



'Let your light shine' Matthew 5:16

Governor Policy 61 - MATHS

POLICY AND TERMS OF REFERENCE DATES:

- **Policy and Terms of Reference first agreed: May 2013**
- **(Local Authority Guidance Adopted)**
- **Review undertaken by the School Development Group**
- **Policy Review Period: Biennially**
- **This revision: January 2020**

This policy is intended to provide clear guidance for the delivery of the Mathematics curriculum throughout the school over the three stages: Foundation Stage, Key Stage One and Key Stage Two.

All pupils can achieve in mathematics! The belief that some pupils can do maths and others cannot is misguided. A typical Maths lesson will provide the opportunity for all children, regardless of their ability, to work through Fluency, Reasoning AND Problem Solving activities.

Intent

By nurturing hearts and inspiring minds, we encourage all pupils to shine in everything they do in maths.

Maths is a journey and long-term goal, achieved through exploration, clarification, practice and application over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time.

There are 3 levels of learning:

- Shallow learning: surface, temporary, often lost
- Deep learning: it sticks, can be recalled and used
- Deepest learning: can be transferred and applied in different contexts

The deep and deepest levels are what we are aiming for by teaching maths.

Implementation

Concrete, pictorial, abstract

Objects, pictures, words, numbers and symbols are everywhere. All Saints' approach incorporates all of these to help children explore and demonstrate mathematical ideas, enrich

their learning experience and deepen understanding. Together, these elements help cement knowledge so pupils truly understand what they've learnt.

All pupils, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking this approach. Pupils are encouraged to physically represent mathematical concepts. Objects and pictures are used to demonstrate and visualise abstract ideas, alongside numbers and symbols.

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

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

Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

Impact

- Quick recall of facts and procedures
- The flexibility and fluidity to move between different contexts and representations of mathematics.
- The ability to recognise relationships and make connections in mathematics

A mathematical concept or skill has been *mastered* when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.

Aims and Objectives

Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of Mathematics.

The aims of Mathematics are:

- to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- to understand the importance of Mathematics in everyday life.

Children learn best when learning activities are well planned, ensuring progress in the short, medium and long term

There will be evidence of:

progress in the children's learning, specifically related to mathematics skills and knowledge

Teachers will ensure that:

- Mathematics learning is a combination of skills and knowledge. Each unit of Mathematics being planned includes opportunities for children to review and extend upon their knowledge in that area, and to apply their mathematical skills in a range of contexts. There will be regular opportunities for children to acquire and improve reasoning skills.

Implications for the whole school

- There is a Calculations Policy in place to ensure continuity and progression throughout the school, focussing on a structured and systematic approach to teaching written calculation methods for number. It also includes a mental maths element to ensure children develop skills in mental arithmetic.

Children learn best when teaching and learning activities enthuse, engage and motivate them to learn, and when they foster their curiosity and enthusiasm for learning.

There will be evidence of:

- Mathematics resources used to support children's understanding of concepts • concrete materials (manipulatives) to assist with more abstract concepts
- Mathematical games to build on children's skills and knowledge
- A range of methods of calculating
- Learning experiences organised that encourage the development of reasoning and there is a balance between practical activities, problem solving and calculations
- Resources are provided on a differentiated basis to provide appropriate support for the variety of abilities and needs.

Children learn best when assessment informs teaching so that there is provision for support, repetition and extension of learning for each child, within their year group expectations.

There will be evidence of:

- Children who are motivated to learn through differentiated learning activities that build on their prior attainment and issue challenge that is pitched at a level that is achievable when they work hard and show resilience
- Teachers keeping assessment records and National Curriculum 2014 objectives assessment information.
- Teachers planning timely intervention to overcome barriers in learning. Learning will be differentiated to ensure optimum learning for all especially those with SEND.
- Assessment for Learning in action so that 'next steps' in learning can be planned.

Children learn best when the learning environment is ordered, the atmosphere is purposeful and they feel safe.

There will be evidence of:

- Children taking risks in their learning, learning from their mistakes and persevering when tasks are challenging
- Organisation of resources to optimise learning (children have access to number lines, number square, cubes, base-10 materials, counting sticks, and counters etc.)
- Children being encouraged in their learning and their efforts will be praised both in the classroom and in assemblies
- A maths learning wall that reflects current learning.

Children learn best when there are strong links between home and school, and the importance of parental involvement in their children's learning is recognised, valued and developed.

- Parents are encouraged to access the Mathematics section of the school website which is based on calculation methods used at school
- Parents are able to view the Written Calculations Booklet on the school website to better assist their children at home
- Parents are welcomed in to share in their children's Mathematics learning, through open mornings/afternoons and class assemblies
- In Key Stage 2, all children will have a login and password for My Maths, which they can use to practise maths skills including timetables and complete homework set by class teachers

- Mathematics is an integral part of home learning to provide opportunities for children to practice and consolidate their skills and knowledge and to develop and extend their techniques and strategies.

'This policy should be read in conjunction with the Single Equality Policy. The general equality duty requires that, in the exercise of their functions, schools must have due regard to the need to eliminate unlawful discrimination, harassment, victimisation and other conduct prohibited by the Equality Act 2010. This school endeavours to advance equality of opportunity and foster good relations for all.'