



CAVERSHAM PARK PRIMARY SCHOOL

Mathematics Policy

Aims and Objectives

Mathematics teaches us how to make sense of the world around us through 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. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

The aims of mathematics are:

- to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to reasoning mathematically by following a line of enquiry, spotting relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- to solve problems by applying their mathematics to a variety of routine and non-routine problems, breaking down problems into a series of simpler steps and persevering to seek solutions;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- to understand the importance of mathematics in everyday life.

Teaching and Learning Style

The school uses a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a mixture of mental maths work, whole-class teaching, focussed group teaching and opportunities for independent investigation and reasoning. 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. Mathematical dictionaries are available in school. Children use computing in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. 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 use cold tasks to elicit the children's understanding and skills in the areas in which we teach. We then use this to inform our planning and build teaching sequences that work from where the children are. Children are not in set "maths groups". Instead we provide differentiated activities to provide support for those who need it and mathematical challenges for the more able to deepen their understanding. In line with the National Curriculum 2014, children are given opportunities to develop fluency, reasoning and problem solving.

An initiative to promote good mental maths skills in the form of whole school "Wizard Maths" tests. These tests are matched to the child's ability and encourages a fun way to learn and

build upon mental maths skills (mainly number facts and times tables) learnt in the classroom. Every child from Year 1 upwards will take part in Wizard Maths 3x a week and will receive rewards (in the form of badges) for improving their mental maths ability.

Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum 2014, and we use this as the basis for implementing the statutory requirements of the programme of study for mathematics.

We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The school long term and medium term planning (which reflects the statutory requirements) is used as a starting point.

Prior to short term planning, teachers assess through a cold task what the children can already do. This ensures that children are not wasting time going over old ground, but are also not missing key areas of their learning that they may not have retained or grasped. Teachers use this cold task as a basis for grouping in maths and also for planning interventions for underachieving pupils.

When planning in the short term, teachers consider where mathematical links can be made and where real life contexts can be used to build understanding. Short term planning is constantly adapted to meet the needs of the children in the class. Differentiation is paramount, as are opportunities to develop reasoning and problem solving.

The children are assessed every day via marking, discussion and target setting. At the end of the Autumn, Spring and Summer terms, children are assessed using standardised PUMA tests and the results of this, along with analysis of the children's work, informs the teacher of how the children are progressing. Analysis of these tests further informs the teacher's planning for the subsequent term.

The Early Years Foundation Stage

Maths is an important part of Early Years Foundation Stage. When the children first join us we carry out a baseline assessment of their mathematical ability as part of the EYFS Baseline Assessment. This helps us to map children's prior learning and identify children who need additional support. 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. This is achieved through planned focussed activities, as well as opportunities to develop their mathematical skills independently in our outside classroom and as part of the child-initiated environment.

Equal Opportunities and Inclusion

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 and have access to the full range of activities. We do this by setting suitable learning challenges and responding to the children's different needs.

Assessment and Recording

We assess children's work in mathematics on a regular basis. At the beginning of each mathematical focus (e.g. addition), teachers in KS1 & KS2 provide the children with a "cold task" to assess the children's prior learning, identify gaps in learning and pupils who need extension. This is then used as a basis of planning alongside the statutory guidance.

A range of assessment strategies such as self-assessment, peer assessment and daily marking is used to track progress in lessons and adapt the short-term planning accordingly. A “hot task” is then completed at the end of the teaching focus to assess progress and identify next steps.

At the end of each term every child is assessed either using summative or formative assessment. These assessments include standardised testing (PUMA tests) and teacher-based assessment based upon the Key Performance Indicators. The results of these assessments are then collated, analysed and tracked by the teachers and headteachers. This analysis helps teachers to plan next steps and also ensures progress is tracked closely throughout the year.

At the end of the school year, assessment data is used to assess progress against school and national targets. Pupil targets are then set for the next school year and a summary of each child’s progress is made and shared with parents/carers in a child’s annual report. Information is also passed on to the next teacher at the end of the year, so that s/he can plan for the new school year.

Children in Year 6 are assessed according to the statutory requirements of Assessment and Reporting Arrangements of the National Curriculum.

Monitoring and Review

Monitoring the standards of children’s work and the quality of teaching in mathematics is the responsibility of the mathematics subject leader. 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 school. The mathematics subject leader provides the Headteacher with regular summaries in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement. The Headteacher allocates regular management time to the subject leader so that s/he can review samples of children’s work and undertake lesson observations/learning walks of mathematics teaching across the school.

Policy date	Review Date
March 2024	March 2027