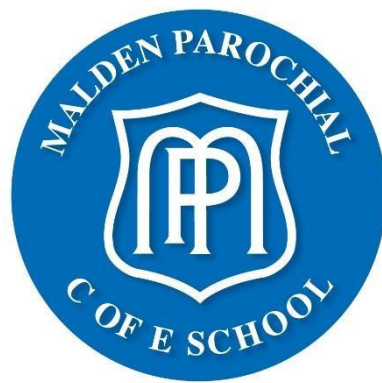


The Royal Borough of Kingston upon Thames

# **Malden Parochial C of E Primary School**



# **Mathematics Policy**

Agreed: Summer Term 2020

Review: Summer Term 2022

*[or as required]*

# Mathematics Policy

## Vision Statement

At Malden Parochial, we aim for children to leave as confident, skilled and resilient mathematicians who understand the importance of maths in everyday life. We aim to develop children's mathematical understanding through enquiry, reasoning and problem solving. Children will use a range of learning strategies, working both independently and collaboratively. We endeavour to ensure children develop a positive attitude to mathematics as an interesting and valuable subject. Teachers use rich questioning and discussions where children can talk about the subject using mathematical language. Misconceptions are identified in classrooms where children are not afraid of making mistakes.

## Intent

At Malden Parochial, children will follow a rich, balanced and progressive curriculum; they will be able to reason, problem solve and develop fluent conceptual understanding in each area of Maths. The lessons are fun, current and linked to everyday life. Children will make better sense of the world around them and relate the pattern between maths and everyday life.

## Statutory Requirements

The National Curriculum for Mathematics aims to ensure that all pupils:

- 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 simpler steps and persevering in seeking solutions.

Through our Maths curriculum, we will sustain and develop in all children:

- confidence, understanding and enjoyment in mathematics;
- an appreciation of mathematics as a means of communication through which they can analyse information and ideas;
- the ability to work systematically where the task requires a careful accurate approach, as well as the ability to show imagination, initiative and flexibility when appropriate;
- independence of thought and action as well as the ability to co-operate within a group;
- problem solving skills and strategies;
- the ability to use mathematics effectively as a tool in a wide variety of situations;

## Policy Development

This policy has been developed in consultation with staff, pupils and parents. The consultation and policy development process involved the following steps:

1. Review – a member of staff (Subject Leader for Maths) pulled together all relevant information including relevant national and local guidance.

2. Staff consultation – all school staff were given the opportunity to look at the policy and make recommendations.
3. Parent/stakeholder consultation – parents and any interested parties were invited to review the policy before ratification.
4. Ratification – once amendments were made, the policy was shared with governors and ratified.

## **Implementation**

### **Definition**

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 apparently distinct domains, but 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.

### **Roles and Responsibilities**

The Subject Leader is responsible for:

- Working with the Headteacher and the Senior Leadership Team to monitor, plan and develop the subject to allow for progression, continuity and high standards of attainment in Mathematics.
- Supporting colleagues in the teaching of Mathematics and provide a strategic lead and direction in the subject.
- Managing periodic book reviews to ensure the curriculum is being covered and the marking policy is adhered to.
- Monitoring progress in Mathematics, highlight and plan actions required.
- Taking responsibility for auditing and organising mathematics resources.
- Keeping up to date with developments in Mathematics education and to inform colleagues as appropriate.
- Drawing up annual action plan for Mathematics.
- Reviewing the school policy for Mathematics as appropriate.

The Headteacher is responsible for:

- Actively supporting and encouraging staff, praising good practise and supporting staff development, in-service training and resources.
- To monitor teaching and learning through lesson observations, learning walks and book checks, and to give informative and constructive feedback.
- Support staff development through training and provision of resources.

The Class Teacher is responsible for:

- Being responsible for the planning and teaching of Mathematics.
- Managing and supervising their class's use of mathematics equipment.

The Governors are responsible for:

- Appointing a named governor who has responsibility to oversee Mathematics. They will meet with the Subject Leader to review development plans.

## **Equal Opportunities**

- At Malden Parochial we value the individuality of all of our children. We are committed to giving our children every opportunity to achieve at the highest of standards.
- We offer a broad and balanced curriculum, and have high expectations of all children.
- We seek to ensure that all pupils have equal access to the full range of educational opportunities provided by the school. We constantly strive to remove any forms of indirect discrimination that may form barriers to learning for some groups.
- We value each pupil's worth, we celebrate the individuality and cultural diversity of the community centred on our school, and we show respect for all minority groups.
- The achievements, attitudes and well-being of all our children matter.

## **Health and Safety**

The Subject Leader for Maths will ensure that all material used when teaching, is appropriate and fulfils the requirements of the school's values as well as the nationwide British Values. Staff will implement effective measures to ensure pupil safety when using mathematical equipment.

## **Planning**

Teachers are expected to plan using the Key Performance Indicators according to the children's knowledge and understanding of the various concepts, identified through the rigorous and ongoing analysis of assessment data and daily marking. Teachers throughout the school plan using the agreed format. This format includes:

- The objective to be covered taken from the key performance indicators;
- Success criteria to show what the children need to be able to do in order to reach the objective;
- Differentiation of teaching and activities to suit the needs of all children within the class;
- Where additional adults will be directed to support teaching and learning;

## **Teaching**

The teaching of Maths at Malden Parochial Church of England Primary School provides opportunities for:

- Group work
- Paired work
- Whole class teaching
- Individual work

Pupils engage in:

- Written methods
- Practical work
- Investigation work
- Problem solving
- Mathematical discussion
- Consolidation of basic skills and routines

We recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. A variety of teaching styles will allow for children's individual learning styles to be catered for. Children must be taught the appropriate language linked to the concepts they are being taught. This should occur at all levels. Children must know and be encouraged to use the vocabulary in the right context. We endeavour to set work that is challenging, motivating and encourages the pupils to talk about what they are learning.

### **Organisation**

The school uses a variety of teaching and learning styles in mathematics lessons. During these lessons we encourage children to ask, as well as answer, mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards and small apparatus to support their work. The school also promotes the use of investigational and problem solving material to allow children to apply their mathematical skills in a variety of situations. In all classes, there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work and in other lessons by organising the children to work in pairs or individually on open-ended problems or games. We use teaching assistants to support some children and to ensure that work is matched to the needs of individuals.

### **Homework**

Homework is sent out weekly and activities are differentiated to appropriate levels for all children in the class. The main purpose of Maths homework is to consolidate the learning that has taken place in class and provide the opportunity for children to discuss mathematical concepts with their family/friends in familiar contexts.

### **Resources**

All classrooms have a number of maths resources and a Mathematical dictionary. Topic specific resources (such as clocks and weights) are located in well-labelled central storage areas. Practical resources are used regularly in Maths across all year groups. It is important for the children to have a range of learning tools provided and to be able to learn through experience. There is a whole school Calculation Policy.

### **Impact**

#### **Assessment**

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class.

Assessment is carried out through:

- Questioning
- Marking
- Mini-plenaries
- TA feedback
- Self-assessment

Children in Years 1 to 6 will sit test papers at least bi-annually, to assess their learning and progress. These will provide the class teacher with a gaps analysis to inform their future planning.

The school's Assessment and Marking Policies inform high quality feedback and pupils' responses in Mathematics. This includes next step marking.

All children are given a maths target from their class teacher, the targets are measurable and are reassessed every half term. The targets are shared with parents and kept in their Maths books.

### **Monitoring Arrangements**

The delivery of Maths, is monitored by the Subject Leader (Natalie Martin) and SLT through:

- Planning scrutiny
- Learning walks
- Lesson observations
- Monitoring of KPIs

The children's development in Maths is monitored by class teachers using the KPIs and SIMS to record.

### **Monitoring and Evaluation**

Monitoring takes place regularly through sampling children's work, teacher planning through a book scrutiny and lesson observations.

Monitoring the standards of children's work and the quality of teaching in Mathematics is the responsibility of the Maths Subject Leader and Senior Leadership Team. The work of the Subject Leader also involves supporting colleagues in the teaching of Maths, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school.

### **Review**

The Subject Leader and Headteacher will review this policy and amend as appropriate.

### **In conclusion**

#### **Consultation**

At the end of each academic year, the coordinator, Headteacher and staff review and evaluate the Mathematics taught. Evaluation should take into account:

- Implementation of the National Curriculum. This will include discussion of the lesson structure, mental and written strategies, progress of the children in line with key objectives, planning issues and staff needs as regards training and support;
- Pupil achievement, both in tests and by teacher assessment;
- Coverage of curriculum;
- Analysis of children's books;
- Staff development;
- Any issues arising from teaching, regards common problems or difficulties
- Children who have not reached the age related expectations;
- Pupils who need to be added to an Additional Needs Register (ANR) or Most Able Register (MAR).

### **Links to other policies and documents**

- Assessment policy
- Marking policy
- Homework policy
- SEND policy
- Inclusion policy
- Science policy
- Computing policy
- Internet Safety policy

### **Acronyms**

KPIs – Key Performance Indicators

SLT – Senior Leadership Team

TA – Teaching Assistant

SIMS – School Information Management System

ANR - Additional Needs Register

MAR - Most Able Register

SEND – Special Educational Needs and Disabilities

### **Appendix**

Appendix A – EYFS Learning and Development

Appendix B – KS1 and KS2 Curriculum Mapping

Appendix C – KS1 and KS2 Curriculum Skills Development

Appendix D – KS1 and KS2 Schemes of Work

Appendix E – KS1 and KS2 Key Performance Indicators