



# **Mathematics Policy**

## **The Glebe Primary School is a Rights Respecting School.**

Article 29: Education must develop every child's personality, talents and abilities to the full.

### **Aims and Objectives.**

At The Glebe Primary School, we ensure pupils receive a rich and enjoyable experience in mathematics by providing the knowledge, skills, concepts and processes that are appropriate to each individual and that relate to the world around them. This provision should enable them to:

- Develop confidence and enjoyment through a positive attitude to mathematics.
- Develop an understanding and efficient use of mathematics in meaningful contexts and to promote its importance in everyday life.
- Understand the nature of mathematics in today's world.
- Use maths to interpret, predict, explain and solve problems involving as much practical experience as possible.
- Develop logical thinking, enquiring minds and an ability to record in a systematic way.
- Gain equal access to mathematical achievement, for all children, so that they achieve their full potential regardless of gender, ethnicity or special needs and disabilities.
- Use technology within mathematics lessons and in the development of their mathematical concepts.

### **Rationale**

Mathematics equips pupils with the uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem solving skills and the ability to think in abstract ways. Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a positive and enthusiastic attitude towards mathematics that will stay with them.

The National Curriculum for Mathematics (2014) describes in detail what pupils must learn in each year group. Combined with our Calculation Policy as displayed on our school website, this ensures continuity, progression and high expectations for attainment in Mathematics.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At The Glebe Primary School we use the National Curriculum for Mathematics (2014) as the basis of our Mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of Mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. Assessment for Learning, an emphasis on investigation, problem solving, the development of mathematical thinking and development of teacher subject knowledge are

therefore essential components of The Glebe Primary School's approach to this subject. Within this rationale the following aims are necessary to achieve success within the National Curriculum for Mathematics (2014).

### **Aims for National Curriculum 2014**

- To foster a positive attitude to mathematics as an interesting and attractive part of the curriculum.
- To develop the ability to think clearly and logically, with confidence, flexibility and independence of thought.
- To develop a deeper understanding of mathematics through a process of enquiry and investigation.
- To develop an understanding of the connectivity of patterns and relationships within mathematics.
- To develop the ability to apply knowledge, skills and ideas in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world.
- To develop the ability to use mathematics as a means of communicating ideas.
- To develop an ability and inclination to work both alone and cooperatively to solve mathematical problems.
- To develop personal qualities such as perseverance, independent thinking, cooperation and self-confidence through a sense of achievement and success.
- To develop an appreciation of the creative aspects of mathematics and an awareness of its aesthetic appeal.

### **Principles of Teaching and Learning**

The school uses a variety of teaching and learning styles in Mathematics lessons.

During every Mathematics lesson, our teachers strive to:

- Build children's confidence, self-esteem and resilience
- Develop children's independence
- Allow all children to experience regular success
- Contextualise mathematics
- Use a range of approaches to mathematics (visual and concrete materials, models and images)
- Encourage children to independently select resources to help them
- Challenge children of all abilities
- Encourage children to enjoy mathematics
- Develop a child's understanding of mathematical language and vocabulary
- Learn from teachers, peers and their own misconceptions
- Allow children to ask questions, as well as answer them
- Deliver a guided group, where there is a teacher and child led discussion around how questions are solved, as well as the opportunity to identify any misconceptions.

To provide adequate time for developing Mathematics, a Maths lesson is taught daily. The children also take part in Big Maths sessions and mental maths sessions. In addition, application of skills are linked across the curriculum where appropriate.

Our pupils should:

- have a well-developed sense of the size of a number and where it fits into the number system (place value)
- know by heart number facts such as number bonds, multiplication tables, doubles and halves
- use what they know by heart to figure out numbers mentally
- calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- make sense of number problems, including non-routine/'real' problems and identify the operations needed to solve them
- explain their methods and reasoning, using correct Mathematical terms
- judge whether their answers are reasonable and have strategies for checking them where necessary
- suggest suitable units for measuring and make sensible estimates of measurements
- explain and make predictions from the numbers in graphs, diagrams, charts and tables
- develop spatial awareness and an understanding of the properties of 2D and 3D shapes

To provide adequate time for developing Mathematics, Maths is taught daily and discretely. However, application of skills are linked across the curriculum where appropriate.

### **Mathematics Curriculum Planning**

Mathematics is a core subject in the National Curriculum and we use the objectives from this to support planning along with our Abacus Pearson scheme planning tools, to assess children's progress.

Staff in Key Stage 1 and 2 use long term planning to ensure coverage of all areas of the National Curriculum and medium term planning to differentiate objectives according to the set which they teach.

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 class teacher keeps these individual plans, which they annotate according to the success of the lesson.

### **Assessment and Recording**

Assessments are both formative and summative. Effective assessment is achieved by:

- Marking written work and formal assessment tasks

- Teacher observations whilst children are engaged in a practical activity, to assess whether particular skills are being used.
- Pupil self-assessment and/or peer assessment
- Teacher discussions with the children in groups, class or individually
- Annotated planning to outline objectives that have been wholly, partly or not met
- End of term assessments to be analysed and inform future targets and planning
- STEP's Mathematical strand profile in Foundation Stage
- Optional Statutory Assessment Tests in Y1 Y3 Y4 & Y5
- Statutory Assessment Tests in Y2 & Y6
- SPRINT tracking system, working alongside our school points tracking system, to closely monitor the progress of children.
- Teachers to input results on the tracking system, on a half termly basis, to monitor progress throughout the terms
- Quick turn around with intervention groups when needed - identified from regular assessments, marking and observations

### **Early Years Foundation Stage**

- Foundation Stage Mathematics to be taught and planned in line with new EYFS framework and transition to KS1 in mind.
- In the Foundation Stage teachers will plan in line with the Early Learning Goals.
- The STEPS mathematics strand is to be completed and analysed termly to assess strengths and weaknesses.

### **Monitoring**

Monitoring the planning, teaching and assessment of Mathematics occurs to fit in with the School Development Plan, through the collection of assessment data, book and planning scrutiny, pupil interviews and observations. Next steps are then identified and support put in place to meet these next steps. This means then that monitoring can always be focused on these areas for development.

### **Special Educational Needs and Disabilities**

Children of all ages and abilities are catered for within the frameworks of the National Curriculum, the Primary Numeracy Framework and the Early Learning Goals. Those with special needs are provided with a School Support Plan, related to their own needs, which is written by the class teacher with help from the SENDCO. Professional support from outside agencies will be used as appropriate. The SEND policy gives details of the arrangements for specific support.

### **Gifted and Talented/More Able**

We aim to identify GTMA children early and track their progress carefully. Work will be differentiated to ensure they have sufficient challenge. Opportunities will be taken wherever they arise to extend and develop their skills, including opportunities outside school.

### **Role of the Subject Leader**

- To identify and address strengths and weaknesses within the subject area in school
- To ensure that all policies, resources and curriculum documents are well organised, constantly reviewed, updated and easily accessible.
- To monitor individual children who require additional intervention and support

- To liaise with SENDCO to ensure appropriate provision for children with special educational needs and disabilities.
- To ensure that all staff and support staff are familiar with all policies, planning formats, frameworks, resources and the curriculum in use at The Glebe Primary School, and to support where necessary.
- To inform all staff of relevant and up to date CPD.
- To report to Governors about the progress in maths, when required
- Monitor and raise standards in Mathematics
- Analysis of data resulting from assessment in both key stages
- To monitor through lesson observations, informal discussions, 'drop in' sessions, learning walks and book and planning scrutiny

This policy will be reviewed biannually.