

**ST. PAUL'S
CHURCH OF ENGLAND
PRIMARY SCHOOL**



ENGAGE - INSPIRE - ACHIEVE

**The Christian family of St Paul's... moving forward together.
A caring, exciting and happy school where everyone succeeds!**



**Mathematics Policy
January 2020**

Article 29:

Every child has the right to an education which helps them develop their abilities and talents.



Policy Statement

The following policy reflects our values and philosophy in relation to the provision and teaching of mathematics at St Paul's C of E Primary School to produce children with mathematical fluency, children who confidently and successfully undertake mathematical activities both in the classroom and the world beyond. Mathematics is perceived as a vital life skill as well as an academic pursuit.

Children that have mathematical fluency are confidently able to apply their mathematical knowledge and skills both at school and in their daily lives.

When possible, practical opportunities, using models and real-life situations are incorporated. This will support and increase all children's access to excellent teaching, leading to exciting and successful learning.

Links to other policies

National Curriculum 2014

Teaching and Learning Policy

Marking Policy

Homework Policy

Aims and purposes of mathematics

Maths teaching should contribute to the acquisition of life-long skills and promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.

Through our provision we aim that children:

- will be able to apply their mathematical knowledge to solve problems, including those with real-life contexts, by choosing the appropriate operations
- can estimate the approximate size of the answer to check the reasonableness of their calculations
- will leave primary school with an efficient, reliable, compact written method of calculation for each operation
- develop a range of mental calculations strategies, aided by informal jottings where necessary
- are confident in the fundamentals of maths and be able to reason mathematically
- understand the importance of mathematical skills in everyday life

Achieving and Maintaining High Standards

The staff at St Paul's C of E Primary School have worked hard to understand the factors that lead to high standards in maths, and have developed a common approach to teaching maths throughout the school based on the following assumptions:

- The need to follow the agreed school curriculum, alongside the mental and written calculation policies.
- The primacy of mental calculations, backed by accurate and rapid recall of number facts, is acknowledged.
- The importance of incorporating a range of teaching approaches, together with appropriate differentiation to meet the needs of all learners.
- Mastering mathematics through a sustained approach to fluency, variation, mathematical thinking and representation and structure.

Planning

To ensure an appropriate balance and distribution of key skills across each term, the school uses Lancashire Maths planning. This covers medium and short-term planning. Learning and Progression Steps (LAPS) are used to scaffold learning required in order to meet the expectations of the National Curriculum.

Our short-term planning follows four key principles. They are:

- Dedicated daily maths lessons use direct, instructive, applicable, exploratory and reflective teaching with the whole class and groups
- **Emphasis on fluency and mental calculation**
- Clear differentiation with all pupils working on a common theme
- Planning begins from a thorough understanding of children's needs gleaned through effective and rigorous assessment and tracking, combined with high expectations and ambition for all children to achieve.
- Medium term planning will outline the areas of mathematics that will be taught during the term to ensure coverage of the National Curriculum.
- Within short term planning, clear steps to success for each key learning objective taught should be created - demonstrating the progression needed to reach and exceed the objective. This will enable the class teacher to follow a clear and systematic teaching sequence, where input and activities are differentiated by considering which parts of the steps to success individual children are ready for.
- Class teachers should incorporate all aspects of 'Building Learning Power' in their planning. This will encourage children to look for patterns, make links between their learning in maths and explore further.
- Class teachers should regularly plan for opportunities for children to apply their maths skills to different problems within maths lessons and across the curriculum. This will also allow children to revisit, practice and master different areas of maths and apply them within different contexts.
- Planning, where possible, should involve real life contexts for maths, where children are problem solving with a purpose in mind.

Organisation of Maths Lessons

- In the Foundation Stage, children are given the opportunity to develop their understanding of number, measurement, pattern and shape and space through a combination of short, formal teaching as well as a range of planned structured play situations, where there is plenty of scope for exploration.
- Children will become very competent 'counters' so that their fluency with the number system provides a foundation for mathematical understanding. Counting forwards and backwards in many different sized steps as well as from different starting and ending points is essential.
- Maths learning builds from a concrete understanding of concepts where children are manipulating objects. When children are able to see concepts this way, they then need to understand the same concepts represented pictorially. Children are then ready for abstract representation before being able to apply their knowledge to different situations.

- Children should be encouraged at all times to communicate their understanding of maths so that it clarifies their thoughts.
- Children's mental maths is of great importance, with number bonds, times tables facts and various strategies for calculation taught and practiced at school with support sought from parents through homework activities.
- A progression towards efficient written calculations should be developed and applied consistently in each year-group. The school Calculation Policy should be followed.
- From Year 1, mathematics continues to be taught as a discrete subject, following the principles described above. In Key Stage 2, children are taught within classes and differentiated accordingly. Progress and attainment is reviewed on a termly basis and organised to best fit the needs of each individual learner. Mathematical knowledge is applied and skills reinforced whenever relevant in other curriculum areas.
- In the EYFS, mathematics forms a fundamental part of the day through child initiated learning. Group activities in Reception adult-led lessons are between 50-60 minutes. Maths lessons in Key Stage 1 also last between 50-60 minutes and 60 - 70 minutes in Key Stage 2. Daily fluency and mental maths sessions are an integral part of every maths lesson.

Assessment, Recording and Reporting

Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. This feedback should be incisive and regular.

- On a daily basis children should self-assess against the key learning and steps to success, giving them a sense of achievement. Children should know when they are meeting their targets and be self-assessing against those too.
- Pupil's work should be marked in line with the Marking Policy and should model how corrections should be made, giving children a chance to learn from their misconceptions or incorrect methods.
- Assessment of pupil work and progress is ongoing by the class teacher and informs future planning. Teachers mark work in mathematics in line with the school marking policy. Teachers use Key Learning Indicators of Performance (KLIPs) and this allows teachers to level children's progress in mathematics, gathering evidence over the course of the year. Teachers use this information to inform planning for groups and individual pupils on a termly basis.
- Tracking is used in order that children who are not making good progress over time can be targeted for support in one form or another. What that support will and how intensive, depends upon the child's needs and it may be a simple strategy within whole class teaching that is needed. Where further support is deemed necessary, children can access appropriate interventions.

Display and Resources

- In the classrooms there should be, either on display or easily accessible to children, level appropriate resources, particularly concrete and pictorial apparatus to support children to grasp concepts. Numicon resources are also prevalent in classrooms and used to support the teaching of key skills.
- Mathematical vocabulary should be displayed so that children use this in the communication of their understanding.
- Working walls should be changed frequently to support the work in the classroom. There should be maths work on display in classrooms and in other areas of the

school in order to encourage a positive attitude and enthusiasm towards mathematics for all groups of children.

Equal Opportunities

The maths policy firmly supports the equal opportunities philosophies of the school and all children will have access to the maths curriculum.

Special Educational Needs

Where necessary, adaptations will be made to the curriculum, to equipment and to resources to allow access to maths for pupils with SEN, including provision for pupils that are exceptionally able in mathematics.

Parents and Homework

We recognise that parents make a significant difference to children's progress in Maths and encourage this partnership. The homework policy and individual class homework leaflets outline how parents can support.

Curriculum Leadership

The role will include:

- Inspiring an exciting and creative approach to maths teaching
- Supporting maths teaching through advice, guidance, CPD and resources
- Sharing information acquired from courses or other sources that may be beneficial to staff
- Reviewing the maths policy and monitoring its implementation
- Regularly evaluating the maths scheme of work and amending as necessary
- The management, maintenance and storage of resources
- Organising pupils' participation in maths workshops and events
- Effectively managing the maths budget
- Reporting to parents, governors and others when appropriate

POLICY REVIEW

The Mathematics policy will be reviewed annually as part of the overall school development plan.

This policy will be ratified by the Governing Body in January 2020

Signed by Mr W Aitkin (Chair of Governors) Date: January 2020

This policy will be reviewed on or before the following date: January 2020