Garlinge Primary School and Nursery

MATHEMATICS POLICY
(Article 28)

Garlinge Primary School and Nursery is a Rights Respecting School. As part of our commitment to the UN Convention on the Rights of a Child, please find links to the *Articles* throughout this policy. Details of the *Articles* can be found on the school website.

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 science and other subjects.

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 *(Articles 28, 29)*

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 *(Articles 3, 28, 29)*

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 and in sets where appropriate. Times tables are taught on a daily basis through a variety of activities.

Differentiation and Additional Educational Needs (AEN) *(Articles 2, 23)*

For pupils with AEN 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' statements or consult with the SENCo and Mathematics Subject Leader if they require extra support with pupils with specific educational needs.

Planning *(Articles 23, 28, 29)*

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** – 2014 Mathematics Curriculum Programmes of Study

- **Medium Term Planning** – White Rose Maths Hub planning linked to each year group's programme of study.

- **Weekly Planning** – the School planning document used is linked to the weekly White Rose Maths Hub planning. This planning is submitted to both the Headteacher and Mathematics Subject Leader 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 Years Foundation Stage (EYFS) *(Articles 23, 28, 29)*

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

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 to support child initiated and teacher directed learning, and practical resources are readily available for children to choose from in order to support this learning.

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

Assessment *(Articles 2, 23, 28, 29)*

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, delivered on a weekly basis using mental arithmetic tests, 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.
- In Years 2 and 6 statutory teacher assessments are made, and in Key Stage 2, pupil National Curriculum testing occurs annually in May, giving pupils a National Curriculum level. Pupil test results are used to inform future targets. National Curriculum test results are recorded using Assessment Manager. In 2016, these tests will include the new National Curriculum Tests.
- Parents have the opportunity to discuss pupils' progress in maths during consultations.
- The school reports to parents annually on pupil achievement at the end of Term 3.

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 *(Articles 28, 29)*

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 School Improvement Plan (SIP) and maths action plan, intended to raise standards, are also monitored for implementation and, when appropriate, impact.

A curriculum working group form part of the Governing Body. They 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 2014 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 the Headteacher 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 SIP and staff development procedure in the school.

Use of Computing and Cross Curricular Links *(Articles 28, 29, 31)*

The mathematical curriculum offers pupils opportunities to use and apply their mathematical skills and knowledge to solve problems and puzzles and 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 using scales in geography and science, time and dates in history, patterns in art, music and dance and scoring and counting in PE.

The 2014 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 2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure.

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

Spoken Language *(Articles 28, 29)*

The 2014 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 *(Article 15, 31)*

Parents are informed of curricular targets throughout the year and receive written reports annually. Mathematics parent information sheets and activities are sent home on a termly basis. Maths homework reinforces class work or curricular target 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 and children with an opportunity to engage in mathematical activities involving problem solving and reasoning skills.

Health & Safety *(Article 24)*

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 e-Safety Policy will also apply with regard to the use of computing within mathematics.