

Mathematics Policy

Date agreed by Governors: _____

Review date: _____

Governor signature: _____

Date of next Review: _____

Introduction:

This policy supports the work of the school in promoting its mission statement, aims and values.

Mission statement:

St Michael's VC School endeavours to provide a happy, safe, caring and stimulating learning environment, based on Christian principles in which all members of the school community are valued as individuals and are encouraged to reach their full potential.

School aims:

At St Michael's we value every member of our school community and our aims are for every child, whatever their background or circumstances, to have the support they need to:

- Develop their understanding of the value of leading a healthy lifestyle
- Work and play in a secure and safe environment in which they are encouraged to develop moral values and mutual respect
- Experience an exciting curriculum which fosters their enthusiasm, develops an enquiring mind and enables every child to achieve his/her full potential
- Access an education for life which promotes British Values that enable all learners to become effective and reliable members of the wider community
- Foster ambition and expectation to carry through to adult life

To achieve these aims all learners, staff, parents and governors will work together to promote our **core values** of peace, courage and respect.

1 Aims and objectives

1.1 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.

1.2 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.

2 Teaching and learning style

2.1 At St Michael's CE Primary School we use a variety of teaching and learning styles in mathematics lessons (kinaesthetic, visual, auditory). Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high proportion of whole-class and group-direct teaching. During these 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 to support their work. Children use ICT in mathematics lessons where it will enhance their learning. Wherever possible, we encourage the children to use and apply their learning in everyday ('real-life') situations.

2.2 In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – in some lessons through differentiated group work, and in other lessons by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals.

For a more detailed account of teaching and learning styles, refer to our [Teaching and Learning Policy](#).

3 The Foundation Stage

- 3.1 We teach mathematics in our Reception classes through discreet 20 minute sessions entitled 'Number Fun!'. We relate the mathematical aspects of the children's learning to the developmental statement guidance set out in the non-statutory 'Early Years Outcomes guide for practitioners' and in accordance with the Statutory Framework for Early Years Foundation Stage which underpins curriculum planning for children aged three to five. We give all our children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities and play that allow them to enjoy, explore, practise and talk confidently about mathematics.

4 Mathematics curriculum planning

- 4.1 Mathematics is a core subject. We use the National Curriculum (2014) as the basis for implementing the statutory requirements of the programme of study for mathematics for Key stages 1 & 2.
- 4.2 We carry out curriculum planning in Mathematics in three phases (long-term, medium-term and short-term). The National Curriculum for Mathematics gives a detailed outline of long term teaching requirements, while our individual year group teaching programmes (overviews) identify the key objectives in mathematics that we teach within each year group. These are highlighted in our medium term planning.
- 4.3 Our medium-term mathematics plans, give details of the main teaching objectives for each half term based upon the National Curriculum for Mathematics programmes of study. This ensures we deliver a balanced, age appropriate and challenging curriculum with an appropriate distribution of work across each term. At St Michael's CE Primary School we recognise the need to revisit topic areas to revise, consolidate and extend (enrich) skills based on a knowledge of our children's individual needs. Planning is kept by individual teachers and reviewed by the Mathematics team on a half termly basis.
- 4.4 It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught. The class teacher keeps these individual plans, and a copy is kept for reference.

5 Calculation Policy

- 5.1 For a detailed account of our approach to teaching quick, efficient calculation methods for each operation, refer to appendices.

6 Marking

- 6.1 Marking and feedback is done as soon as possible after work has been completed. Marking may also take place while the work is in progress to assure the pupil that (s)he is progressing along the right lines or to correct misunderstandings. Wherever possible marking is done in the presence of the pupil(s) so that immediate interaction between pupil and teacher can occur to celebrate success, set targets and consolidate information.

7 Contribution of mathematics to teaching in other curriculum areas

St Michael's CE Primary school operates a creative curriculum. Throughout the whole curriculum opportunities exist to extend and promote mathematics. Our teachers seek to take advantage of all opportunities.

7.1 English

Mathematics contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage children to read and interpret problems in order to identify the mathematics involved. The children explain and present their work to others during plenary sessions. Younger children enjoy stories and rhyme that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

7.2 Computing

Children use and apply mathematics in a variety of ways when solving problems using ICT. Younger children use ICT 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 tessellation. ICT programs are also utilised within the curriculum to consolidate and extend children's knowledge and understanding at an appropriate age/level of challenge for the individual or group.

7.3 Personal, social and health education (PSHE) and citizenship

Mathematics contributes to the teaching of personal, social and health education, and citizenship. 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. We present older children with real-life situations in their work such as the spending of money.

7.4 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 work together, and we give them the chance to discuss their ideas and results.

8 Teaching mathematics to children with special needs

8.1 Wherever possible we aim to fully include SEN pupils in the daily mathematics lesson so that they benefit from the emphasis on oral and mental work and by listening and participating with other children in demonstrating and explaining their methods.

8.2 Where necessary teachers will, in consultation with the SENCO, draw up an Individual Educational Plan for a child. If a child's needs are particularly severe they will work on an individualised programme written in consultation with the appropriate staff.

8.3 When planning, teachers will try to address the child's needs through simplified or modified tasks or the use of support staff.

8.4 Where appropriate, a Group Educational Plan is developed with common objectives and learning targets for a group. For a more detailed account of SEN provision, refer to our [Special Educational Needs Policy](#).

9. Equal Opportunities

- 9.1 As a staff we endeavour to maintain an awareness of, and to provide for, equal opportunities for all our pupils in mathematics. We aim to take into account cultural background, gender and Special Needs, both in teaching attitudes and in the published materials we use with our pupils. For further details, refer to our [Equal Opportunities Policy](#).

10 Assessment and recording

- 10.1 At St Michael's CE School we are continually assessing our pupils and recording their progress. We see assessment as an integral part of the teaching process and endeavour to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the pupils and ensuring progress.
- 10.2 We assess children's work in mathematics from three aspects (long-term, short-term and medium-term). We make short-term assessments which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives.
- 10.3 We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work.
- 10.4 We make long-term assessments towards the end of the school year, and we use these to assess progress against school and national targets. We can then set targets for the next school 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, so that s/he can plan for the new school year. We make the long-term assessments with the help of end-of-year tests and teacher assessments. We use the national tests for children in Year 2 and Year 6.
- 10.5 Foundation Stage children are continually assessed against 'Early Years Outcomes guide for practitioners' and in accordance with EYFS Framework guidelines. A summary of each child's progress is recorded upon their Foundation Stage Profile and reported to parents at the end of Summer term.
- 10.6 Children, identified as requiring additional mathematics support are placed upon intervention programmes where personalised individual or group work is planned for and delivered by Teachers or Mathematical HLTAs. These sessions take place as part of the school timetable and not necessarily within Mathematics lessons.

For further details of our assessment procedures in mathematics, refer to our [Assessment Policy](#).

11 Reporting to Parents

- 11.1 Parents are given the opportunity to discuss their child's progress on two separate occasions, a transitional parent consultation in October and a Spring Term parent consultation, focusing primarily on attainment, progress and learning behaviour.
- 11.2 At the end of Foundation Stage, KS1 and KS2 each pupil's level of achievement against national standards is included as part of their annual written report.

12 Parental involvement

- 12.1 We operate an 'open door' policy to our parents. Parents are invited formally into school on a regular basis during half termly topic 'outcomes' during which they may have access to their children's work as well as during consultation meetings. Learning Journeys are sent home to parents for comment on a half termly basis, within Reception year.
- 12.2 When significant changes have been/are made to the mathematics curriculum parents are invited to a meeting or sent information via newsletter. Home learning support and guidance is also available on our school website.
- 12.3 Parents are welcomed into school to attend FS, KS1 and KS1 support workshops detailing the teaching of mathematics across year groups.

13 Homework

- 13.1 Opportunities will be provided for children to practise and consolidate their skills and knowledge, to develop and extend their techniques and strategies and to prepare for their future learning through out-of-class activities or homework. This may not always be written work and it is aimed that it will be frequently given, short and focused. It will be varied, interesting and fun so that the children are motivated. It stimulates their learning and fosters different study skills. Whatever the nature of the work it is aimed that verbal or written feedback will always be given. KS2 Children are given mathematics homework every week. For further details, refer to our [Homework Policy](#).

14 Governor Involvement

- 14.1 At St Michael's CE Primary School we have identified Governor working groups who attend training and are invited to relevant school INSET days and staff/team meetings.
- 14.2 We have a link Governor (Rachael Clarke) who visits the school half termly to talk with the Mathematics Team and participates in planning and book scrutinies. When possible she talks with teachers and observes some daily mathematics lessons.
- 14.3 The Governor working groups report back to the curriculum committee on a regular basis.

15 Resources

- 15.1 There is a range of resources to support the teaching of mathematics across the school. All classrooms have a number line, 100 square and a wide range of appropriate small apparatus. Mathematical dictionaries are available. Calculators and a range of audio visual aids are available from certain rooms. The library contains a range of books to support children's individual research. A range of software is available to support work with the computers and tablets.

16 Monitoring and review

- 16.1 Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics team leader. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The mathematics subject leader gives the head teacher an annual summary in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement. The head teacher allocates regular management time to the mathematics subject leader so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school. A member of the school's Governing body Working group (Rachael Clarke) is briefed to oversee the teaching of Mathematics. This governor meets regularly with the subject leader to review progress.