



## Whimble Primary School - *Mathematics Curriculum Statement*

### Intent

At Whimble Primary School, we are committed to ensuring that children are able to recognise the importance of Maths not only in school, but, its application across a variety of disciplines in the wider world. We want all pupils to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding.

We intend for all children to:

- Become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Be able to use **Reasoning** skills efficiently to follow a line of enquiry and develop and present a justification or proof using mathematical language
- Apply mathematical **Problem Solving** skills effectively to solve a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios.
- Have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.

A classroom culture of mutual **Respect** and **Teamwork** encourages children to have a go and being comfortable with not getting everything 'right'. Children are supported to understand when learning is taking place and embracing that purposeful struggle can support this.

We *encourage* children to **Stay Positive** and develop their **Resilience** by using mistakes and misconceptions as an essential part of learning.

Through **Aiming High** and **Reflection** we foster positive approaches to maths and 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 alongside developing attitudes that embrace challenge.

### Statement of Implementation:

Our maths curriculum is delivered through the use and support of the White Rose Maths Scheme and Hamilton Trust, which is based on the National Curriculum.

Careful use and selection of both schemes enables learning to be tailored to the needs of mixed classes, particularly at Key Stage 1.

This ensures the taught content revisits previously taught mathematical elements and skills throughout all classes.

Lessons may be personalised to address the individual needs and requirements for a class but coverage is maintained. These teaching sequences are blocked to enable a depth of understanding for all. In Early Years, our aim is to ensure that all children develop firm mathematical foundations in a way that is engaging, and appropriate for their age. In Key Stage 1 number is revisited in all terms; other year groups reinforce number fluency through arithmetic starters. This is because we believe that number underpins all areas of mathematics. Our curriculum interweaves prior content with new concepts, and teachers provide opportunities for the revisiting and consolidation of previously taught knowledge and skills within lessons in other parts of the school day.

The Number Sense Number Facts Fluency Programme is also taught daily in Years 1 to 3. This programme focuses entirely on number fact teaching in a highly visual progressive way supporting factual fluency. In Early Years, alongside structured teaching sessions, children explore maths through well-planned activities and challenges in the continuous provision.

Lessons are taught through the Connective Model of Learning Mathematics (Haylock and Cockburn, 1989). This helps to ensure effective learning takes place as the learner makes cognitive connections between the context (concrete experience) and the use of relevant language, symbols and images. Teachers use modelling and scaffolding as a means to support independent learning.

Using this approach, teachers aim to give children access to equitable classrooms, where all pupils can participate in the mathematics being taught. Children are encouraged to develop deep connected and sustained understanding and demonstrate independence, ownership and resilience towards their learning.

Teachers monitor through marking and formative assessments to inform future planning and identify children who may require pre-teaching, intervention or further challenge.

Pupils are encouraged to think and behave like mathematicians by:

- working flexibly to answer questions
- reflecting on the efficiency of their chosen method
- being willing to have a go and being comfortable with not getting everything right
- developing a resilience that not all maths is easy and may involve purposeful struggle
- talking about the mathematics by responding in full sentences and sharing their understanding
- talking collaboratively with both adults and children, and agreeing or politely disagreeing to justify their thinking
- using subject specific vocabulary

All staff working in classrooms (including TAs) have participated in CPD sessions designed to develop the teaching of reasoning and language in mathematics.

In Key Stage 2 teachers use summative assessments twice a year to inform future planning.

### **Statement of Impact:**

Children are becoming confident mathematicians who are more willing to take risks with their learning.

Assessment of mathematics is ongoing: teachers use formative assessment following taught lessons to build a complete picture of what children in their classes can do, and need to develop further; marking and conversations with students help children to understand this. Evidence of this can be seen in the outcomes of work in pupils maths books and when talking to the children.

Teachers use end-of-term tracking sheets to mark progress over the year. Formative assessments are supported by biannual NFER assessments which include arithmetic and reasoning papers.

Pupils know how and why maths is used in the outside world and in the workplace. They know about different ways that maths can be used to support their future potential. Mathematical concepts or skills are mastered when a child can demonstrate their understanding in multiple ways; describing using correct mathematical language to explain their ideas; representing it in a variety of ways; explain it to someone else; see mathematical connections and can independently apply the concept to new problems in unfamiliar situations. Children demonstrate a quick recall of facts and procedures.