



What Maths looks like at Church Drive Primary School

At Church Drive Primary School we aim to ensure all our children leave at the end of year 6 with the skills and confidence to solve a range of mathematical problems that require fluency with numbers and reasoning. To give maths a purpose we make links between maths and the real world so children can see the relevance of developing these life skills.

Over the past few years we have worked hard to develop and improve the teaching and learning in mathematics, adopting a Mastery approach which underpins all learning. Planning, lesson delivery, classroom environment and assessment all reflect this style of teaching and learning.

The three aims of the NC should be addressed every day throughout our curriculum ([Fluency – Reasoning – Problem Solving](#)).

Curriculum Intent

- **Whole class teaching** - We teach Maths to the class as a whole and do not label children in specific groups – unless curriculum objectives from previous years need to be taught. Formative assessment provides an accurate starting point for all children and their current attainment for a specific mathematical concept unless an alternative provision is required on an as and when basis.

- **Fluency** – We recognise the importance of developing fluency in maths, so it is not just about remembering facts. Ultimately, we want our pupils to be confident in their explanations and reasoning in maths. To support fluency development, our timetable allows for many opportunities to practise previously taught concepts. Manipulatives are regularly referred to and offered to underpin conceptual understanding.

This is our philosophy:

- Teach using the mastery maths approach to achieve the best pupil outcome.
- High quality modelling and scaffolding of skills leading to a deep understanding of concepts and fluency of methods

- Children learning through exploring mathematical concepts and linking to real life situations where they are able to reason.
- Cross-curricular links wherever possible
- Concrete-Pictorial-Abstract approach (Concrete/Images/Symbols/Experiences)

This is the knowledge, understanding and skills achieved at each stage:

By the end of EYFS pupils will:

- Count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number.
- Use quantities and objects to add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.
- Use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

By the end of Key Stage 1 pupils will:

- Develop confidence and mental fluency with whole numbers, counting and place value
 - Use numerals, words and the four operations
 - Recognise, describe, draw, compare and sort different shapes and use the related vocabulary
 - Use a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money
 - Know the number bonds to 20 and be precise in using and understanding place value
 - Read and spell mathematical vocabulary

By the end of Lower Key Stage 2 pupils will:

- Be increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value
- Perform efficient written and mental calculations accurately with increasingly large whole numbers
- Develop their ability to solve a range of problems, including with simple fractions and decimal place value
- Analyse shapes and their properties, and confidently describe the relationships between them
- Use measuring instruments with accuracy and make connections between measure and number

- Memorised their multiplication tables up to and including the 12 multiplication table
- Read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling

By the end of Key Stage 2 Pupils will:

- Understand the number system and place value to include larger integers
- Make connections between multiplication and division with fractions, decimals, percentages and ratio
- Develop 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
- Use the language of algebra as a means for solving a variety of problems
- Classify shapes with increasingly complex geometric properties and use the vocabulary they need to describe them
- Be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages
- Read, spell and pronounce mathematical vocabulary correctly

Curriculum Implementation

This is how it works:

- Children all have the opportunity to be further challenged within a lesson. All learning tasks are linked to the others - not just different tasks.
- Mental arithmetic session to focus on times tables, number bonds, the four operations and retrieval activities.
- Many opportunities for Maths Talk
- Opportunities to learn from our mistakes
- All children regardless of ability are regularly exposed to reasoning and problem solving activities.

This is what adults do:

- Planning through 'Power Maths' to include discrete focus on 3 aims of curriculum- Fluency, Reasoning and Problem Solving
- Reflection to steer next steps learning and planning
- Positive use of mistakes and misconceptions
- Create a learning environment rich in resources that support learning
- Regular book looks, learning walks, pupil voice, staff audit
- Whole school CPD

This is how we support and ensure access for all children:

- Small group/1-1 adult support when needed, based on formative assessment
- We use teacher assessment and self-assessment to quickly identify any child who requires additional support in specific areas
- Same day response time to address misconceptions

This is how we challenge:

- Small group work to further challenge
- Reasoning and justification expected
- Opportunities to 'prove it' and explain reasons for answers
- Greater Depth challenges embedded within 'Power Maths'

This is the lesson structure:

Additional Maths Retrieval Session 9-915am

- Tough 10/ fluent in 5 (shared drive)
- Flashback Four (shared drive)
- Daily 10- times tables focus only, KS1 can start with number bonds in September

- Power Up (optional)
- Discover Task
- Share Task
- Think Together Task
- Independent Practise in Workbooks

Curriculum Impact

This is what you might typically see:

- Happy and engaged learners
- Paired/group work
- Use of a range of manipulatives
- Different representations of calculations
- A range of different activities including practical and use of technology
- Engagement and perseverance
- Self-motivated children
- Resilient learners
- Children talking positively about maths, making links to real life learning
- Children asking questions

This is how we know how well our pupils are doing:

- Verbal feedback for pupils and staff
- Daily marking and formative assessment
- Rosenshine Questioning techniques
- Pupil progress meetings
- Analysis of assessments
- Targeted use of TAs to support individual children

This is the impact of the teaching:

- Confident children who can talk about maths
- Children who are enjoying their learning in maths
- Depth of understanding/application in different contexts
- Children ready for the next step in education

