Statement of Intent – Mathematics

Mathematics is an important creative discipline that helps us to understand and change the world. We want all pupils at Great Whelnetham Primary School to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding. At Great Whelnetham we foster positive can do attitudes and we promote the fact that 'We can all do maths!' We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable, small steps.

Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers.

— Shakuntala Devi, Indian mathematician

We teach our children to be problem solvers. We use mistakes and misconceptions as an essential part of learning and provide challenge through rich and sophisticated problems. Alongside problem solving, our curriculum allows children to develop their reasoning skills and to become confident in making conjectures and justifications. At Great Whelnetham, we encourage our children to be curious, ask questions and spot connections and patterns within their maths. At our school, children will be taught the content from their year group only, spending the necessary time becoming true masters of each area of maths, applying and being creative with new knowledge in multiple ways.

Mathematics can be seen everywhere - from the arrangement of flower petals and the navigation systems of the bees that seek them, to the strategies of how to respond to a pandemic! A secure knowledge of mathematics is not only essential for people seeking employment, it is also key to being financially secure and to be able to engage with a modern, data-driven, technical world.

Adults tend to have varying memories of maths from their own school experience, some very positive and some defined by misunderstanding as a result of out-dated teaching techniques. We aim to challenge this so that in addition to being fluent in mathematics, our children will also develop a positive attitude and sense of curiosity and wonder for this subject that persists throughout their life.

In line with the National Curriculum Objectives for Mathematics, our **intent** is 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.

Our approach to the teaching of mathematics has been carefully considered and is based on the best practices seen around the world including places such as Shanghai and Singapore. **We use a 'mastery based' approach** from White Rose Maths, that builds sequentially on deep understanding and develops fluency and mathematical reasoning. We have worked with organisations such as the NCETM to develop our expertise in mastery and are currently part of an ongoing project with the Angles Maths Hub to hone our skills further and share best practices with other schools in the All Saints Schools Trust. The **main themes** which underpin mastery in mathematics are perhaps best described by the diagram below.