Court de Wyck Church School
Maths Policy

Growing Together, Belonging and Achieving

Everybody in our caring Christian Community inspiring, nurturing and challenging each other to do their best in mind, body and spirit to achieve more than they ever thought possible.

John 10:10 'Life in all its fullness

Our Intent

At Court de Wyck Church School our curriculum is child-centred, aspirational and purposeful in order to instil within our pupils the knowledge, skills and confidence needed for their ever-changing futures. Its focus is on nurturing pupils' natural curiosity and love of learning, supporting them to develop resilience and understanding of the world around them. It encourages pupils to make connections and to be creative, independent thinkers who relate their learning to real- life experiences. At the heart of our curriculum are our Christian values and the dedication to working collaboratively to achieve more than we ever thought possible.

Our Maths Intent

- It is tailored to meet the needs of Court de Wyck Church School, its context within a semi-rural village setting and its pupils who come from a diverse social background.
- It provides experience of and connections to the world beyond the school.
- It provides a broad range of creative learning experiences to develop children's moral, spiritual, social, mental, physical and cultural understanding through our whole school values and the development of a contextually relevant curriculum.
- Is ambitious and aspirational for all pupils inspiring them to believe they can achieve more than they ever thought possible.
- It recognises and celebrates diversity welcoming each pupil as an individual.
- It secures pupils' core skills, knowledge and understanding to at least an age-appropriate level and beyond, and is adapted, designed, and developed for pupils with additional learning needs or disabilities.
- It provides coverage of the National Curriculum and ensures children make good progression from EYFS to Y6.
- It provides enrichment opportunities to broaden and enhance the curriculum experience for pupils through engaging Enquiry Questions and contextually specific learning opportunities to develop 'The Court de Wyck Child.'
- Is flexible and responds to pupils' interests, understanding and progress.

Our Maths curriculum is based on the following principles:

- Encouraging children to have a positive attitude towards Maths as a vital life skill and demonstrate curiosity, perseverance and resilience when tackling mathematical problems.
- Ensuring that pupils are fluent in the fundamentals of Maths and can demonstrate secure recall of key facts in a variety of contexts.
- Developing children's conceptual understanding through high quality teaching which progressively builds on prior learning and recognises the need for concrete and pictorial experiences of concepts before abstract application.
- The importance of using age-appropriate mathematical vocabulary to support children with communicating their understanding and explaining their reasoning when solving mathematical problems
- Providing a wide range of opportunities to apply their knowledge to solve problems in various 'real-world' contexts including making purposeful links within the wider curriculum

Intent and Implementation

We have variable mixed age classes and so we plan the progression of learning for pupils in cycles. These ensure that pupils have the pre-requisite knowledge to learn new material, make links and remember more. This is a summary of what the pupils will learn in each key stage. More detail about an individual cycle is available.

Early Years

In the Early Years Foundation Stage, we use White Rose Maths to guide and give ideas for teaching key mathematical learning. It builds and develops key skills in line with the Early Years Curriculum. Allowing children opportunities to explore number and calculations is an essential part of meeting their Early Learning Goal for number. These are provided through a mixture of whole class teaching, guided group work and play. In EYFS children's mathematical learning is assessed against the Early Years Foundation Stage (EYFS) Framework.

Y1-Y6 at Court de Wyck will experience high-quality maths teaching following a mastery approach based on the White Rose Maths Scheme of Learning. The curriculum is broken up into blocks of learning where the objectives for each block are set up in small sequential steps which build progressively upon each other. Lessons are adapted as required with extra scaffolding, support and challenge for those that need it. The expectation is that all children will master the basic skills or concepts within each step and be able to demonstrate their understanding using mathematical language and by applying it to solve problems in varying contexts. Children who quickly master a step are provided with further opportunities to explore and develop their understanding at a deeper level within each step.

At the end of Key Stage Two a Court de Wyck child will:

- Have a secure understanding of the number system and place value, including larger integers
- Be able to make connections between multiplication and division through their knowledge and understanding of fractions, decimals, percentages and ratio

- Have developed their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation
- Be familiar with the language of algebra as a means for solving a variety of problems
- Consolidate their knowledge and understanding of number in a range of contexts, including geometry and measures
- Be able to classify shapes with increasingly complex geometric properties and know the vocabulary they need to describe them
- Be fluent in written methods for all 4 operations, including long multiplication and division, and in working with fractions, decimals and percentages
- Read, spell and pronounce mathematical vocabulary correctly.

Concrete-Pictorial-Abstract (CPA)
One of the key elements we use in maths mastery is the CPA approach. This is a highly effective method in developing a deep and sustainable understanding of maths. It builds on children's existing knowledge and involves moving from concrete materials, to pictorial representations, and finally to abstract symbols and problems.

The **concrete** phase is the **'doing'** stage. During this stage, children use concrete objects to model problems. This brings concepts to life by allowing children to experience and handle physical (concrete) objects. For example, if a problem involves adding different coloured socks, children first handle actual socks. From there, they progress to handling abstract counters or cubes which represent the socks.

Pictorial is the **'seeing'** stage. Here, visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem. Building or drawing a model makes it easier for children to visualise abstract problems and make them more accessible.

Abstract is the '**symbolic'** stage, where children use abstract mathematical symbols (e.g. +, –, =) to model problems. We do not progress to this stage until the children have demonstrated that they have a solid understanding of the concrete and pictorial stages of the problem.
Although the CPA model has three distinct stages, teachers will go **back and forth** between each stage to reinforce concepts. Teachers vary the apparatus that children use in class, how they represent maths problems and the methods used to solve them, so that children can craft powerful mental connections between the concrete, pictorial, and abstract phases.

Resources

Alongside the White Rose Schemes of Learning, teachers use a collection of complementary resources. These include: concrete resources (such as Unifix cubes, counters, Numicon, Base 10, Place Value Counters, Dienes Equipment and bead strings) and online resources (such as Classroom Secrets, N-Rich, NCETM, Primary Stars Maths). In addition, each child in Y2-6 is provided with their own account on Times Tables Rock Stars to support them with developing rapid recall of times table and related division facts. Teachers follow the White Rose Maths Hub 'Calculations Policies' for progression in written and mental calculations. (See **Appendix A**)

Impact

At Court de Wyck, we intend for the impact of our high-quality Maths curriculum to be that pupils will learn the curriculum each year so that by the end of their time at school they will have a strong understanding of what it means to be a mathematician and have learnt the key knowledge they need to succeed and prosper. Disadvantaged pupils and pupils with SEND will acquire the knowledge and skills needed to move on to the next stage of their education.

Our impact is measured through regular book looks, learning walks and informal assessment of children's understanding and progress by the class teacher. Each classroom utilises a working wall display to support and track children's progress through a unit of work and support with use of appropriate historical vocabulary. Before the start of each maths unit, children will complete elicitation tasks to assess prior knowledge. Knowledge organisers are used for each unit of work which can be referred back to when reviewing prior learning. Regular revisiting of learning is an integral part of each lesson and enables teachers to use AfL effectively to move children's learning forward.

Assessment

Formative assessment takes place on a day-to-day basis throughout Maths lessons. Using the information gained from their observations, teachers address misconceptions in real time and guide children in the next step of their learning. For Years 1-6 summative assessment takes place at the end of each block of work, in the form of White Rose Maths end of block assessments, in order to check progress and understanding of content. Further assessment takes place three times year in Y1-6 using PUMA and teachers analyse the data from these assessments in order to identify targets and create intervention groups. Children in Years 2 and 6 are provided with opportunities to practise SATs style questions and sit past papers which are used by teachers to identify gaps and plan for targeted interventions.

Across the school, we use ScholarPack to track children's progress in Maths three times a year by assessing them against age related expectations as outlined in the National Curriculum Program of Study. In Term 5, Years 2 and 6 complete end of Key Stage SATs papers. In addition, children in Y4 are assessed on their rapid recall of times table facts through the Multiplication Tables Check which takes place in Term 6.

For White Rose Maths Calculation Policy see **Appendix A**

For Whole School Maths Progression Map see **Appendix B**
For Progression of Maths Vocabulary see **Appendix C**