

Aims and objectives

Mathematics teaches us how to make sense of the world around us by developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives.

It is the Policy of Charterhouse Square School to:

- Recognise that literacy problems and poor organisational skills often necessitate different approaches.
- Develop and emphasize correct usage of Maths vocabulary and to encourage explanation of methods of calculations.
- Fill gaps in working knowledge.
- Provide for breadth as well as depth of experience.
- Use practical apparatus where appropriate throughout the learning process.
- Reinforce and revisit topics frequently.
- Ensure all pupils achieve their potential and show maximum progress.
- Assess each pupil's level of attainment.

The aims of mathematics are to:

- Promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- Promote confidence and competence with numbers and the number system.
- Develop the ability to solve problems through decision-making and reasoning in a range of contexts.
- Develop a practical understanding of the ways in which information is gathered and presented.
- Explore features of shape and space, and develop measuring skills in a range of contexts.
- Understand the importance of mathematics in everyday life.

Teaching and learning style

Maths lessons are based on the guidelines found in the Numeracy Framework. Specific work is not designated for a particular year group since ability varies from group to group and year to year. Each year the work is adapted to suit the needs of the children. However, in an academic year, it is the aim to cover all areas as laid down in the Numeracy Framework - i.e. Pure and Applied Mathematics, Number and Algebra, Shape, Space and Measures and Handling Data. The Charterhouse Square School uses a variety of schemes as the core teaching resources, schemes such as Folens, SPMG, Target, Abacus etc. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole-class and group-directed teaching. During these lessons we encourage children to ask as well as answer mathematical questions. 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. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies - in some lessons through differentiated group work, and in other lessons by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals.

Mathematics curriculum planning

Mathematics is a core subject.

We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The National Numeracy Strategy Framework for Teaching gives a detailed outline of what we teach in the long term, while our yearly teaching programme identifies the key objectives in mathematics that we teach in each year.

Our medium-term mathematics plans, which are adopted from the Framework and give details of the main teaching objectives for each term, define what we teach. They ensure an appropriate balance and distribution of

work across each term. It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught.

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 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

English

Mathematics contributes to the teaching of English in our school by promoting the skills of reading, writing, speaking and listening. We encourage children to read and interpret problems in order to identify the mathematics involved. The children explain and present their work to others during plenary sessions. 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.

Personal, social and health education (PSHE) and citizenship

Mathematics contributes to the teaching of personal, social and health education, and citizenship. 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 on the spending of money.

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. We group children so that they work together, and we give them the chance to discuss their ideas and results.

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 allows us to consider each child's attainment and progress against expected levels.

Should progress fall significantly outside the expected range, the child may have special educational needs. Intervention through School Action will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to mathematics.

Assessment and recording

We assess children's work in mathematics from three aspects (long-term, short-term and medium-term). We make short-term assessments, which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives.

We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. We use the class record of the key objectives as the recording format for this.

We make long-term assessments towards the end of the school year, and 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 make long-term assessments with the help of end-of-year tests and teacher assessments. We use the national tests for children in Year 6.

Teachers keep samples of children's work in their personal file. This demonstrates what the expected level of achievement is in mathematics in each year of the school.

Resources

There is a range of resources to support the teaching of mathematics across the school. All classrooms have a number line and a wide range of appropriate small apparatus. A range of software is available to support work with the computers.

Monitoring and review

Monitoring the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics coordinator. The work of the mathematics coordinator 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.