knowledge and skills needed to explain what is happening in the world around them, make predictions and begin to understand why things happen. Children will be able to carry out simple scientific enquiries and tests, make observations and talk about what they have found out. They will develop age-appropriate scientific vocabulary that supports their understanding and enables them to communicate their ideas and findings clearly.

The impact of the science curriculum will be measured through ongoing assessment, including teachers' observations, discussions with pupils and assessment of children's work. Learning will be recorded in ways that are appropriate to the children's age and stage of development, including photographs, drawings, practical outcomes and written work. Teachers will use assessment to identify what children know and understand, address misconceptions and inform future teaching.

The science co-ordinator will monitor the implementation and impact of the curriculum through planned activities such as work scrutiny, learning walks, discussions with staff and pupil voice. This will be used to evaluate progression across the school, identify areas for development and support teachers where appropriate. Pupil voice and opportunities to revisit previous learning will also be used to establish whether key scientific knowledge, vocabulary and skills have been understood and retained over time.

Speaking and Listening

At Hamp Nursery and Infants School, we place a strong emphasis on the development of Speaking and Listening skills. This will be reflected in all areas of the curriculum, both in planning and in time allocation. As a whole staff we have worked on developing the teaching and practising of Speaking and Listening throughout the school. All lessons will, in some part, provide opportunity for speaking and listening development. At the beginning of each new topic for the half term teachers will create a medium-term plan to show the areas of speaking and listening that will be taught during that topic area. These areas will then be taught and practised throughout the half term during planned activities and lessons. Teachers will show where the planning of teaching and practising of Speaking and Listening will take place in lessons by highlighting the text in purple on their planning.

Teachers and TAs will at all times demonstrate good models of spoken English and good models of interpersonal communication through story-telling, reading aloud, class and group discussions and one to one conversation with children and with other staff. Our science curriculum supports the important skills of listening to others, sharing ideas and turn taking in conversation.

SEND

At Hamp Nursery and Infants School, we recognise that all pupils are entitled to high quality provision that enables them to achieve their potential across all subjects. We believe in positive interventions, removing barriers to learning and raising expectations and levels of achievement in order to provide a positive

educational experience for all our pupils. All pupils follow the Early Years framework and National Curriculum at a level, pace and challenge that is appropriate to their abilities.

High-quality teaching, adapted to meet individual pupils' needs, is the first step in responding to pupils who have or may have SEND. In the whole-class work and small-group work, teachers and teaching assistants will involve and support all pupils by differentiated questioning; by demonstrating skills in action and by reinforcing key points. Some children may receive pre-teaching or may work in a small group. In group time, additional needs will be addressed through appropriately supported individual or small-group learning where required and the use of support staff, to consolidate key points. Where applicable, children who have been identified as having an individual or specific need may have a Pupil Passport and provision map with identified SEND support and short-term targets.

EAL

At Hamp Nursery and Infants School, we are committed to ensuring that every child succeeds and reaches their full potential, irrespective of the barriers to learning that they may face. We are dedicated to raising the achievement and attainment of pupils with EAL, enabling them to maximise their progress and attainment within a positive, nurturing, secure and safe learning environment. Through high-quality teaching based on experiences and talk, we aim to meet the language needs of our learners. Through effective planning, organisation, teaching and assessment procedures and the use of resources and strategies, we aim to meet the needs of pupils who have English as an Additional Language (EAL). Our goal is to promote language awareness and raise pupil attainment, progress and achievement.

Gifted and Talented

Teachers identify pupils who demonstrate particular strengths within Science and provide appropriate opportunities for challenge, deeper thinking and further scientific enquiry. All children are encouraged to recognise and develop their individual strengths and are provided with opportunities to extend their learning through questioning, observing, investigating, predicting and explaining. Pupils are given opportunities to apply their scientific knowledge and skills in a range of meaningful contexts, make links between different areas of learning and develop their independence as scientists. Where appropriate, children demonstrating particular strengths are encouraged to take greater responsibility within practical investigations, explain their thinking and support scientific discussion with others.

Diversity and Equality

At Hamp Nursery and Infants School, we are committed to ensuring that all our children have equal opportunity to access all subjects at a level appropriate for their development and ability, regardless of race, gender identity, disability, religion or belief, sexual orientation, or socio-economic background. Our curriculum is designed to be flexible in order to ensure that all children make good progress and achieve success. We teach our children what it means to be part of a diverse society and the importance of inclusion and equality. This is interwoven through our curriculum and promoted across all subject areas. All staff have an inclusive attitude and uphold this in their teaching ensuring all children are valued, represented and treated fairly. At Hamp Nursery and Infants School, we support and celebrate diversity. The SENDCO and EAL coordinator and Gifted and Talented coordinator provide additional support both within and out of the classroom setting.

Online Safety

Technology and online resources can provide valuable opportunities for children to explore, investigate and develop their understanding of the world around them. Within Science, children may use age-appropriate digital resources to find information, observe scientific processes, record findings and support their learning. At Hamp Nursery and Infants School, the safe and responsible use of technology is reinforced across the curriculum. Children are taught to use digital resources safely and appropriately, to understand that information found online

may not always be accurate or reliable, and to seek support from a trusted adult when using online information. Where technology is used within Science, children are reminded of the importance of protecting personal information and following the school's online safety expectations.

Adaptive Teaching

The goal of adaptive teaching is to ensure that all children have equal opportunities to be successful learners; that they are all able to meet their intended outcomes, make good progress and understand their next steps. At Hamp Nursery and Infants School, we are committed to ensuring that every child succeeds, irrespective of their starting points or any barriers to learning. We value personal progress equally with academic progress and are careful to group the children in ways that promotes positivity and develops self-esteem. We are dedicated to providing high-quality teaching which is adapted appropriately to meet the needs of all learners. Teachers use their professional knowledge of their pupils to adapt teaching, resources, scaffolding, questioning, pace and levels of support to enable all children to access learning and experience success. Children may work in whole classes, small groups or even individually. They may work indoors or outdoors; some may work practically with the support of resources, others may learn best through discussion or interaction, and some learn more formally by listening and following instructions.

Class teachers have the flexibility and freedom to use their expert knowledge of the children they teach to plan in the way that best suits the needs of their individual learners. This may look different in different classrooms; pace, depth of learning and expected outcomes will all be planned appropriately to meet the children's needs, ensuring they are all able to become confident successful learners. Adult support will be directed by the class teacher depending on the specific needs of the class and individuals. In all classes, teachers will plan focused and engaging lessons that encourage children to learn. Lessons should be prepared in advance with a clear learning objective, which must be communicated to the children in all cases. Administrative tasks must be kept to a minimum and children should be involved in all parts of the lesson.

Outdoor Learning

At Hamp Nursery and Infants School, we are committed to ensuring we utilise our large and small spaces both indoors and outside. We have a large field which includes several species of mature trees, our forest school and wild area. These are continually being evolved and developed. These areas support learning in all areas of the curriculum. Outdoor learning provides valuable opportunities to support children's learning, development and wellbeing. At Hamp Nursery and Infants School, outdoor learning is an integral part of our children's learning and as such has been interwoven into all areas of our curriculum.

Written by: Mrs Michelle Foord- Autumn Term 2024

Updated by: Mrs Jessica Clements - September 2026

Approved by: Head - Autumn term 2026

Approved by Chair of Governors

Review Date: Autumn 2027 or in line with any statutory changes.