Mathematics Policy

Act justly, Love mercy, Walk humbly

Queniborough C E Primary School

	Date	Signed
This Policy was adopted on	**October 2022**	
To be reviewed	**October 2024**	

Tracey Sharpe October 2022

Vision Statement:

*With **JESUS** at our side, We **ACT** with a sense of right and wrong. We show **LOVE** by being kind to everyone.*

*We **WALK** through each day with modesty in all we do*

Mathematics Information

Queniborough CE Primary School

Intent

At QPS, we aim for all of our children to be confident mathematicians who are able to quickly recall maths facts, reason about mathematical ideas and solve real-life mathematical problems.. Being able to represent ideas in many different ways is a crucial part of 'deep understanding' in mathematics.

Our mathematics curriculum allows children to explore, wonder, question and conjecture. This gives children a secure knowledge and understanding of mathematical ideas. We want children to explore possibilities and experiment with ideas, testing predictions in order to form generalisations. We aim to support our children in developing a growth mind-set and support them in becoming confident mathematicians.

Aims

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It enables children to understand relationships and patterns in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. Pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

We aim to ensure that all children:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils

develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately

- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of more simple steps and persevering in seeking solutions.

Teaching Programmes

We are a Mathematics Mastery partner school and as such follow the Mathematics Mastery Primary Programme in all year groups. The Mathematics Mastery pedagogy is based on the idea that a deep understanding is achieved through covering fewer topics in greater depth. Pupils master concepts rather than learning procedures by rote. There are three key features of the primary programme that help children develop a deep understanding of mathematics:

- **Objects and pictures:**

Children use concrete manipulatives (objects) and pictorial representations (pictures), before moving to abstract symbols (numbers and signs).

- **Language development:**

The way that children speak and write about mathematics has been shown to have an impact on their success. We use a carefully sequenced, structured approach to introduce and reinforce mathematical vocabulary. Every lesson includes opportunities for children to explain or justify their mathematical reasoning.

- **Problem solving:**

Mathematical problem solving is at the heart of the approach – it is both how children learn maths, and the reason why they learn maths. By accumulating knowledge of mathematical concepts, children can develop and test their problem solving in every lesson.

The expectation is that the majority of pupils will move through the curriculum at broadly the same pace. When a child is confident with a certain objective, they will be given the chance to deepen and apply their knowledge and understanding through a variety of problem solving activities.

Maths Meetings

Daily Maths lessons are supplemented by a daily Maths Meeting session which is used to consolidate key areas of mathematics in each class. Maths Meetings provide an opportunity to teach and revise key areas of mathematics in each class. Maths Meetings provide an opportunity to teach and revise key mathematical knowledge which may not be explicitly covered during the maths lesson. This means that pupils are practicing concepts and skills on a regular basis, meaning they are continually building on their mastery of these concepts.

Planning
The class teacher is responsible for adapting Maths Mastery plans to suit their current cohort.

The Foundation Stage
As the Reception class is part of the Foundation Stage, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals. We give all the children the opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practice and talk confidently about mathematics following the Mathematics Mastery programme.

Mathematics and Inclusion
Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all children which meets their individual needs. Through our mathematics teaching we provide learning opportunities that enable all pupils to make good progress from their individual starting points. We strive to meet differing needs of pupils with special educational needs, those with disabilities and those with a particular strength in mathematics.

Assessment
Teachers formatively assess children, in the short term, throughout a lesson and on a lesson by lesson basis to ensure that all children have understood and achieved the learning objective.
As a school we use the Early Years Goals to assess mathematical understanding in Reception. In other year groups we use work in the child's books and observations during lesson time to assess against learning objectives and National Curriculum aims. End of year Standard Assessment Test (SATs) give us our summative assessment data. We use NFER assessments at the end of each academic year to monitor progression in addition to half termly assessments from Mathematics Mastery. Across the school, OTrack is used for both formative and summative assessment. Children's learning is tracked throughout the year and any underachieving pupils are identified and intervention is put into place. In all year groups, same day intervention takes place to ensure that any children with misconceptions are identified and worked with as soon as possible. Observations, good questioning and children's work within lessons are used to informally assess children throughout each lesson.

Resources
All classrooms have a range of resources appropriate to the children. Shared resources are stored in the maths cupboards which all year groups have access to. Resources are evaluated yearly.

Monitoring and Review

Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the SLT and the subject co-ordinator. The work of the subject co-ordinator also involves supporting colleagues in their teaching, being informed about current developments in the subject, and providing support and direction for mathematics across the school. The mathematics co-ordinator will support class teachers in the implementation of the Mathematics Mastery.

Reviewed by T Sharpe (Maths coordinator) October 2022