

MILLBROOK Science Curriculum

Schemes of Learning 2024/2025

What is covered in the Schemes of Learning?

The White Rose Science schemes of learning cover all areas of the National Curriculum in England from Years 1-6. Each objective is broken down in small steps which isolate what the children should think about. Our schemes progressively build knowledge and skills over the year and provides a narrow focus to learning. Practical ideas are provided for each step to enhance and extend the learning outcomes.

As we are larger than a one form entry school but not quite two form entry our Key Stage Two children at Millbrook will complete the National Curriculum Objectives for Years 3-6 by completing a two-year cycle. This ensures all children will be taught ALL Objectives from the National Curriculum whilst exploring 'Working Scientifically' skills using 5 types of Scientific Enquiry, no matter their journey through Key Stage Two.

What is covered in the sustainability blocks?

Our sustainability blocks are designed to foster children's understanding of current issues related to sustainability and climate change. The children will investigate different topics which are linked to the preceding blocks, providing a real-life, relevant context to their learning. These specialised blocks offer children a valuable opportunity to recognise their role in shaping a more sustainable future. They also aim to deepen children's understanding of how they can actively contribute to positive changes in both their local and wider environments.

How does the curriculum address substantive and disciplinary coverage?

The Science curriculum at Millbrook maps out the progression of both scientific knowledge and working scientifically skills (substantive and disciplinary knowledge) throughout the academic year. This strategic alignment ensures that the knowledge and skills are tailored to class, and the small-step approach guarantees sufficient coverage and time for effective teaching and consolidation of these essential skills. Each small-step is accompanied by a National Curriculum link, indicating the covered substantive knowledge and the disciplinary skill.

Are there opportunities for practical, hands-on investigations?

In each step of our curriculum, practical ideas are integrated to encourage children to consolidate and deepen their understanding of both knowledge and skills-based concepts. Moreover, each block includes an enquiry question selected from one of the 5 enquiry types, further enriching children's understanding of the scientific enquiry process.

The 5 types of Scientific Enquiry:

- 1) Observation Over Time
- 2) Pattern Seeking
- 3) Identifying, Classifying and Grouping
- 4) Comparative or Fair Testing
- 5) Research using Secondary Sources