

# Maths Overview



**At Our Lady of the Rosary we follow the National Curriculum for mathematics, which aims to ensure that all children:**

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

**Intent:**

- Skills are embedded within a high-quality mathematics education taught from the earliest age and developed consistently over time through the delivery of an engaging and inspiring curriculum.
- All children can be successful in the study of mathematics. We do not accept that 'some children cannot do maths' or that children should be limited by prior attainment. Our motto is 'I can't do it...Yet!'. We advocate a growth mindset and teach the skills to ensure that our children are resilient learners who become life-long mathematicians.
- We are committed to ensuring that our children are able to recognise the importance of maths in the wider world and that they are able to apply their mathematical skills and knowledge confidently in their day to day lives and within a wide range of contexts.
- All children enjoy maths and experience success in the subject, with the ability to problem solve and reason confidently. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power that can be found in the methodology, sequences and patterns of Mathematics.
- Teachers promote children's enjoyment of maths and provide opportunities for them to build a deep, conceptual understanding of maths before applying their knowledge to everyday problems and challenges.
- Challenge is provided for all children, whatever their understanding. Children make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Children apply their mathematical knowledge to science and other subjects.
- The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material will consolidate their understanding, through additional practice, before moving on.

**Implementation**

- To ensure consistent coverage, teachers follow the White Rose scheme of learning to support their planning. The school also subscribes to White Rose Maths, which works in partnership with White Rose and provides staff with a wide variety of resources from which to plan and teach high quality lessons. Teachers are also encouraged to use resources from other sources such as maths shed, test base, NRich and NCETM to

support, stretch and challenge all children in their classroom. Staff are working on a whole to develop their understanding of mastery through ongoing work with the NCETM mastery readiness programme.

- Staff deliver the maths curriculum with a focus on the concrete, pictorial, abstract approach. By using all three, children can explore, demonstrate and deepen their mathematical learning. Together, these elements help to cement knowledge so that children can truly understand and internalise what they have learnt.
- When introduced to a new concept for the first time, children are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols. Throughout Our Lady of the Rosary you will see these three methods being used:

**Concrete** – children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

**Pictorial** – children build upon this concrete approach by using pictorial representations, which can be used to reason and solve problems.

**Abstract** – with the foundations firmly laid by using the concrete and pictorial methods, the children can move onto an abstract approach, using numbers and key concepts with growing confidence.

- Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we are able to maintain high standards, with achievement at the end of KS2 well above the national average, as well as an increasingly high proportion of children demonstrating greater depth, at the end of each phase.

### **Impact**

- Teachers use formative assessment to evaluate learning during the lesson. They will ask questions to check understanding and scrutinise independent work in order to identify common misconceptions. Such assessment allows teachers the flexibility to intervene in a lesson to remind, redirect or re-teach pupils as required.
- Daily marking of independent work allows teachers greater understanding of whether or not a concept has been grasped and gives the opportunity to provide praise and feedback in order to reinforce learning. It also allows them to reflect on how successful they were in the delivery of their lesson.
- Termly summative assessments, allow teachers to evaluate how individuals, groups and the class as a whole are progressing compared to national expectations. They also provide excellent opportunities to see which concepts need to be given additional time – planning will be adjusted accordingly. This gives the Maths Leader and Senior Leadership the insight to see where the strengths and weaknesses lie, where additional support needs to be focused and what training/ CPD requirements are.
- The combination of all of these systems allows us to judge the impact of the maths curriculum in our school.