

# Roberttown CE (c) J&I School

## Maths Policy



March 2022

<b>Approved by:</b>	Governing Body	<b>Date:</b> March 2022
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<b>Next review due by:</b>	Standards Committee February 2025
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Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. As a Church School, we believe it is important that we develop in our children, a sense of responsibility for the world in which they live.

Mathematics contributes to this by creating responsible, numerate citizens who 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 offers a way of analysing and synthesising our experiences through acts of describing, organising, explaining and predicting in order to make sense of the real world.

### **Rationale**

At Roberttown School, we believe that all children can become mathematicians: Maths should be a dynamic interactive subject, which generates discussion and mathematical thinking. We want our children to enjoy their maths learning and have the confidence to have a go at whatever challenge they are faced with. We want our children to understand the relevance of mathematics to their lives today. Mathematics classrooms should not be silent classrooms. Children need to be able to discuss and articulate their thinking. Classrooms should have a buzz about them – a buzz of enthusiasm and learning.

To this end, at Roberttown, we have adopted a Mastery approach to mathematics. This enables us to deliver the three aims of the National Curriculum 2014: fluency, reasoning and problem solving, in a way that is inclusive for all children. Underpinning this is the belief that all children can achieve in mathematics. We believe in promoting sustained and deepening understanding by employing a variety of mastery strategies, with the teaching of conceptual understanding at the heart of everything we do.

‘Mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil’s journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of the maths that’s been taught to enable him/her move on to more advanced material.’ NCETM

Our aim is to equip our children with the skills necessary to access the curriculum, be that in the Early Years Foundation Stage or Upper Key Stage 2 where we work to prepare them for the secondary curriculum. We endeavour to create independent and confident mathematicians who are well equipped to apply their learning and understanding in the wider world.

### **Aims**

To ensure that:

- Statutory National Curriculum 2014 Guidance is met through our delivery of the Maths curriculum.

- Children throughout school have access to high quality, interactive learning opportunities related to Mathematics.
- Consistent teaching practices based on national, local and in-school recommendations of best practice are implemented effectively through school.
- All pupils make good or outstanding progress in the development of Mathematical skills as they move through school.
- Pupils are able to think and reason mathematically for themselves.
- Pupils are able to recall rapidly and apply fluently and accurately.
- Appropriate resources and approaches are used to enable pupils to understand and master the mathematics they are learning.
- Our expectation is that the majority of pupils will move through the programmes of study at the same pace (age related).
- Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content.
- Pupils are able to apply mathematical knowledge and skills that they have been taught.

## **Roles and Responsibilities**

### **Governing Body**

To challenge and support the school leadership team to ensure that the aims of this policy are met.

### **The Headteacher**

To have overall responsibility for policy development, curriculum planning and the monitoring of standards in teaching and learning.

### **Maths Subject Leader**

To lead on the development of teaching and learning of Maths through:

Auditing (What are the standards and status of Maths across school?)

Action Planning (What do we need to do to develop achievement and attainment in Maths?)

Action (What action will be taken to develop teaching and learning in Maths)

Monitoring (Has teaching and learning in the subject improved)

To report to governors, the headteacher, the leadership team and staff on whole school data and trends relating to Maths

### **Assessment Coordinator**

To liaise with the Maths Subject Lead to analyse pupil data linked to attainment and achievement in Maths throughout school.

### **Class Teacher**

To plan daily mathematics experiences in line with the requirements of the National Curriculum 2014.

To deliver stimulating, well planned mathematics lessons,

To provide feedback to the child as to next steps.

To monitor progress of the individual and group.

To modify lessons and medium term plans according to the needs of the group

To assess and analyse data for the class.

## **Teaching and Learning**

From Reception to Year 6 maths is taught by the class teacher using the National Curriculum programme of study as our guidelines. We organise our teaching sequence by using the White Rose Medium Term Plans and adapting these to suit the needs of our children and school.

### **Daily maths lessons**

All classes (Y1 – Y6) have a daily maths lesson lasting between 45 mins and 1 hour using a Mastery approach. In the Foundation stage, children experience focused enhanced and continuous provision within their setting.

### **Daily maths lessons usually follow a three-part structure of:**

- 5 minutes fluency (e.g. number bonds, table chanting, counting stick)
- Main teaching input (purpose: to introduce new learning – see teaching for Mastery structure)
- Consolidation and investigation (purpose: to review and consolidate learning)

### **Teaching and learning strategies**

- Learning journey (5 min fluency → Review → New learning → Review → Consolidation and independent practise) Teaching for Mastery structure
- Interactive whole class teaching ('ping-pong')
- Variation (conceptual and procedural)
- A high level of questioning including AFL.
- Good subject knowledge and a solid understanding and commitment to teacher modelling.
- Use of age appropriate manipulatives (Concrete → Pictorial → Abstract)
- Stem sentences
- Precise use of language
- Choral repetition
- Full sentence speaking
- Partner discussion.
- Rehearsal of mental strategies (to include TTRockstars, links to ICT to consolidate understanding)
- Opportunities to apply skills in reasoning and problem-solving situations
- Real life contexts
- Collaborative work
- Speaking and listening (Children explaining WHY)
- Applying skills across curriculum (e.g data handling in science)

### **Planning**

Each year group has a long term plan taken from the National Curriculum 2014 which encompasses the key objectives from each year group. Teachers will also use and adapt medium term planning from the White Rose Maths Hub to suit their classes needs. This is continually reviewed. This ensures that coverage of all objectives has been achieved by the end of each year. Short term plans are produced each week detailing teaching and learning strategies as well as notes on how learners will be supported and challenged.

## **Assessment**

Formative:

- PUMA termly assessments
- Y2/Y6 Sats

Summative:

- Regular Observations – recorded in Foundation Stage
- AFL and marking

## **Monitoring**

- Planning and exercise books are monitored termly
- Book scrutiny with children interviews are conducted termly (at least)
- Drop in 10 minute observations on an informal basis
- Learning walks to monitor classroom environment and pupil engagement.
- An annual review of whole school performance, including analysis of KS1 and KS2 SATs results
- Analysis of test results (Pupil Progress)
- Regular feedback to staff when appropriate

## **Links between mathematics and other subjects**

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

## **Information and Communication Technology**

IT will be used in various ways to support teaching and motivate children's learning. IT will involve the SMART boards, bank of laptops, and audio-visual aids.

## **Talk in the Classroom**

The following strategies will be used in daily lessons across the curriculum to support children's thinking and language development:

- Paired talk – children discuss a question or idea together prior to class discussion
- Think-pair-share – children think individually about a question or idea, before sharing and refining ideas with a partner prior to whole class or group discussion
- Oral rehearsal of sentences (stem sentences) and new vocabulary prior to writing
- Articulation of understanding

## **Provision for All**

In line with the National Curriculum we aim for the majority of children to 'move through programmes of study at broadly the same pace. Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through any new content. Those who are not sufficiently fluent will consolidate their understanding including additional practise before moving on.

## **Interventions**

After consultation with the assessment coordinator, maths coordinators, SENCO and class teachers, children who may benefit from extra provision will be identified. The additional provision will be as follows:

- 1<sup>st</sup> class at Number 1
- 1<sup>st</sup> Class at Number 2
- Daily precision teaching
- Small group intervention with a support assistant to consolidate daily classroom learning (Same day intervention)
- Pre-teaching for identified children

#### **Home-School Links**

- Weekly homework – linked to the Homework policy
- Multiplication tables
- Websites (TTRockstars,)

#### **Policy Review**

This policy document will be reviewed in line with the rolling programme in order to take account of any changes to government policy or new guidance received. The success of this policy will be measured by its implementation, usage and effectiveness as a whole school policy document.