



# Inmans Primary School

## Maths Policy

| Date       | Written By | Approved by | Review Date | Approved by Governors |
|------------|------------|-------------|-------------|-----------------------|
| March 2020 | K Batty    | SLT         | March 2022  | D North               |

### **Why teach Mathematics?**

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. 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. (Curriculum 2014)

### **Aims**

The mathematics teaching at Inmans Primary School is committed to enabling each pupil to develop within their capabilities: not only the mathematical skills and understanding for later life, but also an enthusiasm and fascination about maths itself. We aim to provide a stimulating classroom environment with adequate resources, in which pupils can develop their mathematical skills to their full potential. The school's 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.

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. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to

progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems and challenges before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on. It's better to solve one problem five different ways, than to solve five problems only one way.

### **Teaching methods and approaches**

Across the school maths Morning Activities take place. These include promoting quick recall of tables and number facts and are seen as a beneficial start to the day.

### **EYFS**

In the EYFS children are supported in developing their understanding of Numbers, Shape and Space and Measures in a broad range of contexts in which they can explore, enjoy, learn, practise and talk about their developing understanding. They are provided with opportunities to practise and extend their skills in these areas and to gain confidence and competence in their use. Opportunities are provided both indoors and outdoors meeting the children's needs for all types of play which build upon first-hand experience for all children.

### **KS1 and KS2**

Lessons follow a flexible, mastery scheme provided through the 'Maths -No problem' textbooks and workbooks. Long term, medium term and daily planning is all taken from this scheme. Across the school maths is delivered for 1 hour on a daily basis. The series has been created using the principles of Singapore Mathematics and is fully aligned to the 2014 National Curriculum. The programme provides all the elements that teachers and pupils need to explore mathematical concepts with confidence and in depth. To achieve this, children:

1. Study each concept in depth so there is sufficient time to comprehend one concept before the next one is introduced and
2. Sequence topics so, as much as possible the mental distance between concepts is small and the previously learned concept will help in learning each new one.

The teaching of Mathematics at Inmans Primary School provides opportunities for:

- whole class work
- group work
- paired work
- individual work
- group/individual work with a teacher or teaching assistant

The teacher then knows who they need to best support in the next lesson, or where appropriate, in the same lesson so that misconceptions are addressed immediately by the teacher or teaching assistant. Mathematical resources are used to support pupils.

### **Children with Special Educational Needs**

We at Inmans are an inclusive school and wherever possible we aim to integrate SEND pupils in the delivery of Maths. This is so that they benefit from the emphasis

on oral and mental work and by listening, modelling and participating with other children in demonstrating and explaining their methods.

Where necessary, teachers will, in consultation with the SENCO draw up IEP's for a child. If the child's needs are particularly severe they will work on an individualised programme written in consultation with the appropriate staff. When planning, teachers will try to address the child's needs through simplified or modified tasks or through the deployment of support staff.

In Key Stage 1 pupils' needs are assessed using the P Scales, Pre Key Stage Standards and Early Learning Goals.

In Key Stage 2 opportunities through ICT, Booster sessions and pre-teaching sessions enable extra coaching for those who need extra consolidation.

### **Talented and More Able Children**

These children's needs are addressed through challenges as part of Maths No Problem. All children are given opportunities of challenge activities and the development of mental strategies to allow them to work at greater depth rather than accelerating into new mathematical content. NCTEM documents are used to provide pupils with greater depth tasks.

### **Information and communication technology (ICT)**

Calculators are not used as a substitute for good written and mental arithmetic. They are introduced near the end of key stage 2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure. Teachers use their judgement about when ICT tools should be used. Maths programmes such as Achieve online, Times Tables Rock Stars and RM maths are all used to support individual pupils learning in maths.

### **Marking**

Pupils complete their work in their Maths No Problem workbook or in their journals. All work in their workbook is acknowledged. Verbal feedback is also part of the marking process.

### **Journals**

- At least two 'In Focus' tasks a week to be stuck in.
- Response time once every two weeks.

### **Assessment**

Assessment is regarded as an integral part of teaching and learning at Inmans Primary School, and is a continuous process. We are constantly assessing our pupils and recording their progress, in line with the School's assessment policy and Framing Learning in the Classroom (FLiC) software. We strive to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the children and ensuring progress.

Information for assessment will be gathered in various ways; by talking to the children, observing their work, marking their work, SATs papers, NFER tests, Whiterose tests and Assess and Review lessons. These sources of evidence will enable teachers to complete ongoing Teacher Assessments, using FLiC, across different skills which are appropriate for either KS1 or KS2 and described in the National Curriculum 2014.

Information from these assessments will be used to: inform future planning, identify strengths and weaknesses, provide individual and group target setting, set children appropriately in Year 6 and provide information for teachers, pupils, parents and future schooling.

### **Parental Involvement**

At Inmans Primary School we encourage parents to be involved in the mathematics curriculum

- Providing them with a parents information on the school website detailing an overview of the curriculum
- Inviting them into school twice yearly to discuss the progress of their child
- Reporting on mathematical progress in their child's report biannually with a FLiC progress report in February and end of year report in July
- Inviting parents of Year 2 and 6 pupils to a meeting on supporting children with SATs
- Informing parents of significant changes in the Mathematics curriculum
- Encouraging parents to be involved in homework activities
- Inviting parent's in for 'stay and reason' sessions.
- Homework provides opportunities for children to: practise and consolidate their skills and knowledge; develop and extend their techniques and strategies; and prepare for their future learning. Homework is set for children from EYFS up to year 6 on a regular basis.

### **Training and INSET**

The maths team attend courses to support their development and in line with the school development plan. This is cascaded and delivered as training if required to the rest of the staff.