Howbridge Church of England Junior School

Mathematics Policy Introduction

Mathematics teaches children how to make sense of the world around them through developing their ability to use number, calculate, reason and solve problems. It helps children to understand relationships and patterns in both number and space in their everyday lives. The Mathematics curriculum should be bold, provide breadth and balance and be relevant and adapted to suit the needs of all children in the modern world. It should be flexible, motivating all pupils, thus encouraging success at all levels.

It is vital that a positive attitude towards mathematics is encouraged amongst all of our pupils in order to foster confidence and achievement in a skill that is essential in our society. At Howbridge Church of England Junior School we use the National Curriculum for Mathematics (2014) as the basis of our mathematics programme. We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding that provide barriers to learning as they move through education. Assessment for Learning, an emphasis on investigation, problem solving and the development of mathematical thinking and a rigorous approach to the development of teacher.

Intent

At Howbridge Church of England Junior School we recognise that Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment.

We aim to provide a high-quality mathematics education with a mastery approach so that all children:

- become **fluent** in the fundamentals of mathematics;
- develop an enjoyment of learning through practical activity, investigation, exploration; mental exertion and discussion.
- are confident and competent with numbers and the number system.
- have the ability to solve problems through connecting ideas, decision-making and applying their mathematical skills in a range of contexts, including other subjects.
- develop the ability to reason mathematically by following a line of enquiry, developing an argument and making justifications using mathematical language.
- develop practical understanding of the ways in which information is gathered and presented.
- understand the importance of Mathematics in everyday life, especially in relation to essential life skills such as telling the time and handling money.
- foster positive attitudes towards Mathematics by developing pupils' confidence, independence, persistence and co-operation skills in a Mathematical context.

Implementation

*Pupils are taught through whole-class interactive teaching, where the focus is on all pupils working together on the same lesson content at the same time. This ensures that all can master concepts before moving to the next part of the curriculum sequence, allowing no pupil to be left behind.

*If a pupil fails to grasp a concept or procedure, this is to be identified quickly and early intervention ensures pupils are ready to move forward with the whole class in the next lesson.

*Lesson design identifies the new mathematics that is to be taught, the key points and a carefully sequenced journey through the learning. This is supported by White Rose Hub progression documents. In a typical lesson, pupils will have interaction with teachers and peers, including questioning and short tasks, explanation, demonstration and discussion.

*Procedural fluency and conceptual understanding are developed in tandem with the support of Fluent in 5 resources, times table grids, TT Rockstar's and Numbots. This ensures that key facts such as multiplication tables and addition facts are learnt to automaticity and to avoid cognitive overload in the working memory and enable pupils to focus on new concepts.

*It is recognised that practice is a vital part of learning, but the practice used is intelligent practice that both reinforces pupils' procedural fluency and develops their conceptual understanding.

*Significant time is spent developing deep knowledge of the key ideas that are needed to underpin future learning. The structure and connections within the mathematics are emphasised, so that pupils develop deep learning that can be sustained.

Impact

Our mathematics curriculum is based upon 'White Rose Hub' with the support of Numicon document resources which are fully supported by the Department for Education as they meet the requirements of the new curriculum.

The White Rose Hub provides all the elements that teachers need to teach Maths mastery with confidence and encourage children to talk using maths language. We measure our impact of our curriculum through the following methods:

- A reflection on standards achieved against the planned outcomes.
- Block assessments that demonstrate key understanding and concepts that need to be revisited, and help identify early intervention.
- Termly assessment Progress in Understanding Mathematics Assessment with Fluent in 5 and White Rose Hub assessment materials which is a suite of termly standardised maths tests which enable school to track progress, predict future performance and benchmark against national averages.
- Pupil discussion within lessons.
- Pupil discussions and practical activities demonstrating their understanding of their learning in triangulation with book and planning scrutiny.