



Moredon Primary and Nursery School



Maths Policy

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MOREDON PRIMARY AND NURSERY SCHOOL

Mathematics Policy

A high-quality mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. (National Curriculum 2014)

Vision Statement

At Moredon Primary and Nursery School all of our children are given the opportunity to develop their mathematical potential through a rich, engaging curriculum. We want our children to feel confident in using and applying mathematics in a wide range of situations. We also aim to develop lively, enquiring minds which encourage pupils to become self-motivated, confident and to feel challenged in order to solve problems that will become an integral part of their future.

Moredon Primary and Nursery School aims to ensure that all pupils, irrespective of gender, race and culture, have access to a wide range of stimulating problems and activities which will include the appropriate Programmes of Study of the National Curriculum 2014 and the EYFS curriculum. We ensure that the statutory requirements of the National Curriculum 2014 are met and we aim that every child will be fluent in the fundamentals of mathematics, to reason mathematically and to solve problems.

At Moredon Primary and Nursery School, we have adopted the Mastery approach for teaching and learning of mathematics. This means the children will be taught the skills from the National Curriculum for their year group. The curriculum has been split in to the six terms of the year and each unit of work will be taught for longer enabling the children to learn for longer and to go deeper in to each concept. It is expected that the majority of the class will then achieve their age related expectations as outlined in the National Curriculum.

Intended Outcomes

Our children will learn to:

- Develop the appropriate mathematical language associated with number, shape and position;
- Use and apply mathematics in practical tasks, in real life problems and in acquiring further knowledge, skills and understanding in the subject itself;
- Understand and use the four operations of number in relevant contexts;
- Understand relationships between numbers, learn basic number facts and develop a range of computational methods (in line with the calculation policy);
- Understand place value in our counting system and understand how it can be extended into numbers below zero;
- Use their mathematical skills in simple problem solving;
- Collect, interpret and represent data in tabular, graphical and diagrammatic form;
- Develop mental methods of calculation;

- Recognise, describe and represent shapes and patterns in terms of their properties, location and movement;
- Measure quantities including length, area, volume/capacity, angle, temperature, time and mass;
- By the time children reach Year 6 they will be introduced to ratio/ proportion and language of algebra as a means for solving a variety of problems.

We will judge the success of our mathematical teaching by:-

- The motivation and interest displayed by our pupils
- KS1 and KS2 SAT results
- Success in meeting targets
- Data analysis
- Book and planning scrutiny
- Observations of the teaching of mathematics
- Pupil Voice
- Amount of children reaching 'greater depth'

Teaching and Learning Style

The school uses a variety of teaching and learning styles in mathematics lessons. Our principle aim is to develop children's knowledge, skills and understanding in mathematics. We do this through daily lessons where every child has the opportunity to practise their mathematical knowledge, to reason about a misconception and to solve a problem by applying their mathematical knowledge. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. Children use IT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. In addition to the main mathematics teaching, children will be given the opportunity to revisit previous learning in 20 minute sessions called Memory Maths. This will allow children to continue to practise their mathematical knowledge.

We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals. Some children also take part in maths intervention programmes to further support the key skills and fundamentals of mathematics so they are more able to access the learning in the daily lesson.

Mathematics Curriculum Planning

We follow the CanDoMaths scheme of work for our medium term plans which clearly states the order of teaching and what objectives are covered each term.

It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific key learning points which are taken from our scheme of work for each lesson and give details of how the lessons are to be taught. The subject leader monitors these plans and will often discuss them on an informal basis with the class teacher. Work is planned to suit the needs and abilities within the class.

As an ongoing programme to enhance the teaching of mathematics across the school we use our working walls. This outlines the focus of the teaching and learning for the unit of work, detailing the previous learning and what the new learning will be.

The Foundation Stage

At Moredon Primary and Nursery School we teach the Statutory Framework for the EYFS in our Reception and Nursery classes and also use the Development Matters document. 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 have a whole class teaching session each day and adult led activities through the week. The children also have the opportunity to use a wide range of maths resources to develop their understanding in their child initiated learning time. 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.

Contribution of Mathematics to Teaching in Other Curriculum Areas

At Moredon Primary and Nursery School we teach through enquiry based topics where a lot of the learning takes place in a cross-curricular way. Mathematics skills are used through applying their knowledge to other subject areas. For example:

English

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. The children explain their reasoning and present their work to others during their learning time. 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.

Computing

Children use and apply Mathematics in a variety of ways when solving problems using their skills in computing. Younger children use computing 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.

Personal, social and health education (PSHE) and citizenship

Mathematics contributes to the teaching of personal, social and health education, and citizenship. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views. We present older children with real-life situations in their work, for example, spending of money, reading timetables etc....

Spiritual, moral, social and cultural development

The teaching of mathematics supports the social development of our children through the way we expect them to work with each other in lessons. Children are expected to work together, and we give them the chance to discuss their ideas and results. The study of famous mathematicians around the world contributes to the cultural development of our children.

Teaching Mathematics to Children with Special Educational Needs

At our school we teach Mathematics to all children, whatever their ability. Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our Mathematics teaching, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

High quality first teaching, differentiated for individual pupils, is the first step in responding to pupils who have, or may have SEND. Differentiation occurs in the support and intervention provided to

different pupils, through questioning, scaffolding and resources for individual pupils This is an inclusive approach to individual learners' needs, ensuring language, questioning, concepts and ultimately learning is accessible to all.

When progress falls significantly outside the expected range, the child may have Special Educational Needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

We enable pupils to have access to the full range of activities involved in learning mathematics. Where children are to participate in activities outside the classroom, for example, a maths trail, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

Assessment and Recording

We assess children's work in mathematics to develop learning, pupils will be continuously assessed using a variety of strategies - observation, questioning, marking in accordance with our school marking policy and personalised targets set. These short-term assessments are closely matched to the teaching objectives and help us to adjust our weekly plans.

Assessments are done on a termly basis to assess children's knowledge based on that half term. These assessments are provided for us by our scheme of work to ensure that what is assessed at the end of each half term is what has been taught.

We undertake formal written assessments towards the end of the school year, and we use these to assess progress against school and national targets. We can then set targets for the next school year and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, so that s/he can plan for the new school year. We use the national tests for children in Year 2 and Year 6. Children in Year 4 are also assessed on their multiplication tables knowledge using the Multiplication Tables Check (MTC). We also make annual assessments of children's progress measured against the National Curriculum expectations for each year group. In the Foundation Stage assessment is also carried out through use of observation of their play.

Resources

There is a wide range of resources to support the teaching of mathematics across the school. All classrooms have a wide range of appropriate small apparatus which are suitable for each age group. The library contains a range of books to support children's individual research and each class has a mathematics dictionary. A range of software is available to support work with the computers. The mathematics cupboard holds a range of resources for all teachers to access.

Monitoring and Review

Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics subject leader and the senior team. The work of the mathematics 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. The principal allocates regular management time to the mathematics subject leader so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school. A named member of the school's governing body is briefed to oversee the teaching of mathematics. This governor meets regularly with the subject leader to review progress and to be updated on new initiatives and strategies that the school are undertaking. These reviews also include a learning walk of maths across the school and looking at examples of children's work.