

Mathematics Policy



Vision

We feel that Mathematics is a tool for everyday life and that a high-quality mathematics education therefore provides a foundation for understanding the world. It is our intent that children acquire new skills and knowledge sequentially; with a deep understanding that can be built upon as they progress through the school. We aim to provide a curriculum that promotes enjoyment; enthusiasm for learning mathematics; exploration and discussion, to create mathematicians, who are able, confident, and fluent in the fundamentals of mathematics.

Aims

The intention of teaching mathematics is to ensure our pupils can:

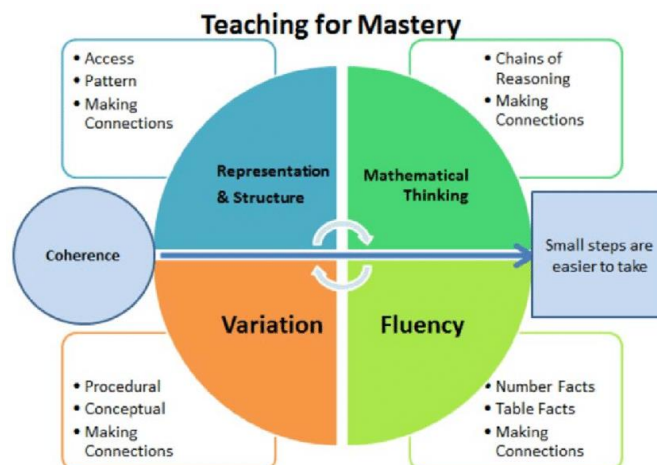
- be competent and confident with the mathematical knowledge, concepts and skills in order to meet age-related expectations;
- have a positive attitude towards mathematics, and to be resilient and persistent in pursuing the answers they are seeking;
- confidently communicate mathematical thinking both orally and on paper;
- develop their understanding and the ability to recall and apply knowledge rapidly and accurately;
- make connections between mathematical concepts, reason mathematically and solve problems,
- use and apply mathematics across the curriculum and in real life situations with creativity.

Teaching of Mathematics

As a school, we follow a Teaching for Mastery approach. We follow pedagogic practices that keep the class working together on the same topic, whilst at the same time addressing the need for all pupils to master the curriculum and for some to gain greater depth of proficiency and understanding.

Challenge is provided by going deeper rather than accelerating into new mathematical content.

Teaching is focused, rigorous and thorough, to ensure that learning is sufficiently embedded and sustainable over time. Long-term gaps in learning are prevented through speedy teacher intervention. More time is spent on teaching topics to allow for the development of depth and sufficient practice to embed learning. Carefully crafted lesson design provides a scaffolded, conceptual journey through the mathematics, engaging pupils in reasoning and the development of mathematical thinking.



Our KS1 & KS2 Mathematics Curriculum

The core of our mathematics curriculum is the National Curriculum for England, which is supplemented by Power Maths and the NCETM Professional Development materials. Each class teaches a 45-minute Mathematics lesson (4 times per week) with an additional arithmetic lesson that gives children the opportunity to develop mathematical fluency and practise written and mental calculation strategies taught previously.

Our EYFS Mathematics Curriculum

Children in Nursery are taught using the White Rose Maths Scheme of work as a guide. Units from this scheme have been carefully selected that meet the Development Matters statements and Birth to Five (Stage 5) outcomes.

Children in Reception follow the EYFS curriculum working towards the Early Learning Goals (ELG's), in conjunction with the NCETM Early Years Typical Progression Chart that provides additional guidance for practitioners. Mathematics is taught as both a discrete subject and within the whole Early Years Curriculum to give children opportunities to use their number skills in real life situations. Children have the opportunity to explore, enjoy, learn about and use mathematics in a range of situations. Teachers plan using the NCETM 'Mastering Number' Scheme and Power Maths to give a twenty-minute input for mathematics (5 times per week). Then throughout the morning there is a maths-based activity every day giving children the opportunity to practise and apply taught skills.

Planning

In order to provide a coherent curriculum, every year group has a yearly Curriculum Map that outlines the key areas of mathematics which will be taught throughout the year. This ensures that adequate amount of time and coverage is allocated to each key area. Detailed Medium Term planning supports teachers to plan a sequence of progressive weekly lessons and over time, giving the children time to master new concepts. Within this document, key objectives, knowledge and vocabulary are outlined along with ideas for stem sentences that will support children to articulate their thinking. Progression documents and the Calculation policy, used to support the Medium-term plan, ensure that staff are delivering a consistent, progressive and challenging curriculum.

When planning a lesson, the teacher carefully considers the five big ideas of 'Teaching for Mastery'. Lessons are planned with a small-step learning journey following a sequence of concrete, pictorial, abstract representations to build knowledge of concepts and relationships of mathematics. This 'learning journey' is sequenced to ensure that knowledge of mathematical concepts builds systematically over time.

Fluency

In addition to the main maths session in KS1 & KS2, there is a daily 15-minute fluency session which allows children to develop and recall their knowledge of key facts. Children in Key Stage One participate in the NCETM Mastering Number programme which supports their understanding of additive facts whilst children in Key Stage 2 develop their fluency of times tables. At the start of each day in KS1 & KS2, children also complete a 'Securing Skills' task which gives them an opportunity to retrieve and apply previously taught mathematical knowledge.

Homework

All children in KS1 & KS2 are given weekly mathematics homework to complete online. Children in Year One are allocated mathematical tasks using the programme 'Numbots'. This gives them the opportunity to develop their fluency with additive facts within ten by playing games and solving problems. Children in Reception have access to 'Numbots' all year round however there will be an expectation on the amount of time they spend using this programme starting in the Summer Term. Children in Year Two onwards are expected to use the programme 'Times Tables Rockstars' to practise their times tables facts and develop their fluency with these facts. They are also given a small number of facts linked to the times tables they have been learning in school for them to learn at home.

Assessment

Teachers are expected to make regular assessments of each child's progress using various methods of formative assessment. In KS1 & KS2 children complete end of unit tests throughout the year which support the teacher to assess their understanding and identify next steps. NFER tests are also completed at the end of each term which provide standardised scores which supports teachers' judgements.

Monitoring and review

We monitor teaching and learning in the same way as we do all the other subjects that we teach in the school. The Governors' Curriculum and Standards Committee has the responsibility of monitoring the success of the teaching in languages.

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Governing body signature:	