

Science Policy

Policy Monitoring, Evaluation and Review

This policy is effective for all academies within The Mead Educational Trust, the Teaching School, the SCITT and all other activities under the control of the Trust and reporting to the Trust Board.

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Revision History:

Version	Date	Author	Summary of Changes:
1.0	Sept 2022	RR	New policy – new Science Lead

Science Policy

What is science at Willowbrook Mead Primary Academy?

At Willowbrook Mead Primary Academy, we believe in the importance of science: nurturing curiosity and creativity. Through a combination of investigative skills and practical activities, children will develop an understanding of the world in which we live, the journey of science and it's important for the future. We believe that building children's science capital is vital to help broaden both experiences and opportunities for our pupils.

Key principals of science teaching and learning:

- Children are able **talk** about their learning using scientific vocabulary
- Children are asking the questions and have a desire to investigate and **explore**
- Children use a **range** of equipment, including ICT
- Children are **engaged** and **excited** to explore – they **enjoy** science
- There are **WOW moments** that surprise the children
- There is skill **progression** across the school
- Learning is **purposeful** with links to **everyday life** and the future
- Use is made of the **outdoors** and completing fieldwork
- There are **cross-curricular** links and children make these links with learning placed in context
- Learning is recorded in a **variety** of ways

Planning of Science

Science in the National Curriculum

As per the 2014 National Curriculum, all children are expected to know, apply and understand the matters, skills and processes specified as 'statutory requirements' within their year group. The non-statutory guidance is to be taught at the discretion of each teacher, dependent on how it fits within each cross-curricular topic. Where necessary, units may be taught discretely to ensure in-depth coverage.

A variety of scientific enquiry has been embedded within each science unit to ensure a broad range of working scientifically skills are developed across the school.

Long term planning

Science is planned with the guidance of The National Curriculum (See Science LTP). Planning enables all areas of the science curriculum to be taught and working scientifically skills are taught and embedded within science units to ensure continuity and progression of essential enquiry skills as children move through the school.

Medium term planning

Units and objectives to be taught each term will be put on to the topic plan and science will be taught as a discrete topic. Key vocabulary for each science unit will be stated within topic plans. Where appropriate, science will be taught alongside another topic which links to the unit. For example, the Year 2 Super Cities topic will be taught alongside the science unit Properties of Materials.

Short term planning

Weekly planning will take into account learning objectives for science, which will in turn provide assessment opportunities: this is the responsibility of the class teacher. Key vocabulary will be embedded within each lesson. All planning will provide opportunities for stretch and challenge for all pupils using a variety of methods or resources such as Explorify and 'Mr Stretch' activities.

Assessment in science

Class teachers will monitor and make on-going assessments of the children's progress in relation to the statutory requirements, with reference to the expected learning outcomes identified in the short term plans. At the start of every unit, teachers will set pupils a 'quiz' based on prior linked knowledge from previous year groups. This will help identify prior knowledge of pupils, any misconceptions held by pupils or areas of focus before the unit is taught. This will then inform planning and teaching of lessons including working scientifically skills, which are embedded within topics. At the end of a unit, another 'quiz' will be completed. This time it will focus on what has been taught during the unit. This will show the learning and progress made by pupils as well as identify future learning targets or areas for development. These will be used in conjunction with Target Tracker to give a judgment for progress and attainment within science.

Relationship to other subjects

Science is commonly taught as part of each topic, although can be taught discretely when necessary. Children are encouraged to communicate and record their work in a variety of ways.

Information Communication Technology

ICT is used in order to support learning in science. It is used as a tool to handle and process information, to measure, to communicate and to model children's ideas to help answer their questions. ICT is also used to research using secondary sources. Laptops and iPads are used to promote learning through interactivity.

Design and Technology³

There is a natural relationship between science and technology. Children are encouraged to apply their scientific knowledge to practical, creative and technological activities and inversely through these activities children are offered opportunities to explore phenomena.

Maths

Science and maths are inherently linked; it uses maths as a tool to represent findings and data and therefore to describe science. Many mathematical skills are used in context, such as: measuring, identifying patterns and drawing conclusions.

Equal Opportunities and Special Needs

Teachers ensure that investigations provide a balance of interest for both girls and boys and link to children's lives and experiences to enhance attitudes and experiences. Work is differentiated to suits the needs of the children in the class.

Stretch and Challenge

Class teachers and the Science Lead monitor planning to ensure it appropriately stretches and challenges pupils of all abilities, including who are performing at a level significantly higher than their peers in science, and these children will be challenged via the use of Blooms Taxonomy questioning. For example, giving opportunities for evaluating, reflecting, analysing, creating comparing and contrasting. This will encourage deeper level thinking in science and allow for children to transfer their knowledge and ideas to different contexts. All planning must show provision for children, especially during investigations, to extend their learning.

Resources

Science resources are centrally located in the resource room (next to the Year 6 group room). Teachers are responsible for checking equipment and the prompt return of resource boxes. Disposables will be replaced when needed and a resource audit is carried out yearly by the Science Lead.

Safety Guidelines

General safety is the class teachers' responsibility. All teachers are responsible for the safety arrangements for their class and must demonstrate the safe use of equipment. They should make reference to the School's Health and Safety Policy and the safety procedures recommended in the 'Be Safe' Document - The Code of Practice for Health and Safety in Primary Science.