

SUTTON CE (VC) PRIMARY SCHOOL



MATHEMATICS POLICY

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Approved by staff Date

Approved by Governors Date

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MATHEMATICS POLICY

Philosophy

The new National Curriculum states that:

“Mathematics is a creative and highly 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.”

At Sutton CE (VC) Primary School we see Maths very much as a multi-discipline, cross curricular, interconnected subject which should encourage creativity. We want the children to see Mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment. To that end, a high-quality, inter-related and creative Maths experience should be one that develops the children’s ability to think mathematically and one which allows them to apply the tools to which they have been exposed in a variety of ways.

Following the introduction of the new National Curriculum in 2014 the emphasis has been to ensure that all children:

- Become **FLUENT**
- **REASON** and **EXPLAIN** mathematically
- Can **SOLVE PROBLEMS**

This means that children need to be regularly exposed to opportunities involving increasingly complex problem solving which allows them to apply their Maths knowledge. In doing so they should be encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

Aims and Objectives

We want to teach Maths in a way that:

- delivers Maths in line with new National Curriculum guidelines
- ensures the delivery of Maths is filled with cross curricular opportunities
- creates a lively, exciting and stimulating environment in which the children can learn Maths
- promotes the concept that acquiring Maths knowledge and skills provides the foundation for understanding the world around the children

- develops mental strategies
- encourages children to use mathematical vocabulary to reason and explain
- allows time for partner talk in order to stimulate and develop a curiosity for Maths
- challenges children to stretch themselves and take risks in their learning
- creates a sense of awe and wonder surrounding Maths
- ensures children in Key Stage 1 are secure in their understanding of number and number relationships
- provides children with the opportunity for low entry-high ceiling challenges

Approach

Our Calculation Policy was revised in line with the New National Curriculum requirements in 2016. The programmes of study set out within each domain in the new National Curriculum will be used to ensure children get the learning experience that is required.

It is important that children are allowed to explore Maths and present their findings not only in a written form but also visually. This will allow the children to experience the physical aspects of Maths before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers.

All staff at Sutton CE (VC) Primary School attend staff meetings that regularly have a Maths focus, which provide information on current thinking and introduces them to new teaching methodologies and ideas. For example this term teachers have been provided with training and information on the use of the Singapore Bar Method, which has been implemented into classroom teaching and problem solving.

Furthermore, in order to address the need for children to have a secure understanding of number facts and relationships in Key Stage 1, the school participated in the Maths Fluency Research project undertaken by Herts for Learning in Autumn Term 2016. This project looked at three strands: number magnitude, subitising and strategy, and sought to raise the attainment of those children with a lower level of Maths understanding. Results show children using more sophisticated strategies after eight weeks on the project.

It is important that parents and carers are actively involved in the children's education. In order to help keep them informed of what is happening within school we shall run annual information sessions which will look at current developments within the school, projects in which we are involved, new methodologies for delivering the teaching of Maths and also any new statutory changes such as curriculum or assessment/testing arrangements.

Planning and Assessment

Teachers will work in teams to plan and deliver lessons that suit the particular learning styles of the children within the year groups. They will use their own judgement and use of formative assessment to ensure a flexible approach is adopted which recognises the pace of learning within the classroom.

Individual, paired and group work will be used across a series of lessons and children will be given the option of three challenges or open-ended problem solving tasks to demonstrate their understanding.

Planning will demonstrate the various challenges available to children, together with AfL (Assessment for Learning) opportunities (speaking and listening and self/peer assessment) and teacher assessment.

Across a range of lessons children should be allowed to engage in mathematical discussion (talk partner or group work), investigations, problem solving, practical experiences and written methods, as well as allowing for time to demonstrate their understanding through gap tasks.

In order to inform planning and to assess children's progress, teachers will maintain an assessment grid which tracks the children's progress and understanding across a range of assessment criteria objectives. This will be updated regularly and informed by annotated plans and work in children's books. The children will be assessed through the application of tests from Assessment Manager; this summative assessment will be used in conjunction with the assessment grids to identify next steps and therefore inform planning.

The children will be provided with feedback either verbally or through written marking. Often, in order to clarify understanding of a concept, children will be set gap tasks, but not for every lesson; these should be completed by the children at the next earliest opportunity after the lesson.

When marking work teachers should adhere to the school's Marking Policy.

Time Allocation

Sutton CE (VC) Primary School allocates the following time to the specific teaching of mathematical skills in the form of a daily mathematics lesson

Foundation Stage	Reception	20 minutes, building to 40 minutes by the start of the Summer Term
KS1	Yr 1 - Yr 2	1 hour
KS2	Yr 3 - Yr 6	1 hour

Resources and Displays

Each classroom will be resourced with materials to support the delivery of Maths; such items might include number lines, multiplication tables, 100 squares, 2D and 3D shapes, multilink cubes, dice and other smaller items. Larger materials such as scales, trundle wheels and measuring cylinders will be held centrally in the store cupboard in the Victorian Block.

Children should be encouraged to use whatever resources are available to them in the classroom and which they feel would be beneficial to help them when completing Maths work.

Each classroom should have a working wall dedicated to Maths linked to these four areas:

- Draw it
- Build it
- Say it
- Write it

A pupil voice should be evident.

Inclusion

In line with the School's Inclusion Policy each child will have an equal entitlement to all aspects of the Maths curriculum and to experience the full range of Maths activities. Therefore, in delivering Maths, care will be taken to ensure that a variety of learning styles are accessed and teaching methods adopted.

Intervention groups will take place both within the Maths lesson and outside; these sessions may be delivered by the teacher or teaching assistant and may involve individual or small group work, accessing both ends of the learning spectrum.

Review

This policy was written in 2017 and will be reviewed in 2020 or sooner if changes to the National Curriculum take place. Reviewing will be in line with the School Development Plan.