



Garlinge Primary School and Nursery

Mathematics Policy

Garlinge Primary School and Nursery is a place for everyone to succeed and thrive with inclusion at its heart.

Educational visits and learning outside the classroom are an integral part of life at Garlinge Primary School and Nursery, furthering the education of the pupils. Educational visits and learning experiences outside the classroom are arranged for pupils at Garlinge Primary School and Nursery when pertinent to the Learning Intention of the lesson. Teachers follow the Teach Active programme to provide at least one active maths lesson per term.

This document is a statement of the principles, aims and strategies for the teaching of mathematics at Garlinge Primary School and Nursery. The purpose of this policy is to ensure that all staff are able to implement the teaching of maths to a high standard in order for our pupils to achieve to the best of their abilities.

Rationale

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The Programmes of Study are, by necessity, organised into distinct domains, but pupils should make rich connections across mathematical ideas. They should also apply their mathematical knowledge to cross curricular learning opportunities.

Teachers should use every relevant subject to develop pupils' mathematical fluency. Confidence in mathematical skills is a precondition of success across the National Curriculum.

Teachers should develop pupils' mathematical skills and reasoning in all subjects so that they understand and appreciate the importance of mathematics. Pupils should be taught to apply arithmetic fluently to problems, understand and use measures, make estimates and check their work. Pupils should apply their geometric and algebraic understanding, and relate their understanding of probability to the notions of risk and uncertainty. They should also understand the cycle of collecting, presenting and analysing data. They should be taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

Aims

At Garlinge Primary School and Nursery we aim for all pupils to have equality of opportunity:

- to promote enjoyment of learning through practical activity, exploration and discussion;
- to develop confidence and competence with numbers and the number system;

- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and developing measuring skills in a range of contexts;
- To help children understand the importance of mathematics in everyday life.

Organisation

The expectation is that the majority of pupils will move through the Programmes of Study at broadly the same pace. However, decision about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage.

Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content.

Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice and access to a wide range of manipulatives, before moving on. Interventions will mainly be organised for pupils as an additional teaching opportunity outside of the mathematics lesson.

Mathematics is taught on a daily basis in classes. Times tables are taught on a daily basis through a variety of activities.

Differentiation and Special Educational Needs and Disabilities (SEND)

For pupils with SEND the task will be adjusted or pupils may be given extra support from an adult and through use of manipulatives. The grouping of pupils for practical activities will take account of their strengths and weaknesses and ensure that all pupils take an active part in the task and gain in confidence.

Pupils with specific learning difficulties or physical disabilities will be provided with a differentiated programme to support their needs when necessary. Teachers should refer to pupils' EHCP's or provision plans or consult with the SENDCo and Mathematics Subject Leader if they require extra support with pupils with specific educational needs.

Planning

The Programmes of Study for mathematics are set out year-by-year for key stages 1 and 2. The Kent Advisory guidance and planning is referred to when teachers are completing their planning. Programmes of study for each term and week are followed, alongside suggested activities for each area of mathematics being taught.

Long Term Planning – Mathematics National Curriculum Programmes of Study

Medium Term Planning – White Rose Maths Hub planning linked to each year group's Programme of Study.

Weekly Planning – School planning document used (see appendix), linked to the weekly White Rose Maths Hub planning. This planning is submitted to both the Head teacher and Mathematics coordinator every Monday morning in order to analyse. Teachers do not always need to adhere to the set number of weeks, but ensure that coverage is understood and grasped.

Maths in the Early Year Foundation Stage

The four themes of the EYFS underpin mathematical teaching within the Early Year department at Garlinge Primary School and Nursery. Planning for mathematical activities involves using these principles and on-going assessment to closely match learning and development to a child's current needs.

It takes into consideration pupils varied starting points upon joining our school. Maths is taught through two areas: Number and Numerical patterns. There is a focus on developing children's understanding of the six key areas of early mathematics with an emphasis on developing number sense through: cardinality and counting, comparison and composition of number and developing understanding of pattern, shape and space and measures.

A daily maths lesson is planned and delivered – this begins with a counting activity and develops into a taught session supported with lots of practical resources and using models and images. The learning environment has maths displays and continuous provision to support child initiated and teacher directed learning. Practical resources are readily available for children to choose from in order to support this learning through exploration and play activities. Activities may be indoors or use the outdoor environment enabling children to explore maths in the real world. Opportunities are provided to support children to embed taught concepts and solve problems within the provision, through daily routines and through the environment.

Adults seek out pupils who need additional support and provide this through play. The rich environment and provision provide pupils with a wide range of opportunities for mathematical development enabling children to revisit each key area of early maths.

The Transition Policy from Foundation to Key Stage 1 allows for the smooth transition from the EYFS Curriculum into the National Curriculum.

Assessment

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children. This information informs subsequent planning and next steps in teaching and learning. Planning is annotated to demonstrate adaptations and provide feedback about children's individual/group progress.

Teachers are expected to make regular assessments and record them systematically. The mathematics Programmes of Study are referred to in order to assess children's knowledge, indicating on assessment grids the pupils who are: working below, at, or exceeding expectations.

Assessment also includes:

- Informal testing of mental recall daily and mental calculation.
- Times Tables Tests to be carried out on a weekly basis, and results recorded in teacher mark books.
- Weekly planning is annotated on a daily basis to inform future planning, and to ensure individual pupil attainment.
- National Curriculum testing at the end of Key Stage 2 occurs in May, giving pupils a National Curriculum descriptor.
- Parents and carers have the opportunity to discuss pupils' progress in maths during consultations.
- The school reports to parents and carers annually on pupil achievement at the end of Term 3 as a written report showing end of year attainment and progress is given in Term 6.
- Multiplication Tables Check is used to assess children's knowledge and understanding of tables in Year 4.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant Programme of Study.

Monitoring and Evaluation – The Subject Leader

The quality of teaching and learning is monitored as part of the appraisal process through lesson observations and monitoring progress and attainment towards end of year targets. In addition, continuity and progression across the school is monitored by the maths subject leader as is the implementation and impact of Assessment for Learning. Actions identified in the SIP and Maths Action Plan, intended to raise standards, are also monitored for implementation and, when appropriate, impact.

Governors are briefed to oversee the teaching and learning of mathematics. The governors meet with the subject leader to review progress at appropriate points throughout the academic year.

The Subject Leader's role is to:

- Help raise levels of pupil attainment
- Ensure high quality teaching through arranging training events; lesson demonstration; lesson observation with structured feedback from which teachers can act upon improvement targets
- Keep up to date with developments within mathematics and new initiatives, and feedback information to colleagues.
- To attend training and development opportunities and maths meetings
- Be an exemplar to colleagues in all aspects of maths and professional role

- Take the lead in policy development in school; ensure that the National Curriculum is being followed effectively to provide continuity and progression throughout the school.
- Monitor the delivery of the Maths Curriculum across the school and inform SLT and individual staff concerned on development required.
- Ensure that opportunities to use ICT in mathematics are planned.
- Effectively manage the allocated budget and ensure that adequate and appropriate resources are available.
- Guide and support teachers in the medium and short term planning of work and with assessment and record keeping requirements.
- Organise and lead regular development opportunities

Resourcing, personal development and INSET needs will be addressed in line with the School Improvement Plan and staff development procedure in the school.

Use of Computing and Cross Curricular Links

The mathematical curriculum offers pupils opportunities to use and apply their mathematical skills and knowledge to solve problems and puzzles. Maths at Garlinge Primary and Nursery is presented in everyday situations relevant to primary pupils.

Pupils are provided with many real life situations to apply their maths knowledge, through topic work carried out in school. This may include measuring, using charts and scales in geography and science, time and dates in history, patterns in art, music and dance and scoring and counting in PE.

The National Curriculum has many ICT resources which support the teaching of maths through ICT.

Calculators should not be used as a substitute for good written and mental arithmetic. They should therefore only be introduced near the end of Key Stage two to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure.

The school has class sets of tablets and laptops which are used to enrich and compliment learning. Up to date programmes and resources are available for the children on each device, alongside data programmes and access to internet games and activities for mathematics.

Spoken Language

The National Curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and

remedy their misconceptions. Teachers are also expected to clearly display relevant linked mathematical vocabulary in classes, which can then be used on a regular basis.

Homework and Partnerships with Parents

Parents and carers are informed of curricular objectives throughout the year, and they will receive written reports annually.

Maths homework reinforces class work or curricular work and will usually provide an example of any processes used by the children to support such work.

After school workshops and clubs are run providing parents, carers and children with an opportunity to engage in mathematical activities involving problem solving and reasoning skills.

Equal Opportunities Statement

At Garlinge Primary School and Nursery, we are committed to ensuring equality of opportunity for all pupils, staff, parents and carers irrespective of race, gender, disability, religion & belief, sexual orientation, marital status, pregnancy & maternity, age or socio-economic background. We aim to develop a culture of inclusion and diversity in which all those connected to the school feel proud of their identity and ability to participate fully in the curriculum and school life. A wide range of manipulatives are available in every class to allow all children to fully access the curriculum.

Health & Safety

In accordance with the school Health & Safety Policy, children are instructed in the correct and safe use of all equipment. In particular, care needs to be taken when using compasses and heavy weights with balances. Children engaged in practical tasks will always work in pairs or groups. Guidelines within the Computing Policy and Computing e-Safety Policy will also apply with regard to the use of Computing within mathematics.

Appendices

Calculation Policy

Weekly planning document

Assessment grids

Feedback Policy

Mental Calculation Progression document

Policy adopted by Governing Board _____

To be reviewed _____

**Signed by Executive
Headteacher** _____

Signed by Chair of Governors _____