



Mathematics Policy

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 St. Paul's C of E Junior 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 and creative maths experience should be one that develops the child's ability to think mathematically and reason, applying the tools to which they have been exposed in a variety of ways.

Aims

Through the teaching of mathematics, we aim for all children to:

- Develop a sound understanding of calculation, number, shape, space and measures, and handling and interpreting statistics;
- Become fluent in the fundamentals of mathematics, practising with more complex problems over time, to develop conceptual understanding and the ability to recall knowledge rapidly;
- Be challenged to stretch themselves and take risks in their learning;
- Learn maths in a lively, exciting and stimulating environment;
- Solve problems with increasing sophistication, by breaking them down and seeking solutions. This will be achieved through development of a wide range of skills which can be applied both within school and within everyday life;
- Use mathematical vocabulary and manipulatives to reason and explain.

Planning and Teaching

The school will deliver the National Curriculum Programmes of Study in Mathematics according to the guidance set out in the National curriculum in England: mathematic programmes of study. Each teacher is responsible for the planning of weekly lessons in mathematics for their class, ensuring clear progression from concrete to pictorial and finally to abstract, and that both mental and written calculations are regularly practised. Planning will also include opportunities for the following components: key vocabulary and higher- order questioning; teacher modelling and reference to the Working Wall. Wherever possible, teachers will plan lessons based on one concept that all pupils can access to provide an appropriate level of challenge for all.

Delivery of the mathematics curriculum should provide children the opportunity to engage in practical activities, games and problem solving investigations. These activities can be done individually, in small groups or as a whole class, along with opportunities to use ICT as a mathematic tool.

Working Walls

Every classroom will have a utilised Working Wall which is updated and added to during each unit of work. It will display: the learning objectives for that week; key vocabulary; modelled examples of manipulatives and methods being learnt. It will also be used to display children's work.

Effective use of available support will be modelled by the teacher, on a day to day basis, who will use this point of reference to aid pupils in making links between their learning and to develop as active, independent learners.

In addition, all pupils have access to a box of maths manipulatives to support their day to day learning and visualisation of mathematical concepts and processes. Again, teachers will model effective use of the most suitable manipulatives to pupils.

Strategies for Learning and Teaching

We want to teach maths in a way that:

- Is in line with the National Curriculum guidelines;
- Ensures the delivery of maths is filled with cross-curricular opportunities;
- Promotes conceptual understanding by moving from concrete, to pictorial, to abstract;
- Promotes the concept that acquiring maths knowledge and skills provides the foundation for understanding the world;
- 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 learning;
- Creates a sense of awe and wonder about maths.

Organisation

Pupils are taught by their class teacher and progress is monitored regularly and carefully to ensure teaching is appropriate to need. Lessons are organised to provide each child with:

- a dedicated mathematics lesson of one hour every day;
- direct teaching and interactive oral work with the whole class and groups;
- a range of robust mental and written strategies;
- the opportunity to master aged related expectations.

Assessment

Formative assessment is an integral part of teaching and informs subsequent planning. Observations, summative assessments and evidence from pupils' books are used to determine progress and to inform teacher judgements. Children are provided with feedback either verbally or through written marking. Pupils' assessment information is regularly entered onto Target Tracker and reviewed by senior leaders at termly pupil progress meetings. A summary of performance data is presented to the governors' Learning and Teaching Committee once per term.

Links to other Subjects

Wherever possible, work is linked to other areas of the curriculum and every possible opportunity is used to promote pupils' spiritual, moral, social and cultural development.

Equal Opportunities

Each child will have an equal entitlement to all aspects of the maths curriculum and to experience the full range of activities. Wherever possible, any interventions will take place within the maths lesson and, ideally, will be delivered by the teacher.

Review of Policy

The Policy will be reviewed every two years.

HISTORY

Date	Reference	Amendments
25/11/15	KN	Front page removed, font changed to Verdana 9 and 12, review details inserted into header. New National Curriculum overview, aims and objectives added. Strategies for learning: focus on calculator use altered Organisation: Emphasis on mental calculation removed Opportunity for mastery inserted. Assessment: New Target Tracker assessment process inserted.
31/01/18	SB	Add information to opening statement Edit Aims Add Planning and Teaching section
07/02/18	SB	Review inclusion and assessments section
25/04/19	SR	Added Working Wall Included key components into Planning section Combined Intervention Section into Equal Opportunities. Included emphasis on Concrete, Pictorial, Abstract approach and use of modelling and manipulatives. Slimmed down Assessment section