

St Laurence Church Infant School

Mathematics Policy



Approved by: Curriculum, Safeguarding and
Pupil Welfare Committee

Last revised on: March 2020

Next review due by: March 2023

Mathematics Policy

"Mathematics is a creative and higher 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."

National Curriculum September 2013

"Mastery of mathematics is not a fixed state but a continuum. At each stage of learning, pupils should acquire and demonstrate sufficient grasp of the mathematics relevant to their year group, so that their learning is sustainable over time and can be built upon in subsequent years. This requires development of depth through looking at concepts in detail using a variety of representations and contexts and committing key facts, such as number bonds and times tables, to memory."

Maths Hub/NCETM/Oxford Owl 2015

Intent

Why do we teach Mathematics?

At St. Laurence Church Infant School, we want our children to be confident in Mathematics and begin to see its purpose for everyday life and the work they may want to do in the future.

We want to encourage a positive attitude and an enjoyment of mathematics.

We want to develop each child's mathematical potential in terms of mathematical awareness, skills, knowledge and understanding, enabling them to reason logically, solve problems and to think in abstract ways.

We want children to be able to work independently, taking responsibility for planning and carrying out mathematical tasks.

Implementation

How we teach Mathematics

We teach the National Curriculum and the Early Years Foundation Stage Curriculum for Mathematics by broadly following the White Rose scheme of work. We develop Mathematical skills more effectively by using a concrete, pictorial, abstract approach where children have the opportunity to use concrete objects to help them understand what they are doing, they use pictorial representations to help them reason and solve problems which leads to an understanding of more abstract and mental methods. There is an emphasis on reasoning in Number, Measurement, Geometry and Statistics. Computing is incorporated into the maths lesson wherever it is beneficial to consolidate, practise and extend learning for all abilities. A wide range of maths software is installed on the network. Remote controlled vehicles, Bee Bots and I-bugs are also used for work on position and direction.

How we plan Mathematics

We plan from the National Curriculum using our own planning grid for our weekly maths planning in Year 1 and Year 2 and a more appropriate format for Early Years Foundation Stage planning. Teachers use objective led planners during the lesson to inform their ongoing assessment. The planning is carried out in our weekly planning meetings. In Years 1 and 2 a variety of resources, including materials from commercial schemes, are used to supplement our teaching of mathematics. Other appropriate materials from our school resources complement this. We plan carefully using ongoing assessment

opportunities, to ensure high expectations, consistent approaches and good progression throughout our school.

We use our learning focus approach to planning to ensure we provide chances to study maths in other contexts. Further details are to be found in the appropriate Schemes of Work and on our Curriculum Maps.

How we teach Mathematics in EYFS

In Reception a range of mathematics activities are planned during each week to practise, consolidate and develop the concepts taught during the whole class sessions and to remind children of previous learning. There is a strong emphasis on achieving the learning objectives through practical activities rather than through pencil-and-paper exercises. Teachers know their children very well and move their learning on as they engage with their play by looking for teachable moments. The use of objective led planners supports this.

How we teach Mathematics in Key Stage One

In Key Stage 1, Mathematics is taught for a minimum of 5 hours a week. This time could be shared between 2 mornings or shorter lessons daily as best suits the children and what is being taught. Lessons begin with a mental/oral warm-up, followed usually, by whole class teaching of the learning objective and group work. Children who cannot access this teaching may work with a Teaching Assistant at this point to practise previous learning. Children who do not need the whole class teaching may be given a task to deepen their learning to complete at this time. A plenary will happen at different stages of the lesson to address misconceptions, give assessment opportunities, reinforce the learning objective and move the learning forward. The main teaching activity may be with the whole class throughout or the children may work at differentiated activities and receive further teaching during the lesson to move their learning on. The children are organised into mixed ability groups within the class which are fluid allowing children to access learning with an appropriate level of challenge for each child.

How we Assess, Record and ensure Continuity and Progression

We follow the Early Years Foundation Stage Curriculum and the National Curriculum programmes of study to ensure continuity and progression. Each child is able to progress at a rate suitable to his or her own experience, ability and stage of development.

Children are continually being assessed through the use of the objective led planner, marking, observation and teacher pupil conversations and this ongoing teacher assessment is recorded on our annotated planning and on our data tracking system, Target Tracker.

Progress in the Early Years Foundation Stage is assessed against the developmental bands and, at the end of the year, the Early Learning Goals.

In Key Stage 1, progress is assessed against key objectives from the National Curriculum content.

At the end of Year 2 teachers use the Teacher Assessment framework, along with SATs results, to make a teacher assessment judgement of each child. These teacher assessments are sent to the Junior School.

How we ensure all children access the Mathematics curriculum.

When planning mathematics, consideration is given to the children's varying levels of ability and through following the White Rose materials we are able to plan for mastery at all levels of ability. Our flexible system of grouping children for maths enables staff to move them into a more appropriate group whenever this is necessary. We use additional published materials e.g. Mathematical Challenges to provide suitable extension activities for more able children so that they can make further progress through challenges and investigations. Maths continuums are used to help plan smaller steps of

progress for children on the SEND register and for children entitled to pupil premium funding where they are not making expected levels of progress.

We have our own Equal Opportunities Policy and are aware of the Birmingham Policy. We seek to ensure that no child is disadvantaged because of gender, language, background or race. Results are scrutinised to make sure that any group which appears to be disadvantaged receives help to remedy this.

How we Monitor and Evaluate Mathematics

The Mathematics Co-ordinator, together with the Headteacher, will maintain an overview of the mathematics teaching in the school to ensure effective implementation of the Mathematics Policy. The monitoring schedule includes:

- Scrutiny of planning
- Work scrutiny
- Assessment analysis
- Discussions with staff
- Discussions with children
- Lesson observations
- Learning walks
- Resource reviews

Resources

Individual classroom resources are checked on a regular basis and staff are asked about their resource needs so that deficiencies can be remedied as far as financial constraints allow. Some resources are held centrally if this is more appropriate.

Teachers' handbooks from several commercial schemes are kept with the central resources to provide background and reference material. Additional materials for problem solving, mental maths etc are also stored with the central resources.

Impact

The children's potential will be maximised and their confidence increased. They enjoy Mathematics and develop problem solving strategies which will carry them into adulthood and support them in their working life.

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Mathematics Co-ordinator: Lorraine Sharp