

St Leo's and Southmead Catholic Primary School



Mathematics Policy

Our Mission Statement

*In our school, we want to celebrate God's gift of life together; by inspiring, enhancing and developing tomorrow's talent, today!
We respect all; aiming to achieve and live our values.
A place to allow everyone to flourish.*

SAFEGUARDING STATEMENT

Safeguarding and promoting the welfare of children is defined for the purpose of this guidance as:-

- Preventing children from maltreatment
- Preventing impairment of children's health or development
- Ensuring that children grow up in circumstances consistent with the provision of safe and effective care and
- Taking action to enable all children to have the best outcomes.

PROMOTING BRITISH VALUES AT ST LEO'S AND SOUTHMEAD CATHOLIC PRIMARY SCHOOL SERVING THE COMMUNITY

At St Leo's and Southmead Primary School we aim to help, guide and prepare our children as future citizens. As our Mission Statement says, our school is "A place to allow humanity to flourish!" This statement permeates everything that we do in school and captures what British Values are about:-

- Democracy
- The Rule of Law
- Individual Liberty
- Mutual Respect
- Tolerance of those of different faiths and beliefs.

We grasp every opportunity throughout the school day to teach, model and show by examples all of the above. We have provided further information on our school website. We are proud of our school and are proud of the British Values that we live and learn about.

Introduction

Mathematics is a creative and highly interconnected 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.

SMSC Statement - Mathematics

At St Leo's and Southmead Catholic Primary School we recognise that the personal development of pupils, spiritually, morally, socially and culturally, plays a significant part in their ability to learn and achieve. We therefore aim to provide an education that provides pupils with opportunities to explore and develop their own values and beliefs, spiritual awareness, high standards of personal behaviour, a positive, caring attitude towards other people, an understanding of their social and cultural traditions and an appreciation of the diversity and richness of the cultures.

The teaching of Mathematics offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. For example:

- The history of maths, for example, the origins of Roman Numerals and important mathematicians.
- Respect and resilience are a very important part of our lessons. Our children experience different learning situations; small collaborative, partner and independent.
- Children are encouraged to think and make links between their learning in maths. Pupils are always encouraged to delve deeper into their understanding of Mathematics and how it relates to the world around them.
- Problem solving skills and teamwork are fundamental to Mathematics, through creative thinking, discussion, explaining and presenting ideas. Pupils are encouraged to develop their Mathematical reasoning skills, communicating with others and explaining concepts to each other. Self and peer reviewing are very important to enable pupils to have an accurate understanding of where they are and how they need to improve. Working together in pairs or groups and supporting others is a key part of Maths lessons.
- To be aware globally of sharing, supporting and respecting. To also learn from others in different parts of the world.
- The development of future life skills are vitally important for our children. Children will be encouraged to be ambitious and aspire for future employment.
- They are able to manage their budget and live quality lives.

Aims for Early Years

By the end of the Early Years we aim that our children can:

- Count reliably with numbers from one to twenty, place them in order and say which number is one more or less than a given number.
- Add and subtract two single digit numbers and count on or back to find the answer using quantities and objects.
- Solve problems, including doubling, halving and sharing.
- Use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems.
- Recognise, create and scribe patterns.
- Explore characteristics of everyday objects and shapes, using mathematical language to describe them.

Aims for Key Stage 1 and Key Stage 2

The national curriculum for mathematics aims to ensure that all pupils:

- 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.

Information and communication technology (ICT)

Calculators are not used as a substitute for good written and mental arithmetic. They are only introduced near the end of key stage 2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure. ICT is used regularly within maths lessons. All classes have an interactive smartboard and an I Pad which can be linked to this. The majority of classes also have a few iPads which can be used to support the mathematics curriculum.

Spoken Language

In our school we understand the importance of spoken language in pupils' development across the whole curriculum - cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their

mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Curriculum Planning in the Early Years

In the Early Years, we plan using the Early Years Foundation Stage (EYFS) which is the statutory framework. Within this framework, maths is split into two distinct sections - Numbers and Shape, Space and Measure. Mathematical development involves providing children with opportunities to practice and improve their skills in counting numbers, calculating simple addition and subtraction problems, and describing shapes, space and measure. These aspects are explored within the broader EYFS framework, which promotes communication and language development, physical development, personal, social and emotional development and making relationships.

Approaches to Teaching and Learning

At St Leo's and Southmead we have a very clear approach to the teaching of mathematics. Although planning is based on the appropriate National Curriculum Framework (2014), all teachers adjust and modify their plans to ensure that the individual needs of every child are met. See our [Teaching and Learning policy](#) for more details.

"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 should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on." (National Curriculum 2014)

Marking and Feedback

Feedback within a lesson is the most effective form of marking. Marking will also be done in accordance with the school's [Marking Policy](#). In addition, opportunities will be regularly provided for children to discuss their work with a peer, and, for example, investigate if they had differing answers.

Lessons

Written methods are used alongside mental methods and pupils are taught to always use mental strategies as a first resort and also to approximate the answer if a written calculation is required. Within our school, there is a developmental recording of mental strategies that allows the children to make their thinking skills visible. See Written Calculation Policy for more details.

Big Maths

The children will practise the basic mathematic concepts weekly via Big Maths. This will inform future planning and give the children regular practise of basic mathematical skills (for example, place value, the four operations).

Cross Curricular Skills and Links

Opportunities are taken to develop mathematical skills needed to support other subjects. Examples include: measuring in design technology, charts and graphs in science and geography, time and dates (including Roman Numerals) in history, patterns in art, music and dance, scoring and counting in P.E.

*"They should also apply their mathematical knowledge to science and other subjects."
(National Curriculum 2014)*

Mathematics and Inclusion

It is important that children develop positive attitudes towards mathematics through enjoyable, purposeful activity, which brings them success at their own level. During whole class teaching and learning, the use of open and closed targeted questions ensures that all children are included. Practical activities, games, visual prompts and other materials are provided as necessary to support independent learning. Teachers ensure that the level of challenge is suitable to the individual child, including those with a SEN need or who are talented within maths.

Assessment

Assessment for learning is an important part of our assessment process. Through discussion, observation, marking and feedback teachers are continually assessing children's progress and attainment. Teachers ensure that our children know how they have been successful and what steps they can take to make further progress.

Assessment will be continually made against the expectations at the end of each year group and in particular the Key Performance Indicators (KPI's). Daily, weekly and half termly assessment will inform future planning. For further details please see the school Assessment Policy.

Resources

A wide range of relevant resources are provided for our children. A range of practical resources are available in each class room for use on a day to day basis. In addition, there are further resources available, stored in a central location. I Pads have been purchased which further support the children's learning.

Display

The mathematics displays in our classrooms are to be used as a tool for learning and raising attainment.

Roles and Responsibilities

Head Teacher and Governing Body

- support the use of appropriate teaching strategies by allocating resources effectively.
- Monitor teaching strategies.
- Monitor the effectiveness of teaching and learning strategies in terms of raising pupil attainment.
- Ensure that staff development and performance management policies promote good quality teaching.

Subject Leader

- Take a lead in policy development
- To have an impact on raising standards of attainment for mathematics across the whole school.
- Ensure the correct implementation of the National Curriculum for Mathematics.
- To ensure a regular and effective programme of analysis of children's work and short term planning is in place.
- Take responsibility for the purchase and organisation of resources.
- Keep up to date with developments in mathematical education and disseminate information to colleagues through INSET days and staff development meetings.

Class Teachers

- Ensure the effective implementation of the Statutory National Curriculum for Mathematics.
- To ensure learning that is differentiated to enable all children to reach their full potential.
- To make effective use of assessment for learning within mathematics.
- Be committed to raising standards for all children.

Parents/Carers

Parents are encouraged to assist their children achieve the targets set each term. Regular homework is given (see Homework Policy) and "booster packs" (for a small group of children) are sent home (after a meeting with the parents/carers) to further support our parents.

Review: September 2019

Signed:

J McIntyre (Maths Subject Leader)

P Morris (Maths Subject Leader)