ST JOHN THE BAPTIST C OF E PRIMARY SCHOOL

Life in all its fullness

Mathematics Policy
September 2021

- An exciting quality environment

- **ST JOHN THE BAPTIST C OF E PRIMARY SCHOOL**

MATHEMATICS POLICY

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:

- We will endeavour to instil the Christian values of resilience, self-discipline and encouragement.
- 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.
- To develop depth of mathematical understanding through a mastery approach.

2 Teaching and learning style

2.1 The school uses a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through daily lessons 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 mathematical manipulatives such as Base 10, number lines, number squares, digit cards and small apparatus to support their work. Numicon is used as a visual resource to support SEN and lower ability children. Mathematical working walls are available in all classrooms. Children use ICT in mathematics lessons where it will enhance their learning, as in modelling ideas and methods. Wherever

possible, we encourage the children to use and apply their learning in 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. We also identify children who are working below where they should be and need to make accelerated progress through target and group teaching. Booster teaching and maths interventions are used to ensure children can reach their full potential.

2.3 We teach calculating in accordance with the St John's Calculation Policy. We ensure more able pupils are suitably stretched and challenged, enabling them to reach their full potential.

3 Mathematics curriculum planning

3.1 Mathematics is a core subject in the National Curriculum and we use the National Curriculum as the basis for implementing the statutory requirements for mathematics. As a school we follow the White Rose maths curriculum which is designed and built upon the National Curriculum.

3.2 We ensure coverage and progression is taught through the areas : number and place value, addition and subtraction, multiplication and division, fractions, measurements, geometry and statistics.

3.3 The planning of maths consists of three phases (Long term, Medium term and Short term). The Long term plan outlines which structures are covered in which year group. Weekly planning takes the form of specified directives on the weekly planning time table.

3.4 The class teacher plans their lessons in line with the whole school curriculum progression map, which has been built upon the National Curriculum strategies and the White Rose Maths scheme of work. The White Rose Scheme is broken down into 'small steps' and is designed to facilitate maths mastery. The key factures in a mastery approach to teaching maths include use of physical manipulatives, varied fluency (seeing the same problem in a range of visual representations), and reasoning and problem solving.

3.5 To ensure retention of skills and knowledge teachers include opportunities within their planning to revisit, revise and practise objectives which have been

covered previously in the year group or prior year groups coverage. Use of White Rose resources 'Flashback 4' ensures this revision is done regularly.

4 The Foundation Stage

4.1 We teach problem solving, reasoning and numeracy in our Foundation class. We relate the mathematical aspects of the children's work to the objectives set out in the Early Years Foundation Stage Curriculum which underpin the planning for children aged three to five. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practice and talk confidently about mathematics.

5 Contribution of mathematics to teaching in other curriculum areas

5.1 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.

5.2 Information and communication technology (ICT)

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 tessellations. When working on control, children use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships.

Children have been given user profiles for different online platforms such as Times Tables Rockstars and Sum Dogs in order to support their learning. They are given opportunity in class time to access these through use of school ICT equipment.

5.3 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

on the spending of money. The school bank enables children to take control of their finances.

5.4 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. Christian values are identified in the maths teaching, where possible.

6 Teaching mathematics to children with special educational needs

6.1 At our school, we teach mathematics to all children, whatever their ability. 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 progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress. Pivots and B Squared assessments schemes able us to support SEN children with smaller, more precise steps.

6.2 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, differentiation – so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

6.3 SEN Intervention will lead to the creation of pupil provision plan for children with special educational needs. The plan may include, as appropriate, specific targets relating to mathematics.

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

7 Assessment and recording

7.1 We assess pupils' progress in mathematics in the form of formative and summative assessment.

7.2 We assess pupils progress in mathematics formatively on a lesson on lesson and week by week basis and adjust/adapt our daily plan accordingly to meet

the needs of all pupils and ensure key concepts are embedded. We also use formative assessment on a term by term basis to help us plan the next unit of work.

7.3 We make long-term summative 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. We use PUMA tests at the end of each term in year 1, 2, 3, 4 and 5.

7.4 We meet on a half termly basis to discuss visual maps generated by Eazmag and set target and booster groupings.

8 Resources

8.1 There is a range of resources to support the teaching of mathematics across the school. All classrooms have a maths working wall and a wide range of appropriate small apparatus. Calculators and a range of audio/visual aids are available from the central storage area. A range of software on ipads and laptops is available to support work.

9 Monitoring and review

9.1 Monitoring of the standards of the children's work and of the quality of teaching in mathematics is the responsibility of the mathematics subject 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 the 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 the children's work and undertake lesson observations of mathematics teaching across the school. The maths subject leader updates the Oct governing body of any updates or developments.

9.2

Reviewed September 2021
Review September 2023

Reviewed by Staff: ……P Seaton……..

Reviewed by Governor: ……J Jackson……