

Mathematics Policy



Aims and Objectives

Mathematics teaches us to make sense of the world around us, through developing a child's ability to calculate, reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate how mathematics is applied to many different skill sets and professional environments and, more simply, that Mathematics is everywhere.

The aims of mathematics are:

- to promote confidence and competence with the use of number and calculation and their application within all other strands of Mathematics;
- to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to make sense of Mathematics in the real-world.

Planning, learning and teaching

The new Mathematics curriculum was introduced throughout the school in September 2014. "Rainbow Maths" requires teachers to plan lessons over a two-week period using a 'driver' to lead the lessons. In this way, the children begin to understand how Mathematics is applied across all the strands (number; calculation; fractions, decimals and percentages; measures and statistics) through a more holistic method of teaching and learning.

Mathematics is taught discreetly every day. Each lesson will begin with the counting stick; an empty number-line resource that encourages quick-fire recall of many different processes, from counting in 2's to times tables, fractions and measures. It then progresses onto differentiated work, allowing every child to progress at their own level yet, at all times, being challenged.

The use of Maths games, investigations, problem-solving and practical activities, as opposed to merely using worksheets, consolidates learning. In this way children can not only work out the correct solutions, but can develop the ability to explain their thinking, apply their understanding to new situations and work with confidence developed through sound mathematical skills.

In all Mathematics lessons, highly experienced teaching assistants work alongside the class teachers to ensure that every child succeeds.

Differentiation and support

The children will learn strategies related to their own year group, to ensure that deeper learning takes place along with a greater understanding of how Mathematics is used and applied in the real world. We do recognise, however, that not all children work at the same speed and in this case teachers will differentiate lesson plans to allow these children to access curriculum from previous years to enable them to progress. This is often done in smaller break-away groups once areas of difficulty are identified.

Teachers ensure that marking and constructive feedback is personal, enabling pupils to understand how to improve and develop their learning. Planned time is given to allow the children to respond to the feedback.

Assessment

Assessment is regarded as an integral part of teaching and learning and is a continuous process. At the end of every term, teachers will use the ARE (age related expectations) for each child in order to assess their current level of learning and to set targets for the following term.

The Foundation Stage

We relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about Mathematics.

Teaching Mathematics to children with special educational needs

The new 'Rainbow maths' format of teaching allows every child to learn at their own speed within the curriculum for that current year. When a teacher recognises that a child needs to work outside the expected range, an Individual Education Plan (IEP) will be set up, along with initiating appropriate intervention plans and resources to enable the child to learn more effectively. These children will be closely monitored by the Mathematics co-ordinator and senior leaders to ensure that these interventions are effective and that the child is showing progress.

Contribution of Mathematics to teaching in other curriculum areas

Literacy

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage children to read and interpret problems in order to identify the mathematics involved; they also become more adept at explaining and presenting their

work to others. Younger children enjoy stories and rhyme that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

Information and communication technology (ICT)

Children use and apply mathematics in a variety of ways when solving problems using ICT. Younger children use ICT to communicate results with appropriate mathematical symbols. Older children use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations. When working on control, children use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships.

Presentation in books

Work must be presented in maths books with less emphasis on worksheets glued to pages. If loose sheets or photos are added or stuck into books they should not be folded but trimmed to size to fit the page. Short dates and colour coding linked to rainbow grids must be used to indicate area of learning and continuity of learning. Rulers should be used when drawing straight edged 2D and 3D shapes, graphs and indicator lines or arrows. Only pencil should be used in books.

Monitoring and review

The monitoring of the standards of children's work and the quality of teaching in Mathematics is the shared responsibility of the class teacher, senior leadership team and the Maths co-ordinator. The work of the subject leader also involves supporting colleagues in the teaching of Mathematics, being informed about current developments in the subject and providing a strategic lead and direction for the subject in the school.

Signed:

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