

The Cathedral School of St Peter and St John RC Primary



*Growing together within God's loving family, we support, challenge and inspire
each other to become the best that we can be.'*

Mathematics Policy

September 2022

Contents:

[Statement of intent](#)

1. [Legal framework](#)
2. [What Mathematics Looks Like at The Cathedral School](#)
3. [Our Philosophy for Teaching Mathematics](#)
4. [Planning](#)
5. [Assessment](#)
6. [Monitoring and review](#)

Statement of intent

Mathematics is a creative and highly inter-connected discipline which provides answers to many of the world's greatest problems. It is essential to everyday life, critical to science, technology and engineering and necessary for financial literacy and most forms of employment. Through a high-quality Mathematics curriculum, accessible to all, we will provide children with the life skills they need ensuring they develop their mathematical potential:

- the ability to reason mathematically and the language to explain their thinking and methods.
- the fluency and sound number fact knowledge to make problem solving easier
- a range of methods for solving calculations and the ability to choose the most appropriate for a quick answer
- a mathematical resilience and an appreciation for the power and beauty of mathematics.
- A sense of enjoyment and curiosity about the subject.

Teaching should reflect future learning and concepts – ‘move away from a coverage mindset in to an advancing understanding mindset.’ (Chris Quigley 2016)

The quality of language and mathematical vocabulary is carefully planned to ensure secure foundations are set and misconceptions are avoided and remedied. Eg. Be aware of using the terms – “add a zero” “you can’t split three in to two”

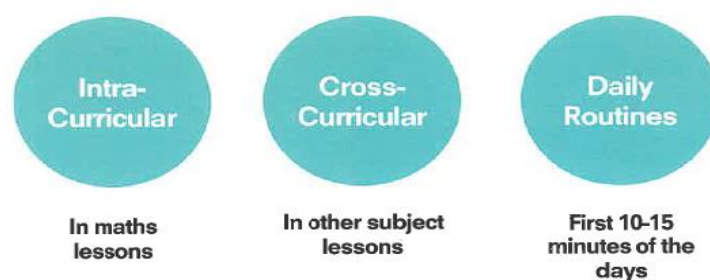
1. Legal framework

This policy has due regard to statutory guidance including, but not limited to, the following:

- DfE (2014) 'National curriculum in England: Mathematics programmes of study'
- DfE (2021) 'Statutory framework for the early years foundation stage' (see EYFS policy)

2. What Maths Looks Like at The Cathedral School

For children to fully understand concepts of Mathematics, they need to be fully immersed in it throughout the day. This will be achieved by using a continuous provision of mastery maths. Mastery is about the teaching, providing opportunities through a range of applications and cross curricular links. This means maths will be holistically embedded throughout the whole curriculum.



- Intra-Curricular – Measures is to be taught through continuous provision of the other Mathematical strands (Number and Place Value, Four Operations, FDP) to provide real conceptual understanding
- Cross-Curricular – Geometry will be linked to Computing and Design Technology, Statistics will be linked to Science and Geography to teach these skills through everyday relevant contexts
- Daily routines – Choosing from a catalogue of routine activities to support learning over time eg time- four clock classroom, days of the week, months of the year, chronology,
- Maths progression will be met through thematic teaching, using The White Rose Maths scheme as a basis, making the connections between the strands of Mathematics and cross-application of skills, ensuring all children master an understanding and love of mathematics with the right kind of teaching and support.

3. Our Philosophy of teaching Maths

Using 5 main principles, we aim to ensure all children master an understanding and love of mathematics with the right kind of teaching and support.

Metacognition – children are encouraged to think of their own methods and solutions, applying their mathematical knowledge.

Visualisation - concrete and pictorial representations are embedded into teaching to help build procedural and conceptual knowledge together.

Generalisation – children spot patterns and can apply these as a method.

Number sense – children grow in fluency and can quickly apply their mathematical knowledge.

Communication – children are encouraged to develop a deeper understanding of mathematical language and to articulate their thoughts using reasoning.

Activities will encourage pupils to work on the same objectives and engage in common discussions with a strong emphasis on Mathematical talk. Differentiation occurs in support, tailored questioning and intervention provided. This mastery approach allows for deep understanding of Mathematical concepts.

Teachers ensure that they teach in a precise way - using clear pre-planned language, thought through models and images, open questions and having identified the potential of misconceptions - enabling children to engage successfully with tasks at the expected level.

Maths is taught in small, carefully sequenced steps, building on prior learning. We ensure that children are given the opportunities to become masters of their own abilities.

Concepts are often explored together to strengthen the understanding of the connections throughout Mathematics.

4. Planning

At The Cathedral School of St Peter and St John RC Primary we use the White Rose Maths scheme to inform individual year group curriculum, which thematically builds knowledge year on year, providing a structured progression of learning. Teachers use the given planning as a basis to create links between concepts and everyday life.

(for example: In one week of teaching the skill of addition, the use of measures would also be used for problem solving, meaning the depth of understanding of objectives from the measures strand are consolidated and linked to addition giving the calculations a real purpose).

Lessons are a mix of journaling, and workbooks.

Journals are where children are given the opportunity to record their own mathematical methods and explanations. Maths journals are:

- Descriptive: showing methods used
- Evaluative: pupils have to make and justify choices
- Creative: pupils are encouraged to develop their own methods and ideas
- Investigative: pupils record their findings after exploring a problem
- Formative: pupils demonstrate their understanding and progress

Workbook activities are where children practise applying a new method independently. The children are given further opportunities to develop mastery by revisiting their journals after the workbook and can apply their new found skills to problem solving.

5. Assessment

“Here and now” marking is adhered to ensuring that pupils’ difficulties and misconceptions are identified and addressed with rapid intervention. Teacher responses are mainly verbal. Assessment for Learning is used in daily teaching to inform Target Tracker as an ongoing assessment record.

Children identified in a session as not having a secure understanding are assessed as needing more concrete practise and will receive further focused input before moving on to independent tasks.

Children use the White Rose Maths workbooks to independently apply their learning. These are marked during the lesson with the child and misconceptions are immediately addressed.

End of block and termly formative assessments are used to inform future planning and address misconceptions with interventions being set in place as appropriate following their outcomes. This data is also fed into the ongoing Target Tracker assessments.

Ongoing assessment is used to set personalised focused curricular targets that the children are aware of and can aim towards daily.

6. Monitoring and Evaluation

This policy will be reviewed on an annual basis by the subject leaders.

The subject leaders will monitor teaching and learning in the subject at The Cathedral School of St Peter and St John RC Primary ensuring that the content of the national curriculum is covered across all phases of pupils’ education.

A named member of the governing body (Julia Romanova) is briefed to oversee the teaching of numeracy, and meets regularly with the subject leaders to review progress.

Any changes made to this policy will be communicated to all teaching staff.

Reviewed policy agreed by GB:	
Reviewed policy shared with staff on:	
Policy to be reviewed again on:	
Committee responsible for review:	