



CLUTTON PRIMARY SCHOOL - MATHS PROCEDURES

Introduction

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore 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

Aims

The 2014 National Curriculum for mathematics aims to ensure that all pupils:

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The purpose of mathematics in our school is to develop:

- Positive attitudes towards the subject and awareness of the relevance of mathematics in the real world.
- Competence and confidence in using and applying mathematical knowledge, concepts and skills.
- An ability to solve problems, to reason, to think logically and to work systematically and accurately.
- Initiative and motivation to work both independently and in cooperation with others.
- Confident communication of maths where pupils ask and answer questions, openly share work and learn from mistakes.
- An ability to use and apply mathematics across the curriculum and in real life.
- An understanding of mathematics through a process of enquiry and investigation.

We aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching and learning.

Cross Curricular Links

Mathematics is taught mainly as a separate subject but every effort is made to link maths with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between maths and other curricular work, so children see that maths is not an isolated subject. In the Early Years, these links are more evident because of the less formal timetable.

Teachers planning and organisation

Long term planning

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long term planning for mathematics taught in the school.

Medium term planning

Years R-6 use the White Rose Maths Hub schemes of learning as their medium term planning documents.

These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number at their heart. They ensure teachers stay in the required key stage and support the ideal of depth before breadth. They support pupils working together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum.

Short term planning

The above schemes of learning support daily lesson/flipchart planning. EYFS planning is based on the medium term plans and delivered as appropriate with thought to where the children are now and what steps they need to take next.

All classes have a daily mathematics lesson where possible. In key stage one lessons are 45-60 minutes and in key stage two at least 60 minutes.

In EYFS the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom, with Mathematics being taught through An integrated approach.

Special educational needs & disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's Single Support Plans incorporate suitable objectives from the National Curriculum for Mathematics or development Matters and teachers keep these in mind when planning work. These targets may be worked upon within the lesson as well as on a 1:1 basis outside the mathematics lesson. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. Within the daily mathematics lesson teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability.

Equal Opportunities

Positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics.

The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons. Lessons involving lots of visual, aural and kinaesthetic elements will benefit all children including those for whom English is an additional language (EAL).

Marking

Marking children's work is essential to ensure they make further progress. Work is marked in line with the school marking policy. Some pieces of work in mathematics can be marked by children themselves or by peers, with support and guidance from the teacher. Children are promptly given the opportunity to correct errors in purple pen.

Assessment

Assessment is an integral part of teaching and learning and is a continuous process.

Teachers make formative assessments of children daily through;

- Regular marking of work.
- Analysing errors and picking up on misconceptions.
- Asking probing questions and listening to answers.
- Facilitating and listening to discussions.
- Making observations.

These ongoing assessments inform future planning and teaching. Lessons are adapted regularly and short term planning is evaluated in light of this information. NFER summative assessments or SATS are carried out in each year group three times a year (except in EYFS) Data is then used to inform school leaders of progress, which is then shared through Pupil Progress Meetings.

Resources

Each class has a stock of core resources that are age appropriate in order to support the children in gaining a secure understanding of each concept. Additional mathematical equipment and resources are stored centrally in the resource cupboard. Teachers are encouraged to have the resources out for the children to use, and chose to use, on a daily basis. This supports the concrete, pictorial and abstract approach to learning.

Reporting

Parents receive an annual written report on which there is a summary of their child's effort and progress in mathematics over the year. Reports also indicate pupil attainment against national standards. There are also two parent evenings where progress and attainment are discussed and parents are given next step targets for their child which indicate how they can support mathematical learning at home.

Monitoring and Evaluation

Throughout the year, monitoring by the maths subject leader takes place in the following forms;

- Lesson observations
- Book and planning scrutiny
- Pupil conferencing and learning walks
- Analysis of performance data

Homework

Children use a mixture of Doodle Maths (3 times a week) and more specific focused maths related tasks, especially in Years 2 and 6 in preparation for SAT assessments.