



Our Maths Curriculum

Intent

Due to the context of our school and the diverse social and economic backgrounds of our families, we have designed a curriculum that includes a wealth of enrichment opportunities. Sacred Heart's curriculum is closely designed around our school's mission and value statements and to support the development and needs of the pupils and families we serve. Our curriculum is designed to allow children to **endeavour, enrich and enjoy** their learning.

Mathematical learning behaviours are developed such that pupils focus and engage fully as learners who reason and seek to make connections. By mastering maths, pupils are acquiring a deep, long-term, secure and adaptable understanding of the subject and to cultivate classroom practice to give pupils the best chances of **mastering maths**. As active 'Witnesses' to our Faith, we aim to develop and sustain mutual belief that everyone can learn and enjoy Mathematics.

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore 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."

Mathematics: Purpose of Study from the 2014 National Curriculum.

The Five Big Ideas in Teaching for Mastery are central to children's learning and are given highest priority. An expectation that everyone can enjoy Mathematics is ensured through Mastery approach to teaching and learning and is defined by **Sacred Heart Way** approach that aims to create and make positive mathematical experiences and achievement of all of our pupils through seeing Mathematics, mathematical thinking, coherence, fluency and variation. We place a high focus on acquiring, understanding and applying precise mathematical vocabulary, deep knowledge of mathematics and its pedagogy.

The Sacred Heart DAWN **RAINBOW** Continuum for Mathematics outlines clear progression of the skills across the Foundation Stage, Key Stage One and Key Stage Two. We follow the EYFS Statutory Framework, DfE statutory and non-statutory guidance 'Teaching Mathematics in Primary School' and the supporting materials from the **NCETM** and **EEF** Recommendations.

[Reception Yearly Overview](#)



reception_overview.pdf

[Year 1-2 Yearly Overview](#)



Year 1-2 Yearly Overview.pdf

[Year 3-4 Yearly Overview](#)



Year 3-4 Yearly Overview.pdf

[Year 5-6 Yearly Overview](#)



Year 5-6 Yearly Overview.pdf



Mathematics Vocabulary Progression document.pdf

Implementation

For National Curriculum classes at Sacred Heart RC, we have adopted **DfE approved Power Maths. PM** is a Whole-Class Mastery Approach for Ages 5-11 fully aligned with the new White Rose Maths progressions and schemes of learning.

PM is built around a child-centred lesson design that models and embeds a growth mind set approach to maths and focuses in helping all children to build a deep understanding of maths concepts. Curriculum design ensures a coherent and detailed sequence of essential content to support sustained progression over time and it has been designed to spark pupils' excitement and curiosity about maths whilst developing their confidence. It combines interactive teaching tools, rich and quality pupil practice books intelligent practise. Maths resources follow maths mastery guidance from the **DfE** and **NCETM**.

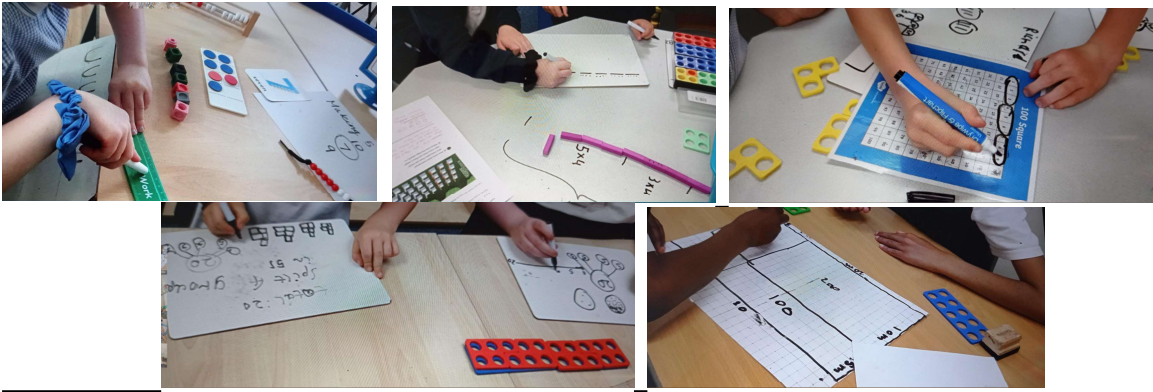
Lesson design links to prior learning to ensure all can access the new learning and identifies carefully sequenced steps in progression to build secure understanding. **Problem solving** approach provides wealth of opportunities for guided and independent practise that plays a pivotal role in the Power Maths approach. It takes place in class groups, smaller groups, pairs and independently, so that children always have the opportunities for thinking as well as the models and support they need to practise meaningfully and with understanding.

Examples, representations and models are carefully selected to expose the structure of mathematical concepts and emphasise connections, enabling pupils to develop a deep knowledge of mathematics. Procedural fluency and conceptual understanding are developed in tandem because each supports the development of the other. It is recognised that practice is a vital part of learning, but the practice must be designed to both reinforce pupils' procedural fluency and develop their conceptual understanding.

Variation in the questions and exercises as well as to represent and expose mathematical structures are used in lessons.

Classroom Practise

Pupils are taught through **whole-class interactive teaching**, enabling all to master the concepts necessary for the next part of the curriculum sequence. In a typical lesson, the teacher leads back and forth interaction, including questioning, short tasks, explanation, demonstration, and discussion, enabling pupils to think, reason and apply their knowledge to solve problems. Use of precise mathematical language enables all pupils to communicate their reasoning and thinking effectively. If a pupil fails to grasp a concept or procedure, this is identified quickly, and gaps in understanding are addressed systematically to prevent them falling behind. Significant time is spent developing deep understanding of the key ideas that are needed to underpin future learning. Key number facts are learnt to automaticity, and other key mathematical facts are learned deeply and practised regularly, to avoid cognitive overload in working memory and enable pupils to focus on new learning.



Maths Hub and NCETM

Teachers continually develop their specialist knowledge for teaching mathematics, working collaboratively to refine and improve their teaching through CPDs and Lesson Studies and Teacher Research Groups.

The National Centre for Excellence in the Teaching of Mathematics (NCETM) supports schools in England to develop their maths teaching through local **Maths Hubs (MHNW1)**. Our school works with North West One Maths Hub to provide our staff regular professional development in teaching maths. Evidence shows that improving the quality of teaching is the best way to improve children's success and enjoyment of maths as Maths is a fascinating and creative subject. We take part in NCETM and Maths Hub projects. Our most recent involvement with NCETM and MHNW1 includes Mastering Number KS1 and KS2, Teaching for Mastery, Year 5 -8 Continuity Teacher Work Groups, Tfm TRGs. Our Maths lead is Accredited PD Lead and is currently obtaining her Mastery Specialist Qualifications. Evidence from Ofsted reports demonstrates positive impact teaching for mastery is having on professional development in schools. Researchers found four areas of change to children's learning as a direct result of teaching for mastery:

- children accept the 'challenge of mathematics' because they are encouraged by the belief that everyone can succeed through effort,
- children demonstrate their growing understanding of mathematics through their reasoning and willingness to explain their mathematical strategies,
- schools identify the development of mathematical vocabulary and language as having an impact on children's progress,
- children recognise that physical and verbal representations of mathematical ideas are as valuable as written ones.

Interventions

Since maths competence depends on mastering concepts one-by-one in a logical progression, it is important that no gaps in understanding are ever left unfilled. Same-day interventions – either within or after a lesson – are a crucial safety net for any child who has not fully made the small step covered that day. In other words, intervention is always about **keeping up, not catching up**, so that every child has the skills and understanding they need to tackle the next lesson. That means presenting the same problems used in the lesson, with a variety of concrete materials to help children model their solutions.

NCETM Mastering Number Reception and Key Stage One:

This project aims to secure firm foundations in the development of good number sense for all children from Reception through to Year 1 and Year 2. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention will be given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.

NCETM Mastering Number Key Stage Two:

Knowledge of multiplication and division and its application forms the single most important aspect of the Key Stage Two Curriculum. It is often an area that children may struggle with. This project aims to secure good multiplicative number sense and automaticity in time tables through additional daily sessions.

Impact

Maths is monitored throughout the academic year by the subject leader to ensure all children have access to the Dawn Curriculum. The impact of the curriculum is monitored through lesson observations, pupils voice, assessment outcomes and progression, work in books as well as learning walks and discussions with teaching staff. These are used to inform the quality of learning and understanding that pupils have gained.

Upon leaving Sacred Heart, we aspire that our children will have developed a love of Mathematics. We require our children to become reflective and resilient mathematicians who are able to use their mathematical knowledge to support their everyday lives. We believe that everybody is a mathematician and that all children are capable of succeeding at mathematics. Children at Sacred Heart would have encountered positive mathematical experiences that will help them to prepare for their future, better understand the world around them and to become successful adults.