



## QUEENSWAY SCHOOL MATHEMATICS POLICY

### **Aims:**

Our school believes that every child is entitled to a high quality mathematics education, which will provide a foundation for them understanding the world. As a result, they will have an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. It is our belief that our pupils should:

- **become fluent in the fundamentals of mathematics**, so that they:
  - have a well-developed sense of number values
  - know by heart key number facts, e.g. times-tables and related division facts, number bonds – in line with the latest programmes of study
  - apply knowledge of the above to work out connected facts
- **reason mathematically**, so that they:
  - are able to follow a line of enquiry
  - provide generalisations and proof of findings around their investigations
  - are able to justify their thinking, e.g. as to why a particular calculation strategy is the most efficient
- **solve problems by applying their understanding of mathematics**, so that they:
  - encounter a variety of both routine and non-routine problems
  - are able to select specific maths skills and/or operations
  - persevere with a line of enquiry, breaking down increasingly complex problems into a series of smaller steps

### **DEFINITION**

'Mathematics is a creative and highly inter-connected discipline. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.' **National Curriculum**

### **OBJECTIVES**

- Our approach to teaching mathematics is to develop pupil's skills, attitudes, understanding of concepts and knowledge in a positive environment through varied teaching styles to ensure all lessons are fully inclusive.
- At Queensway we use a variety of teaching styles including using a range of questioning techniques.
- We encourage the children to explain using full sentences.
- We encourage the ability to work systematically where the task requires imagination, initiative and flexibility.
- Maths lessons maintain pace and will include interactive, practical, modelled, investigative and exploratory learning experiences, all of which are differentiated.
- We develop mental strategies by enabling children to form a logical way of thinking which can be applied in a variety of situations. We do this by providing opportunities for children to verbalise their methodology in response to a wide range of challenges. Also by encouraging children to recall mathematical facts and present them in an appropriate manner.
- We believe children learn most when they are well motivated, secure and confident. We therefore aim to create a classroom atmosphere which is stimulating, challenging, interactive and fosters the development of logical and creative thinking.
- We use ICT to develop their understanding of mathematical ideas and as a way of handling information effectively.
- We develop the numeracy skills the children will need as a foundation for studying and using mathematics across the curriculum and in everyday life.

## **HOW WE TEACH MATHEMATICS AT QUEENSWAY SCHOOL**

At Queensway School we follow a Maths mastery approach.

- This ensures:
  - A high level of performance for all
  - Keeping the class working together when appropriate whilst addressing the needs for all pupils to master the curriculum and for some to gain greater depth and proficiency
  - A mind-set - All children can achieve with good teaching, appropriate resources, effort and a 'can-do' attitude.
  - The manner in which the curriculum is designed, focusing on fewer topics in depth, repetition and application. All pupils have access to the ideas and concepts
  - Deep and sustainable learning – for all '*depth*' is the key to avoiding the need to repeat teaching. It doesn't feel like we're starting again each term.
  - The teaching of Maths should include aspects of the following Mastery approach strategies in every lesson and/or over a series of lessons:  
Concrete-pictorial-abstract
- The differentiation of tasks is done in various ways:
  - Open ended questioning and activities which allow more able children to offer more sophisticated mathematical responses
  - Stepped Activities which can be accessed at different steps, supporting and challenge all
  - Recording e.g. allowing some children to give verbal responses and photographing their learning
  - Resourcing e.g. Use of cubes, 100 squares, number lines, tens frames to support all children
- As part of our strategy to raise pupil attainment, this school uses the Year related objectives as outlined in our Progression of Skills long term plan as a basis for planning teaching to fulfil the requirements of the National Curriculum for Mathematics. This ensures continuity and progression throughout the school, using an approach adopted by the vast majority of schools in England.
- At Queensway there is a Foundation Stage and they too have a progression of skills document for both nursery and reception. These objectives follow the new EYFS framework September 2021 and the emphasis on a secure understanding of number.
- To ensure that essential number skills are given priority all teachers will include an extra daily counting session in their timetables where they can cover the "on the boil" objectives from the school long term progression of skills document.
- Mathematics can be used to enhance the teaching and learning of other National Curriculum subjects, and equally those subjects can be used to acquire, reinforce and apply Mathematical understanding.
- Teachers will use appropriate Assessment for Learning strategies to help children develop responsibility and ownership of their learning and provide and as part of this they will provide follow up marking (also see school marking policy)
- Active Maths is encouraged and teacher will plan opportunities weekly for the children to carry out active Maths activities.

## **PLANNING**

In preparation for each term a medium term plan is drawn up by teachers consisting of the objectives to be covered from the school progression of skills documents from Nursery to Year 6.

In preparation for each week, teachers will develop resources, approaches and activities in order to deliver the planned objectives.

Weekly and medium-term planning is saved on Google Drive. Weekly planning is filed in the folders held in the staff room by all class teachers at the end of each week and annotated appropriately to show children's achievements and evaluate effectiveness of teaching. This is then monitored throughout the year by the Maths Lead.

### **INCLUSION AND EQUAL OPPORTUNITIES**

All children are provided with equal access to the mathematics curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background.

### **HEALTH & SAFETY**

At all times, due care and consideration must be given to health and safety, as outlined in our 'Health & Safety Policy'. In particular, teachers must give thought to health and safety issues when planning work and children must be taught to work safely at all times.

### **ASSESSMENT/RECORD KEEPING/REPORTING**

Assessments are made at the end of terms 2, 4 and 6 against the objectives for each Year Group using the computerised assessment program on Integris. These are based on teacher assessment, informed by children's achievement of Key objectives, ongoing assessment and the use of previous SAT tests for Year 2 and Year 6. These assessments are recorded on the 'integris and class assessment forms'.

It is good practice for a teacher to have the evidence to support the termly assessment. This record compliments the work done in books and unrecorded maths work. Also, planning sheets are used as a working document where pupil's achievements can be recorded against the objective. Progress of all children is monitored regularly and additional support will be made for the curriculum in the classroom. Foundation Stage pupils are assessed termly using the Foundation Stage Profile.

### **USE OF ICT TO DEVELOP MATHS CAPABILITY**

Pupils are given opportunities where appropriate to develop and apply their IT capabilities in their study of mathematics. A range of software is used to support the teaching of the key objectives and aid children's understanding including internet-based resources Supermovers, Maths Whizz.

### **TIMES TABLES**

Times Tables need to be taught and then practised. Times Table Rockstars is available for the practice of times tables from year 2.

### **Times Table (TT) ROCKSTARS**

TT Rockstars is an initiative for year 2-6. It is a fun way to practise times tables. The 'Sound Check' programme on TT Rockstars follows the structure of the year 4 multiplication test.

### **WORKING WALLS**

All children have a clear working wall where models, vocabulary and visual images used in previous lessons are displayed and referred to. Children use these to support their learning.

### **RESOURCES**

All classrooms have a number of mathematical age appropriate resources. Resources which are not used or required regularly are stored centrally and accessed by teachers at the beginning of a topic. Should staff be unable to find what they need, they should consult the subject leader. Staff will also be consulted regarding the purchasing of new items. The subject leader will monitor resources and ensure items are replaced if necessary.

**HOMEWORK**

Please refer to the Queensway Homework Policy which outlines the Maths homework for children in each Year group.

**ROLE OF THE SUBJECT CO-ORDINATOR**

- To take the lead in policy development.
- To monitor and be accountable for progress in Mathematics – this is done through scrutiny of work, observation and analysis of formal assessment data.
- To support colleagues e.g. leading staff CPD, planning support.
- To be familiar with current thinking concerning the teaching of Mathematics, and to disseminate information to colleagues.

**REVIEW**

We will review this Policy at least once every three years by the Quality of Education committee of Governors.

Chair of Committee ..... Date .....

Head Teacher ..... Date.....