



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 particularly 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.
- Teachers are flexible in their approach and use a range of questioning techniques.
- 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 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 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, mirrors to support some children
- As part of our strategy to raise pupil attainment, this school uses the Year related objectives as outlined by our Progression of Skills long term plan (see attached) 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 where reception pupils complete this foundation year following the Early Years Foundation Stage curriculum. Objectives form part of the problem solving, reasoning and numeracy area of the curriculum.
- To ensure that essential number skills are given priority all teachers will include an extra daily counting session in their time tables 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)

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 document or the Early Year's Foundation Stage Profile.

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 copied for the Head teacher and SMT to assist them in their monitoring. 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.

EQUAL OPPORTUNITIES IN MATHEMATICS

All pupils, regardless of gender, ethnicity, or special needs, will be taught in such a way that no-one is disadvantaged by the context, material and methodology, language, relationships or attitudes expressed in the curriculum or learning process.

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 1, 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 and Number Shark.

RESOURCES

School Maths resources are kept centrally and a list is updated annually. In addition, Mathematical equipment specific to age can be found clearly labelled in each class. 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

The subject co-ordinator should be approachable and willing to give advice and help with their subject to all staff as required. He/she must keep up to date with any changes in the curriculum and other relevant information and ensure it is communicated effectively to staff. In order to do this he/she is expected to attend Banbury Partnership meetings. He/she is responsible for the monitoring and development of Maths in the school, including the writing, reviewing and updating of the policy and scheme of work and the provision and maintenance of adequate resources.

REVIEW

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

Ratified by Governors on

Chair of Governors Date

Head Teacher Date.....