ST. MARY’S PRIMARY SCHOOL MATHEMATICS POLICY

* Introduction - Purpose of Study

Mathematics 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.

The national curriculum for mathematics aims to ensure that all pupils: become fluent in the fundamentals of mathematics; reason mathematically; can solve problems by applying their mathematics.

2. Aims of the Maths curriculum at St. Mary’s Primary School

We aim to develop a positive attitude and enjoyment of learning towards mathematics; mental maths skills, which enable children to calculate in their heads; develop a range of written methods for calculation (see calculation policies); an understanding of how maths is used in everyday life; the ability to solve problems through decision making, and reasoning in a range of contexts; the skills of perseverance and independence, appropriate to whichever level the child has reached; confidence and competence with numbers and the number system, promoting effective learning.

3. Objectives at St. Mary’s Primary School

We offer a mathematical curriculum and teaching that: has progression and structure through the National Curriculum; supports children’s learning effectively, helping them progress and fulfil their potential; uses a variety of methods to further children’s understanding through: mental strategy practice, practical activity, investigation, discussion, group, paired or individual work, direct teaching methods; utilises opportunities for cross-curricular work; utilises resources to achieve the highest standards.

4. Mathematics Curriculum Planning

Years Reception to 6 follow the Power Maths scheme of work as an outline for medium term planning, linking objectives to National Curriculum Programmes of Study and Attainment Targets. Pre-school children follow the latest EYFS guidance. The planning and use of proformas needs to be in line with the school’s Teaching and Learning policy and involves the use of appropriate lesson planning documents. The use of Power Maths weekly units may support planning, alongside the use of other appropriate resources. Planning is the responsibility of the class teacher. These weekly plans list the specific learning intentions/objectives and success criteria for each lesson, and give details of how the lessons are to be taught. These plans are to be shared with any support staff, to ensure that all abilities are catered for.

5. The Foundation Stage

In the Early Years Foundation Stage (EYFS), we relate the mathematical aspects of the children's work to the Development Matters statements and the Early Learning Goals (ELG), as set out in the EYFS profile document. Mathematics development involves providing children with opportunities to practise and improve their skills in counting numbers, calculating simple addition and subtraction problems, and to describe shapes, spaces, and measures. The profile for Mathematics areas of learning are Number (ELG 11) and shape, space and measures (ELG 12). We continually observe and assess children against these areas using their age-related objectives, and plan the next steps in their mathematical development through a topic-based curriculum.

6. Teaching Emphasis

Teaching emphasis is on direct teaching, mental strategies and differentiated work. A maths lesson will be taught every day and may include all or some of the following elements: a mental/oral starter; a main activity, meeting the main objectives; a plenary/conclusion, which draws together learning, discusses misconceptions, or extends the learning further. Children may work individually, in pairs or in groups during these sessions, with discussion being actively encouraged.

7. Differentiation and Target Setting

Children are taught in class groups, with appropriate differentiation. Some children may have individual work set for them, if appropriate.

8. Organisation and Layout of Work

Early Years Foundation Stage Work is usually carried out in books, practically (both inside and outside) or on paper and placed in folders. Photographs and notes are also used as evidence of attainment. Key Stage 1 & 2 - children’s maths work is recorded in their Power Maths books. White boards are also used for mental/written methods and jottings. Practical activities are regularly used and outcomes are related to objectives and recorded on assessment sheets, which are on the reverse of the weekly planning grids. Books – A4 squared paper exercise books are used with a ‘Mathematics Books’ cover detailing the child’s name (first and last) and class. Margins – A 2 square or 2cm margin is used for every piece of work. If appropriate, an extra 2 square or 2cm margin is added 9 squares away from the first margin. • Dates – The date, showing day, month and year is written in numbers e.g. 05/09/19. Title - an appropriate title, underlined with a ruler, heads every piece of work usually with the learning objective. Children use HB pencil for all Maths work. Setting out – all work starts 1 square in from the margin. For vertically oriented sums, 2 squares are left between each sum, whilst horizontal sums have 1 square left between. Only one digit/symbol is placed in each square.

9. Marking of Children’s Work

Marking – depending upon the type of work, correct answers should be marked with a pink tick. Incorrect answers are to be marked with a green dot. Marking is done, as far as is reasonably possible with the child so any misunderstandings can be explained so the child’s understanding can be stretched. No child is to be faced with a page full of crosses. If a child has obviously made many mistakes, marking ceases and a comment requesting the child to seek help from the teacher is written (age appropriate). For more detailed information, see St. Mary’s Marking Policy. Corrections – children should not be allowed to alter any answer once it has been marked. Corrections should be carried out at the end of the piece of work. The process of correcting work is encouraged to establish the importance of self-checking work by the child and to avoid making similar errors in the future. Comments – comments are always positive, constructive and relevant to the child and to the learning objective for that particular lesson/series of lessons/targets. When and where appropriate, constructive comments should be given so children have a focus and a target for improvement. Children are encouraged to self-assess their work and make links to “where next?” In addition, it is appropriate for older pupils (Y5 & 6) to regularly record their own comments in purple pen (what they did well and what needs to be improved next time).

10. Mathematics and Computing

Computing is used in Maths sessions to enhance the teaching of mathematics significantly, supporting direct teaching or part of the lesson.

11. Homework

In years R and 1, homework is given occasionally and is done on a voluntary basis. In years 2 to 6, children are set a piece of homework weekly, which supports or extends their Maths lessons from the week. In the Spring Term, Y6 children may also be set items of Maths homework to support their work towards the SATs tests.

12. Assessment Procedures Progress and Attainment

Assessment Procedures Progress and Attainment are measured in a variety of ways: teacher assessment of pupil progress is to be recorded on the school pupil tracking system termly, showing national curriculum expectations; informal assessment, including marking of pupils’ work, listening to their discussions and observations; assessment sections on the weekly plans should be filled daily, as appropriate, and used to inform future planning (formative assessment); weekly tests on appropriate skills, such as number bonds, or multiplication facts; EYFS Early Learning Goals (ELG) in Foundation Stage; SAT’s – both statutory and non-statutory in Y2-6.

Assessments, both formal and informal, will inform the planning of future lessons and activities for groups and individuals.

13. Mathematics and Inclusion

We aim to promote equality of opportunity for every child and ALL children have equal access to the Mathematics curriculum regardless of race, gender, background, disability or religion. Mathematical skills are incorporated within the EYFS timetable. Through our Mathematics teaching, we provide learning opportunities that enable all pupils to make at least good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those identified as gifted and talented and those learning English as an additional language, and we take all reasonable steps to achieve this. 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.

Special Educational Needs

The school is committed to the early identification of Special Educational Needs and we operate using the Code of Practice (2014) to address those needs. The mathematics curriculum is always differentiated to cater for children’s abilities and we aim to mark work and give individual support wherever possible to encourage all of our pupils.

In addition, those with learning difficulties may: receive support from a Learning Support Assistant, outside agencies or specialist support staff; use specific resources or specialist equipment that may be required to enable the child to take part in practical work; have parallel lessons planned for to support individual needs, as appropriate.

Intervention through School Action and School Action Plus will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to mathematics. From late Autumn 2018, reviews of these IEP’s will take place. Interventions and expected outcomes will then be planned, using the existing IEP format and progress will be reviewed termly with other end of term assessments).

Provision for the Gifted, Talented and More Able For those children who are deemed to be high achievers and/or ‘Gifted and Talented’ certain action may be taken: undertaking activities appropriate to ability; receiving support from outside agencies; parallel lessons or challenges planned for; investigations that use and apply their skills and develop deeper thinking and strategies.

14. Evaluation and Monitoring

To review our effectiveness, monitoring and evaluation of mathematics takes place on a termly basis. We monitor standards in Mathematics by: tracking a class through the school; analysis of the schools’ pupil tracker; observations of Mathematics lessons, or parts of a lesson to assess quality of teaching and learning; monitoring of planning; work scrutiny (including homework); informal discussions with children; monitoring the use of resources across the school; interpreting data, including SATs.

15. Reporting to Parents

Reports are made to parents at the Parents’ Evenings held throughout the course of the year. Written reports are sent to parents in July. In Reception, Year 1, 3, 4, and 5, teachers’ comments are based on their own assessment of the child’s work. In Years 2 and 6, SATs results and Teacher Assessments are also included in the report. Written comments are positive and highlight strengths, achievements and progress, whilst also suggesting achievable targets for future improvements. For detailed information on SEN and additional reporting, see the SEN policy.

16. The Role of Governors

It is good practice for the Governing Body to appoint a Maths Governor. The role of this Maths governor is to: liaise with the Headteacher and (more frequently with) the Maths teachers; monitor Mathematics strategically – i.e. to confirm awareness of whole school priorities, overall standards and trends as well as actions taken by the school with regard to maths development; inform the Governing Body on matters relating to Maths provision; liaise with other staff; view resources, liaise with inspectors.

17. The Role of the Maths Leader

To provide a strategic lead and direction for Mathematics in the school; to provide support and advice to staff in the delivery of the Mathematics programme of study; remain informed about current developments in the subject by attending INSET sessions and being involved in independent research and reading; disseminate relevant information to staff; deliver INSET sessions to staff, to support staff development; to monitor and evaluate teaching and learning of Maths; monitor standards in the subject, through planning and work scrutiny, statistics, quality of teaching and pupil assessments; to order and maintain resources to enhance effectiveness of Maths teaching within the school; to consider with staff in the evaluation and planning of actions included within the School Improvement Plan.

Date of policy – September 2019

Review – September 2020