St Laurence Church of England Primary School

Maths Policy
2023 - 2024

Introduction

At St Laurence Church of England Primary School, we believe that mathematics is an important creative discipline that helps us to understand and change the world. We want all pupils at St Laurence Church of England Primary School to experience the beauty, power and enjoyment of mathematics and develop a sense of curiosity about the subject with a clear understanding. We foster positive can do attitudes and we promote the fact that 'We can all do maths!' We believe all children can achieve in mathematics, and teach for secure and deep understanding of mathematical concepts through manageable steps.

Teaching and Learning

At St Laurence Church of England Primary School we use a mastery approach to maths teaching.

To ensure whole consistency and progression, the school uses the DfE approved 'Power Maths scheme. New concepts are shared within the context of an initial related problem, which children are able to discuss in partners. This initial problem solving activity prompts discussion and reasoning. These problems are presented with objects (concrete manipulatives) for children to use. Teachers use careful questions to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills. Students can underperform in mathematics because they think they are unable to do it. The Power Maths programme addresses these preconceptions by ensuring that all children experience challenge and success in mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child.

Daily Counting

All of our school take part in daily counting activities. EYFS focuses on counting forwards and backwards to 20, while KS1 counts within 100 both forwards and backwards. They then progress to counting in 2s, 5s, 10s and 3s. KS2 typically uses the daily counting time to practice times tables and division facts.

Maths Lessons

A typical lesson starts with counting or times table practice. Children will then be introduced to a 'Discover and Share' task in which a contextual problem is shared for the children to discuss in partners. This helps promote discussion and ensures that mathematical ideas are introduced in a logical way to support conceptual understanding. These problems are often presented with objects (concrete manipulatives) for children to use. Teachers use careful questions to draw out children's discussions and their reasoning and the children learn from misconceptions through whole class reasoning. Following this, the children are presented with similar problems, which they might discuss with a partner or within a small group. At this point, scaffolding is carefully reduced to prepare children for independent practice. This is the 'Think together' part of the lesson and the children might record some of their working out in their Maths journals or on a mini whiteboard. The teacher uses this part of the lesson to address any initial errors and confirm the different methods and strategies that can be used. The children are then shown a 'challenge' which promotes a greater depth of thinking. The class then progress to the 'Practice' part of the lesson, which is designed to be completed independently. This practice uses conceptual and procedural variation to build fluency and develop greater understanding of underlying mathematical concepts. A challenge question and links to other areas of Maths encourages children to take their understanding to a greater level of depth. The final part of the sequence is a 'reflect' task. This is an opportunity for children to review, reason and reflect on learning.

Within EYFS and KS1 maths understanding is further strengthened by additional maths tasks being made available during free flow and enhanced provision.

Review Lessons

Year 3-6 have a review lesson each week. This is where a topic from a previous year group is covered. Teacher's plan their review lessons based on gaps identified by analysing the results of the last NTS assessment.

Planning and resources

To ensure consistency, all staff adapt and add to the planning provided by Power Maths.

The use of mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into teaching and learning. The school has a wide variety of good quality equipment and resources, both tangible and ICT based, to support our learning and teaching. Standard resources, such as number lines, multi-link cubes, base ten, hundred squares and counters are located within individual classrooms. Resources within individual classes are accessible to all children who are encouraged to use it, where needed.

Interactive teaching tools for modelling strategies are available to all teachers as part of the Power Maths scheme. Resources to support teachers' own professional development and understanding of new approaches as part of a mastery approach are available on the Power Maths 'Activelearn' platform. As well as overviews of learning, these include short videos, which demonstrate new methods to ensure accuracy.

High quality textbooks and practice books, approved by the DfE, as part of the national approach to teaching for mastery are used in each year group and a digital version of the Power Maths textbooks allows these to be shared with the class, during the main teaching. Teachers are encouraged to use the school playgrounds as an outdoor classroom when possible, for example, when teaching length, area or perimeter.

Assessment

All year groups track attainment and progress using FFT. This includes the EYFS so that there is consistency as children move up through the school. Teacher assessment takes place after each lesson where a 'traffic light' assessment sheet is used to gauge a child's understanding of each lesson. It also identifies children who need some intervention time to aid their understanding. Formal assessment takes place at the end of every term in the form of testing. Children are assessed through Rising Stars NTS tests each term.

The results of the NTS assessments are put onto Rising Stars MARK system which analyses the data, identifies gaps and produces recommendations for interventions.

Children self-assess each completed piece of work in their Power Maths book. The child will then mark in red, orange or green to show how well they believe they have met the lesson objective.

Spiritual, moral, social and cultural development

Maths contributes to the teaching of PSHE by encouraging children to take part in class and group discussions. During this time, children learn to listen and respect the views of others while understanding how best to gently challenge and correct ideas, where appropriate.

Maths and Inclusion

At our school, we teach maths to all children, whatever their ability through quality first teaching. It is part of the school Curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with special educational needs, those learning English as an additional language, as well as providing appropriate, challenging planned work for those children who are more able.

Maths Coordination

The maths coordinator will:

- Actively encourage the love of maths throughout the school
- Ensure that maths have a high profile throughout the school
- Monitor the school and individual needs

- Source and provide quality professional development opportunities for all
- Maintain an overview of current trends and developments within the subject
- Ensure, together with the Head of School, a rigorous and effective programme of

lesson observation, monitoring and feedback

- Actively seek out the views and opinions of children and staff
- Work alongside the SENCo and other school leaders to monitor children's progress through the analysis of whole school data
- Audit and purchase central and class based maths resources

Additional Information

Our Calculation Methods policy provides further detail on how we teach for progression across the school and aims to provide guidance on teaching methodology used throughout the school. Further information on how we help children progress on a day to day basis can be found in our Marking Policy and on the school website.

Mr Hallam

November 2023