St. Peter's C of E Primary School

Mathematics Policy

'Unlocking the gates to a lifelong love of learning and faithfulness'

"Start children off in the way they should go, and even when they are old they will not turn from it" Proverbs 22:6

Ratification Date: Spring 2020
Review Date: Spring 2024

St. Peter's Vision Statement

At St Peter's C of E Primary School, the growth and development of children and adults is central to everything we do. As a church school, we aim to serve and take care of our community by providing an education which inspires every child to be the best they can be. This is within a framework which is rooted in distinctive Christian beliefs and values whilst embracing diversity, respecting other faiths and worshipping together. We encourage an understanding of the meaning and significance of faith and promote Christian values through the experiences we offer to all our school community.

Aims

At St. Peter's , we believe Maths is an essential part of our curriculum; our intent is that we will promote a real love for maths, promoting children's curiosity and enthusiasm within the subject area. We intend for our curriculum to be fun, practical and engaging, giving children a sense of excitement and the ability to use maths in their daily lives with confidence. Teachers will deliver the National Curriculum, promoting a real thirst for understanding, creating ambition to become Mathematicians of the future. We aspire that all children are equipped with mathematical knowledge, skills and vocabulary to use in today's world and tomorrow's.

1. **The aim of the mathematics curriculum is that children will become confident mathematicians**:

- 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.
- a positive attitude towards mathematics and an awareness of the fascination of mathematics.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- **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. (National Curriculum 2014)

2 Teaching and learning style

2.1 The school uses a variety of teaching and learning styles in mathematics. Our principal aim is to develop children's knowledge, skills and understanding. During our daily lessons, we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources, such as number lines, number squares, digit cards and small apparatus (manipulatives) to support their work. Mathematical language will be explicitly taught.

2.2 In the EYFS children follow the NCETM mastering number programme which aims to give the children a firm foundation in the development of number This is continues in year 1 and year 2 who also access the White Rose Scheme. The rest of the school follow the White Rose Scheme of learning with other supporting resources for example: deepening understanding, Nrich and NCETM resources.

Lessons are personalised to address the individual needs of the children and class.

3 Mathematics curriculum planning

3.1 Mathematics is a core subject in the National Curriculum and we use this as the basis for implementing the statutory requirements of the programme of study for mathematics.

3.2 There is a mathematics lesson every day which has a clear focus on direct, instructional teaching and interactive oral work with both the whole year group and smaller ability groups.

3.3 Lessons in Year 1 to Year 6 are planned using the White Rose scheme of learning which breaks the lessons into small steps. The programme supports teachers in planning flexible lessons which meet the specific needs of the children. It also ensures continuity and progression throughout the school.

3.4 Each lesson is designed to build on prior knowledge to increase fluency and to enable high quality reasoning and problem solving. Vocabulary will be taught explicitly.

4 Contribution of mathematics to teaching in other curriculum areas

4.1 English

The teaching of mathematics contributes significantly to children's understanding of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, in mathematics lessons we expect children to read and interpret problems in order to identify the mathematics involved. They are also improving their command of English when they explain and present their work to others during plenary sessions. Maths can contribute in English lessons too: younger children enjoy stories and rhyme that rely on counting and sequencing while older children encounter mathematical vocabulary, graphs and charts when reading non-fiction texts.

4.2

Personal, social and health education (PSHE)
Mathematics contributes to the teaching of PSHE. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views.

4.3

Spiritual, moral, social and cultural development
The teaching of mathematics supports the social development of our children through the way we expect them to work with each other in lessons. We group children so that they can work together and we give them the chance to discuss their ideas and results.

4.4 Mathematics and Computing

Information and communication technology enhances the teaching of mathematics significantly because computing is particularly useful for mathematical tasks. It also offers ways of impacting on learning which are not possible with conventional methods. Teachers can use software to present information visually, dynamically and interactively so that children understand concepts more quickly. Younger children use computing to communicate results with appropriate mathematical symbols. Older children use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations.

5 Mathematics and inclusion

5.1

At our school, we teach mathematics to all children, whatever their ability and individual needs. Mathematics forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our mathematics teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details see separate policies: Special Educational Needs; Equality; Gifted and Talented.

5.2

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors – classroom organisation, teaching materials, teaching style and differentiation – so that we can take some additional or different action to enable the child to learn more effectively. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels. This ensures that our teaching is matched to the child's needs.

5.3 Intervention will lead to the creation of a provision map for children with special educational needs. This provision map may include, as appropriate, specific targets relating to mathematics. Where possible, we try to keep all the year group working on the same objectives. On occasions, children will work with different year groups to allow the child to access the mathematics curriculum.

5.4 We enable all pupils to have access to the full range of activities involved in learning mathematics. Where children are to participate in activities outside the classroom (a 'maths trail', for example), we carry out a risk assessment prior to the activity to ensure that the activity is safe and appropriate for all pupils.

6 Assessment for learning and marking

6.1 The school marking policy is followed: Wherever possible Live marking takes place so that children's misconceptions can be corrected immediately and children are receiving instant feedback. Children are given opportunities to "purple pen" (edit) their work. When appropriate, the children will mark their own work with support and guidance from the teacher. The children can also peer mark each other's work.

6.2 Teachers will assess children's work in mathematics from three aspects (long term, medium-term and short-term). We use short-term – formative - assessments to help us adjust our daily plans. These short-term assessments are closely matched to the learning objectives.

6.3 We carry out summative assessments at the end of each term and we use these to assess progress against school and national targets, and National Curriculum expectations. We can then set targets for the next school term/year and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, as relevant, so that s/he can plan for the new school year. We make formative assessments using a variety of assessment information. We use the national tests for children in Year 6. End of Key Stage 1 assessments are done on the basis of the class teacher's ongoing assessments which can be supported by the published test materials. Year 4 are assessed on the national times table test in June.

6.4 The Reception baseline assessment is carried out in September for the reception children.
Each class teacher is responsible for monitoring and evaluating the progress of the pupils' mathematical skills.
Times tables are monitored through regular practise and testing. Year 4 children take the multiplication check which identifies their fluency.
Children are formally assessed in Mathematics in Year 2 and Year 6 according to SATS tests and tasks.
Puma assessments are carried out termly and the results are used to inform planning. These are used to identify misconceptions and consequently inform planning and teaching. In Year 6, old SATS papers are used to monitor progress.
In KS2 children are given arithmetic tests regularly and these are used to identify gaps. White Rose provides two assessments for each block of work so that teachers are able to carry out an assessment prior to teaching and therefore

identify any areas which may need more work and the post assessment will identify any children who may need additional support,
The Eazmag tracking system is used to closely monitor children's progress throughout the school with data put on termly. Summative results are recorded as Autumn 2, Spring 2 and Summer 2.

7 Home-School Links

7.1 We encourage parents and carers to support their children's maths learning at home by encouraging them to:

- Talk about and involve their children in everyday maths, such as telling the time, money, shapes and measures.
- Help with the learning of number bonds and multiplication tables.
- Support the school in the use of the methods of calculation it teaches; these can be found in the maths booklet for parents handed out at Parents' Evenings.

7.2 Parents and carers are always welcome to speak to their child's class teacher (in the first instance) or the head teacher about any aspect of maths provision in school.

8 Resources

8.1

The curriculum is planned by teachers and delivered by teachers and teaching assistants. All classrooms have an interactive whiteboard, a wide range of appropriate small apparatus and learning displays Some resources are kept in classrooms for the children to access independently.

9 Monitoring and review

9.1

Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the subject leader. The work of the subject leader also involves supporting colleagues in their teaching, being informed about current developments in the subject and providing a strategic lead and direction for mathematics in the school. The head teacher allocates regular management time to the subject leader so that s/he can review samples of children's work, undertake pupil interviews and lesson walks of mathematics teaching across the school.

10 ROLE OF THE CO-ORDINATOR

- To take the lead in policy development
- To support colleagues.
- To monitor progress in Mathematics – e.g. leading staff CPD, scrutiny of work, analysis of formal assessment data.
- To take responsibility for the choice, purchase and organisation of central resources for Mathematics, in consultation with colleagues.
- To liaise with other members of staff to ensure a coherent and progressive scheme of work which ensures both experience of, and capability in, Mathematics.
- To be familiar with current thinking concerning the teaching of Mathematics, and to disseminate information to colleagues.
- The co-ordinator will be responsible to the Head teacher and will liaise with the named link Governors.