



St Monica's Science Curriculum

Science - Our intent and vision for Science here at St Monica's

At St Monica's Primary School, we are **SCIENTISTS!**



Here in St Monica's, we want our children to love and respect science. We want them to have no limits to what their ambitions are and grow up wanting to be doctors, marine biologists, vets, astronomers and astronauts. Above all, we want our children to continually question the world around them and be able to figure out how to find the answers to their questions.

Our aim is that, through the teaching of Science in St Monica's, we stimulate all children's interest and understanding about the world around them. Through teaching the specific disciplines of biology, chemistry and physics, we develop children's scientific knowledge and conceptual understanding. Children are taught in a relevant context and provided with practical, creative and challenging lessons. Children are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

We teach children scientific concepts and methods to develop their curiosity, critical thinking, and understanding of the world around them. By learning about key male and female scientists from different cultures, time periods, and backgrounds—such as Isaac Newton and Mary Anning—children gain an appreciation of how science has shaped, and continues to shape, our daily lives and society. This inclusive approach helps pupils value the diverse contributions to science in modern multicultural Britain and inspires them to see themselves as future scientists.

We believe that by promoting a vibrant curriculum that teaches the importance and wonder of Science through fascinating lessons and opportunities, such as practical investigations, workshops and trips, our pupils will become enthused learners in Science.

Working scientifically is at the heart of science teaching in St. Monica's. Through a range of practical approaches, children are given opportunities to develop their disciplinary knowledge to think critically, ask questions, and carry out investigations. Pupils are taught to observe closely, perform simple tests, identify and classify, use appropriate equipment, and gather and record data to support their findings. As they progress, they learn to make predictions, draw conclusions, and evaluate results, helping them to understand the nature, processes, and methods of science. These essential skills enable children to become confident, curious learners who can apply scientific thinking to the world around them.

Science - How we Teach and Implement Science at St Monica's

- At St Monica's, Science is taught in every year group, one unit per term from Y1 to Y6.
- A Science lesson typically takes an afternoon per week of learning in St Monica's.
- Topics are blocked to allow children to focus on developing their knowledge and skills, studying each topic in depth.
- We have developed a progression of skills with each year group, which enables pupils to build on and develop their skills each year.
- For Science in EYFS, please see the next section.
- In KS1, Science begins by exploring seasonal changes and daily weather. Children learn about the four seasons and the typical weather conditions in Autumn, Winter, Spring, and Summer. They will investigate why day turns into night and discover what makes a tree, including identifying the different types of trees found around school and understanding the differences between them.
- In KS1, Science covers key areas including plants, animals (including humans), everyday materials, and seasonal changes. Emphasis is placed on developing scientific enquiry skills such as observing, classifying, and performing simple tests. This lays the groundwork for a lifelong interest in science and prepares pupils for more complex concepts in later key stages.
- In KS2, pupils build on their KS1 foundation through more structured scientific enquiry and increasingly complex concepts. They develop greater independence in planning investigations, recording results, and drawing conclusions. The curriculum broadens to include topics such as forces, electricity, light and sound, and more detailed studies of living things. There is a stronger focus on scientific vocabulary, data handling, and critical thinking, ensuring a clear progression towards secondary science.
- In order to support children in their ability to 'know more and remember more' there are regular opportunities to review the learning taken place in previous topics as well as previous lessons: this is a core part of our CUSP curriculum.
- At the start of each topic, children will review previous learning and will have the opportunity to share what they already know about a current topic.
- Children are given a knowledge organiser at the start of each topic which details some key information, dates and vocabulary. This is not used as part of an assessment, but to support children with their acquisition of knowledge and is used as a reference document throughout the unit.
- Effective CPD and standardisation opportunities are available to staff to ensure high levels of confidence and knowledge are maintained.
- Medium-term planning is of the highest standard across all units, underpinned by the CUSP Science framework. Planning ensures clear coverage and progression of key scientific concepts, including substantive knowledge (e.g. biology, chemistry, physics) and disciplinary knowledge (e.g. working scientifically). Each unit is coherently sequenced to build on prior learning, with a strong emphasis on retrieval, precise vocabulary, and scientific enquiry.
- Children are given opportunities, develop and apply skills in observation, pattern



seeking, comparative and fair testing, classification, and the use of secondary sources. High-quality planning supports teachers in delivering a rigorous and knowledge-rich science curriculum.

EYFS - Our Early Years History Curriculum at St Monica's

- In the Early Years Foundation Stage (EYFS), children's understanding of science is developed through the 'Understanding the World' area of learning. This encourages children to explore, observe and ask questions about the natural world around them. Through hands-on investigations and everyday experiences, they begin to notice patterns, talk about changes, and develop curiosity about how and why things happen, forming the foundations for scientific thinking.
- Children are supported to explore and talk about the world around them using scientific vocabulary introduced through the 'Understanding the World' area of learning. They are encouraged to notice change, patterns, and differences by engaging in activities such as planting and growing, observing seasonal changes, and exploring materials and living things. These experiences help develop their understanding of concepts like growth, change, floating and sinking, melting, freezing, and life cycles.
- Teachers model and reinforce key scientific language during play, investigation, and daily routines, using words such as 'observe', 'predict', 'change', 'grow', 'melt', 'hard', 'soft', 'hot', 'cold', 'float', 'sink', and 'materials'. Through open-ended questions like 'What do you notice?', 'What might happen next?', and 'Why do you think that happened?', children are encouraged to think scientifically, describe what they see, and make sense of the natural and physical world.
- Our subject lead works throughout the year to ensure clear links are made between EYFS and KS1 so learning and language is cohesive.

Science - How we measure Impact here at St Monica's

The impact of this curriculum design will lead to outstanding progress over time across key stages relative to a child's individual starting point and their progression of skills. Children will therefore be expected to leave St Monica's reaching at least age related expectations for Science.

Our Science curriculum will also lead pupils to be enthusiastic learners in Science, evidenced in a range of ways, including pupil voice and their ability to describe their learning and completed work. We want them to "Know more; remember more".

CUSP assessments at the end of each unit in Science help teachers assess a pupil's science knowledge retention and make judgements on a pupil's progress from the start of the year. Lessons also encourage a pupil to 'connect' learning with prior learning in earlier lessons and year groups.



When writing reports to parents, teachers will look at all of these elements before making a judgement if a pupil has reached age related expectations.

Subject Leader Vision and Development Plan 2025/6

Key Subject Development Points from 2024/25 - to feed into the Key Subject Targets for 2025/26
<ul style="list-style-type: none"> To ensure that adaptations with Science lessons are being implemented in lessons so all learners are included
<ul style="list-style-type: none"> To ensure pupils 'know more and remember more' and can articulate their learning, through talking about their learning and the work they have produced
<ul style="list-style-type: none"> To ensure consistency of implementation across the school

Key Subject Targets for 2025/26 - to be monitored throughout the year in the Termly Review	
Key Target and KPI's	Termly Reviews 2025/26
<p>Key Target 1: To implement the CUSP curriculum in St Monica's from Y1 to Y6; with monitoring and auditing to ensure a successful strategy</p> <p>KPI's</p> <ol style="list-style-type: none"> Engage with CUSP CPD offer and join the national CPD clusters Monitor Science work alongside the co-science lead to ensure consistency of implementation across KS1 and KS2 - sharing good practice with staff meetings to ensure a consistent implementation Present to Governors and the HT a review of Science CUSP at the end of Autumn Term about the strengths and targets of CUSP, and next steps 	<p>Autumn Review Spring Review Summer Review</p>
<p>Key Target 2: To ensure all CUSP sequencing is in line with the wider curriculum and on top view, ensuring clear direction to all staff on when Science is being taught and what unit:</p> <p>KPI's</p> <ol style="list-style-type: none"> Clear Science sequencing on Top View, and in the LTP to ensure coverage Work alongside Curriculum lead to ensure blocks are correct and in line with number of weeks in each term in 2025/26 Work alongside Maths lead, to ensure any cross curricular links, e.g. tables, graphs etc... are compatible with age and stage of learning. 	<p>Autumn Review Spring Review Summer Review</p>
<p>Key Target 3: To monitor how adaptations are made within Science lessons to ensure learning is inclusive and lessons cater for all</p>	<p>Autumn Review Spring Review</p>

<p>learners:</p> <p>KPI's</p> <ol style="list-style-type: none"> 1. Assistive learning is taking place within lessons (with the understanding that the availability of assistive tech is developing within the school) 2. Within lessons, adaptive learning is evident - word banks, inclusive tasks through CUSP, scaffolding is being implemented - with workload taken into consideration 	<p>Summer Review</p>
<p>Key Target 4: To monitor how pupils can articulate their learning and retain key information, especially in comparison to the pre-CUSP curriculum</p> <p>KPI's</p> <ol style="list-style-type: none"> 1. When interviewed pupils from all sub groups (PP/SEND/gender), can articulate learning from learning, and can talk learning through using their workbooks 2. Gather feedback about CUSP and evidence led, cutting edge approach to lessons from pupils 3. Compare work and knowledge with the pre-CUSP curriculum 	<p>Autumn Review Spring Review Summer Review</p>

<p>Termly Review of Science: 2025/26 (trips, progress against targets, enrichment activities) To be updated each term</p>
<p>Autumn</p>
<p>Spring</p>
<p>Summer</p>