



# Manland Primary School-Intent, Impact and Implementation of Science



This document outlines how our school community work together, to ensure a rich and engaging Science curriculum for all learners across the school.

Intent	Implementation	Impact
To give all children a strong knowledge and understanding of the world around them whilst acquiring specific skills and knowledge to help them think scientifically.	At Manland, we make learning explicit. We outline the skills which children will develop and increase the children's awareness of these skills in their learning. We teach children why they are learning what they are and how they can use this knowledge across other subjects.	Children's knowledge is strong, and children retain knowledge in the three science strands that is pertinent to Science with a real life context. Children of all ages can articulate their science learning clearly to others.
To ensure that all national requirements are mapped out on a long term plan. (Ensuring that prior knowledge is secure for each area of science and there is clear progression which builds on prior experiences).	Clear documents are in place showing coverage of the National Curriculum expectations. Teachers refer to the long term plan outlining the knowledge and skills required for each topic, ensuring that all topics are covered, and enabling progression across all key stages within the strands of science.	There is a clear progression of knowledge and skills evident in children's work and books across the key stages. Teachers' planning across the school is supported by documents provided by the subject leader.
To support children to become engaged learners who develop a sense of excitement and curiosity about our universe, and a respect for living and non-living things.	We teach science as a discrete weekly lesson and where applicable, make cross curricular links to other subjects to apply science skills across topics. Through planning, we include problem solving opportunities that allow children to find out for themselves. Children ask their own questions and curiosity is celebrated in the classroom. Teachers plan engaging lessons and use precise questioning to test conceptual knowledge and skills.	When talking to the children at Manland, it is clear that children enjoy and are enthusiastic about science in our school and wish to pursue science beyond the primary age. Children leave Manland Primary School as confident science learners ready for the next stage in their lives.
To teach specific science skills and build up specialist vocabulary for topics taught.	Teachers model key vocabulary within lessons and explain word meanings allowing children to understand and readily apply this in their written, mathematical and verbal communication.	Science vocabulary is evident in written conclusions and verbal discussion. Books and pupil voice show children using a broad range of scientific vocabulary confidently and coherently.
To provide a science curriculum which encourages children to ask questions, helping them to become independent and confident enquiry-based learners throughout their time at school and beyond.	Teachers embed working scientifically skills in lessons. They provide as many opportunities as possible for scientific enquiry, for example, where children decide on the question, select their own resources and decide how to record their results or carry out an investigation.	Children are confident, curious learners who ask questions, explain the process they have taken and are able to reason scientifically. Lesson observations show that children are keen to learn more and play an active role in their lessons.
To embed working scientifically skills in each topic and to revisit and develop topics throughout the children's time at school.	Teachers help to embed children's science knowledge in their long term memory. They provide opportunities for pupils to recall and consolidate their previous learning, while outlining the knowledge and vocabulary all children will master, in line with the sequence of lessons.	Children have a greater understanding of the scientific approach as they progress through the school. Children demonstrate that they have acquired the skills required to learn independently and solve problems. Children can question ideas and reflect on knowledge.



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To provide a stimulating environment, where children can work in an investigative way and can communicate their findings in a variety of ways.	Working walls in our classrooms reflect topics and display vocabulary. Children are encouraged to refer to these, so they can be resourceful in supporting their own learning. Teachers plan opportunities to develop children's understanding of their surroundings by accessing outdoor learning and a variety of enriching experiences.	Children are increasingly independent in science, selecting their own tools and materials, completing pupil lead investigations and choosing their own strategies for recording.
To provide rich and engaging science lessons which provide challenge for all learners.	We plan differentiated challenges that provide for all children, including vulnerable groups and those working at greater depth. Throughout the year groups, we provide enrichment activities including trips, visits and workshops from experts in their field to enhance learning experiences.	Pupil voice shows that children can talk about science in the real world and discuss activities they have enjoyed. They are able to talk about their science learning in detail and can explain how their teachers support and challenge them in their learning.
To teach children to use equipment safely and sensibly.	Subject Leaders keep up to date with current health and safety guidance for science. Teachers identify safety considerations in planning for specific lessons and refer to relevant guidelines. They make children aware of safety issues that could arise and train them in the appropriate use of equipment.	Teachers are aware of health and safety issues that they should consider within their lessons. All children feel safe and become aware of the safe and appropriate use of equipment within their science lessons.
To monitor children's progress in science and how they apply their learning.	Teachers assess through marking and feedback, ensuring that the next lesson is progressive from the last, and that any gaps in learning are addressed in future planning. They use a range of assessment and tracking documents to assess attainment at the end of a topic, and to gauge the knowledge a child has built up and how they apply this. Tracking documents enable teachers to assess all the essential science skills and make secure judgements of attainment. The science leader then analyses this for trends or target children.	Marking and feedback from teachers has an impact on our pupil's attainment and provides next step questions to push learning on further. Children are supported to make good or better progress from their starting points, helping them to achieve age related expectations in science at the end of the cohort year. Progress in science knowledge and skills is visible across the school. The subject leader has a clear picture of children's progress across the year groups.
To support teachers and provide ongoing development of science across the school, through the school improvement plan and subject action plans.	We provide teachers with regular training and professional development to facilitate discussion about topics taught and to ensure science is well taught across the year groups.	Science is well led and taught well. Teachers are supported in their role and know who to ask if support is needed.