# Subject: Mathematics
# Christian Value: COURAGE

*"A high-quality mathematics education 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."*
*National Curriculum*

## Intent

At **Kirby Hill Church of England Primary School**, our mathematics curriculum is guided by our Christian vision that *"All things are possible for one who believes"*, and is deeply rooted in our **ACHIEVE** curriculum drivers:

- **A**spire
- **C**hallenge
- **H**onour every individual
- **I**nspire curiosity and creativity
- **E**mbed strong values
- **V**alue community and global connections
- **E**mpower through knowledge

Using the National Curriculum, our intent is to **aspire** for all children to become confident and competent mathematicians who are not afraid to take risks and think innovatively. We **challenge** pupils to think critically and solve problems through hands-on learning, ideation, and reflection.

Our curriculum **honours every individual**, ensuring that mathematics is inclusive, accessible and relevant to all learners regardless of starting point or background. It aims to **inspire curiosity and creativity**, helping children to explore how mathematics affects our lives and shapes our understanding of the world.

We **embed strong values** - such as resilience, responsibility, and compassion - through collaborative work and self-reflection. Our Christian Value for this subject is **Courage**. In mathematics, we apply the skills and knowledge they have acquired to solve increasingly challenging problems in a range of contexts.

Through links to local industry, heritage and environmental issues, we **value our community and wider world**, giving children real purpose for their learning. By building mathematical vocabulary, modelling techniques, and encouraging iterative improvement, we **empower pupils** with the skills, confidence and self-belief to flourish - in school and in life.

At Kirby Hill Primary School, we aim to provide a high-quality mathematics education that fosters a deep understanding of mathematical concepts, fluency and problem-solving skills. Our curriculum is designed to help develop confident, inquisitive learners who appreciate the beauty and power of mathematics and are able to apply their skills in a range of contexts.

A mastery approach ensures that every child is able to develop a secure and adaptable understanding of mathematical concepts, regardless of their starting points. We focus on depth of understanding and use concrete, pictorial and abstract representations to support learning. Our lessons encourage reasoning, problem solving and resilience, enabling children to articulate their mathematical thinking confidently.

We are committed to nurturing a love for mathematics by making learning engaging and relevant. By the end of their primary education, our pupils will have the knowledge and skills needed, preparing them for the next stage of their education and life beyond school.

**We intend to do this by:**

- Ensuring our children have access to a high quality maths curriculum that is both challenging and enjoyable, and builds upon previous learning.
- Providing our children with a variety of mathematical opportunities, which will enable them to make the connections.
- Ensuring children are confident mathematicians who are not afraid to take risks.
- Fully develop independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement
- Providing children with the opportunity to apply their mathematical knowledge across other curriculum areas.

## Implementation

Maths is a core subject in the National Curriculum. Kirby Hill CE School follows the White Rose Hub Scheme of Work to develop secure understanding of the maths curriculum.

# Kirby Hill C of E Primary School

All things are possible for one who believes (Mark 9:23)

**Planning**

Planning is undertaken at three levels:

- **Long term:** As set out in the National Curriculum.
- **Medium term:** White Rose Maths planning gives the main teaching objectives (small steps) for each term and gives ideas for maths talk, fluency, problem solving and reasoning.
- **Short term** planning for a White Rose block is prepared by the class teacher using the Kirby Hill maths template. These plans list the order of learning concepts to be covered, National Curriculum learning objectives to be covered, the NCETM 'Big Idea' and key vocabulary.

**Teaching**

At Kirby Hill CE Primary School, teachers:

- Know where their children are using assessment (formative and summative).
- Understand where their children need to be, through a secure understanding of year group and/or pre key stage expectations and ongoing, formative assessment
- Know how they are going to get them there through the use of a range of strategies to promote independence, mastery and high expectations of ALL.
- Effectively deploy adults to support and challenge.
- Plan for progression during and between lessons.

**Fluency**

In addition to maths lessons, All classes from Y1 upwards have separate fluency sessions at least 3 mornings per week (preferably daily), following the Kirby Hill fluency LTP. These revisit and embed key maths skills to enable children to use these confidently in maths lessons.

**Challenge for all**

At Kirby Hill, pupils are encouraged to take ownership of their learning. Independent work is placed in differentiated trays to provide appropriately challenging tasks for all pupils to meet the lesson objective and progress in their maths learning; children choose their own level of challenge. In the Y1/2 class, the initial focus is on developing independence in reading and answering maths questions: children are given questions that they can access independently. More confident mathematicians then move onto problem-solving challenges.

In EYFS, timely adult intervention is used to develop and extend children's maths experiences.

**Concrete, pictorial, abstract**

The CPA approach helps children to explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding. When introduced to a key new concept, pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols.

**Assessment**

- For each WR maths block: a White Rose test from the year below is used as pre-assessment and a current year group test at the end of the unit.
- At the end of each term, NTS tests (Y1-5) and old SATS papers (Y6) are used to track progress and are reported to governors.
- Teachers assess formatively every lesson, both during and when marking pupil books

## Impact

The impact of Mathematics is constantly monitored through both formative and summative assessment opportunities. Each lesson, teachers assess pupils against the learning objectives. Furthermore, each unit has a pre-assessment and an end of unit assessment to test pupil understanding of the concepts taught.

Termly summative assessments, using NTR or SATs papers, enable pupil attainment and progress over the year to be tracked and analysed.

Pupils leaving Kirby Hill School at the end of KS2 will be equipped with the requisite skills, enthusiasm and knowledge to succeed in science at KS3. They will have the necessary tools to confidently and meaningfully question and explore the world around them. Pupils will be aware of the significance and impact of science on society.

**The expected impact of Kirby Hill's mathematics curriculum.**

Pupils will leave us prepared for the next stage in their lives with:

- Quick and accurate recall of facts and procedures
- The ability to recognise relationships and make connections in mathematics
- Confidence and willingness to challenge themselves
- Skills and concepts that have been mastered.
- The knowledge that maths underpins most of our daily lives