St. James' C.E.P School

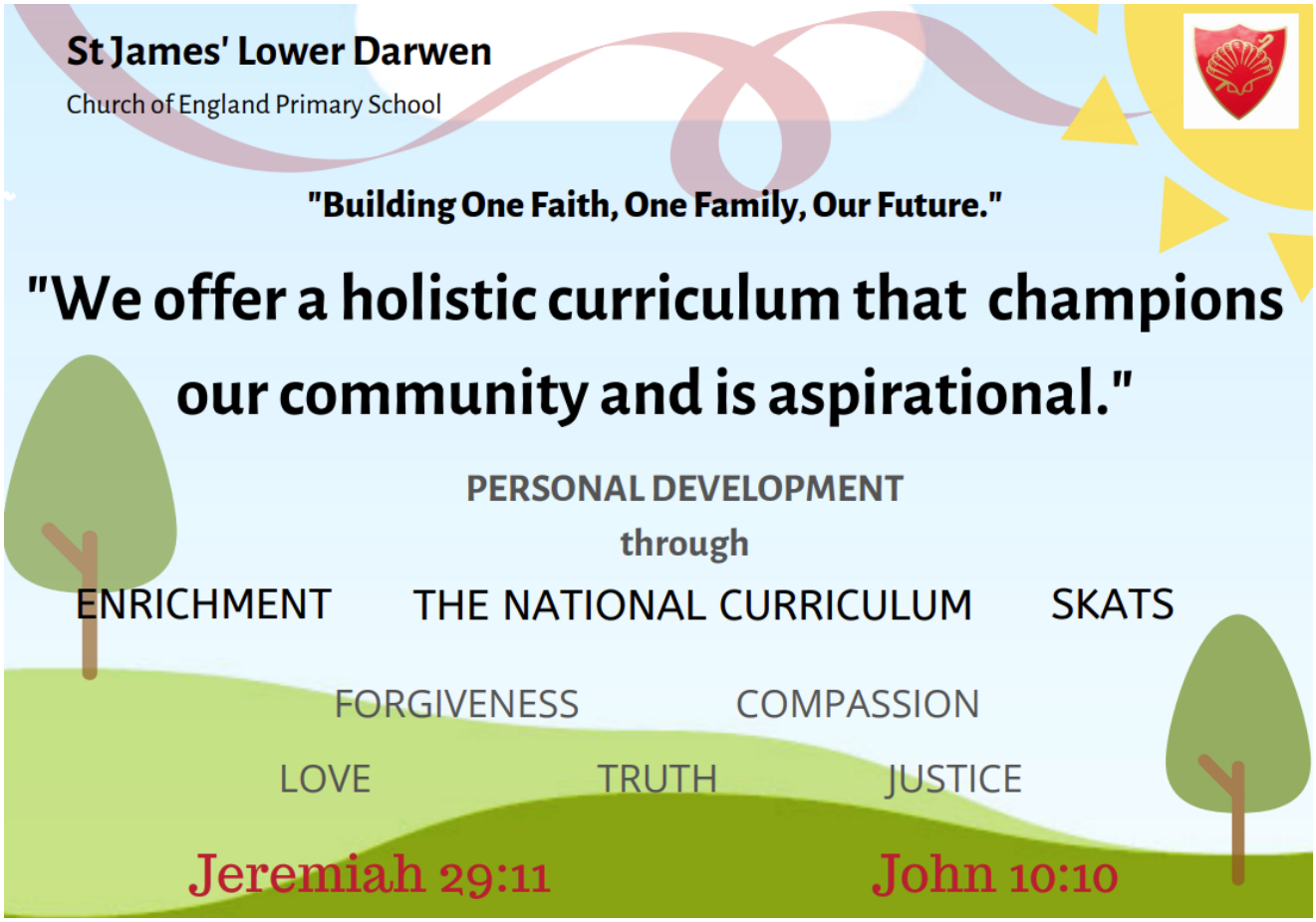
'Building One Faith, One Family, Our Future'

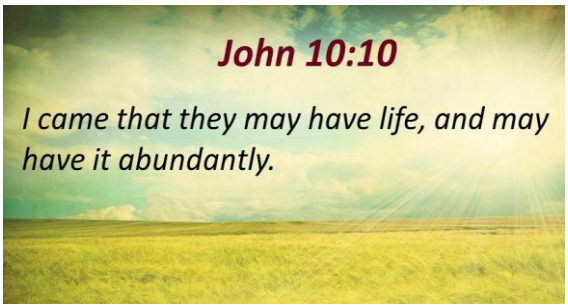
Mathematics Policy

Updated by L Malik Autumn 2025
Approved by Governors – Autumn 2025

Review Date – Autumn 2026 (Standards Committee)

Foundation, Vision and Intent





We want our children to know that **God has a plan for them** that means **they live their best life possible.**

Each **policy** and procedure within school, alongside the ongoing **curriculum** delivery, our **SKATS** programme, **enrichment** and the **spiritual development** offered to our families through Worship, RE and our links with Church, work towards making this happen.

Aims and objectives

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.

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.

Teaching and learning style

The principles of the mastery approach are at the heart of mathematics at St. James'. Our principal aim is to develop children's knowledge, skills and understanding in mathematics, including fluency, reasoning and problem solving. 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 and discuss their learning with their peers. They have the opportunity to use a wide range of concrete resources such as numicon, Cuisenaire rods and place value counters to enhance their learning. Teachers use ICT in mathematics lessons, where it will enhance the children's learning, to model concepts, methods and concrete or pictoral representations. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes, there are children who grasp mathematical concepts quicker than others. At St. James', we believe that all children can achieve success in maths through hard work. The majority of children work together towards the same objectives where their learning progresses in small, manageable steps. This prevents their working memory from becoming overloaded with too much new information at one time. Unless a child is working more than 2 years below or above their age-related expectation, the children are supported to access the same task or concept being taught through adult or peer support, or through the use of concrete resources or pictoral representations.

Mathematics curriculum planning

Mathematics is a core subject in the National Curriculum, and we use the National Curriculum 2014 as the basis for implementing the statutory requirements of the programme of study for mathematics.

We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The White Rose Hubs Scheme of Learning gives a detailed outline of objectives taught in the long-term. Key objectives are outlined in a yearly overview for each year group, ensuring appropriate coverage of all knowledge and skills required.

Our medium-term mathematics plans, are provided by the White Rose Hubs Scheme of Learning and give details of the main teaching objectives for each term to define what we teach. They ensure an appropriate balance and distribution of work across each term. The curriculum is broken into topics which are focused on for several weeks. Number skills and previously taught concepts are recapped regularly through a section of each lesson which is dedicated to

fluency. The online programmes Times Table Rockstars and Numbots provide a platform for children throughout school to practice and improve their fluency skills.

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 Mastering Number Programme provided by the National Centre of Excellence for Teaching Mathematics (NCETM) is delivered daily to all children in Reception, Year 1, Year 2, Year 4 and Year 5.

The Foundation Stage

We teach mathematics in our reception class using the White Rose Hubs Scheme of Learning and The Mastering Number Programme provided by the National Centre of Excellence for Teaching Mathematics (NCETM). As the class is part of the Foundation Stage of the National Curriculum, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, which underpin the curriculum 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.

Calculation Policy

Our Calculation Policy explains the key written methods that need to be taught in each year group, to support the planning, delivery and assessment of learning and teaching in Mathematics and to ensure consistency and progression across the School.

Contribution of mathematics to teaching in other curriculum areas

Oracy

At St. James', we value oracy as a vital tool for deepening mathematical understanding. Through structured partner and group talk, pupils are encouraged to articulate their reasoning, explain their methods, and justify their answers. We use carefully designed sentence stems to support pupils in developing precise mathematical language and confidence when discussing concepts. Regular opportunities for talk are embedded in lessons, enabling pupils to listen, question, and build upon one another's ideas. This focus on mathematical oracy helps pupils to think critically, solve problems collaboratively, and communicate their understanding effectively.

Information and communication technology (ICT)

Children use and apply mathematics in a variety of ways when solving problems using ICT. Teachers can use iPads to model the use of concrete apparatus to the whole class, enabling them to understand and use these representations to enhance their learning. When focusing on statistics, children can use their ICT to create and interpret graphs and charts.

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 which link to the PSHE strand 'Living in the Wider World' and allow children to apply their mathematical skills to managing money.

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. Children are expected and encouraged to

support and challenge each other in a respectful manner. There a numerous SKATs which link to mathematics lessons, such as perseverance, teamwork and articulating their thinking. Mistakes are celebrated and all children understand that mistakes are necessary for learning, linking to a growth mindset approach to the teaching of mathematics.

Teaching mathematics to children with special needs

We teach mathematics to all children, whatever their ability. It is part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Work in mathematics takes into account the targets set for individual children in their Individual Education Plans (IEPs).

Assessment and Recording

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 and identify groups for timely intervention. These short-term assessments are closely matched to the teaching objective and can be found in the marking responses of the teacher in the children's books. Progress made for each teaching objective is recorded on Sonar.

We make medium-term assessments at the end of each half term using the White Rose Hubs Termly Assessments (Fluency and Reasoning & Problem Solving papers) to measure progress against the key objectives, and to identify gaps in learning to be addressed in the following term. This informs teacher assessment judgements which are recorded on Sonar and also provides summary data and gap analysis using the provided Excel spreadsheet.

We make long-term assessments towards the end of the school year, and 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. Information is shared, using Sonar, with the teacher in the next year group, 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, plus the White Rose assessment tests for children at the end of Years 1, 3, 4 and 5. We also make annual assessments of children's progress using Sonar.

Resources

The use of Mathematics resources is integral to the concrete – pictorial – abstract approach and thus planned into our learning and teaching. We have a wide variety of good quality equipment and resources, both tangible and ICT based, to support our learning and teaching. Standard resources, such as number lines, multi-link cubes, dienes, hundred squares, shapes, etc. are located within individual classrooms. These resources are used by our teachers and children in a number of ways including: Demonstrating or modelling a concept, an operation or method of calculation, e.g.: a number line; place value cards: dienes; money or coins; measuring equipment for capacity, mass and length; bead strings; the interactive whiteboards and related software; 3D shapes and/or nets; Numicon and related resources and software; multilink cubes; clocks; protractors; calculators; dice; number and fractions' fans; individual whiteboards and pens; and 2D shapes and pattern blocks, amongst other things; Enabling children to use a calculation strategy or method that they couldn't do without help, by using any of the above or other resources as required.

Home–School Partnerships

We actively promote partnerships between home and school to strengthen pupils' mathematical learning. Families are encouraged to engage in meaningful discussions about maths in everyday contexts, such as shopping, cooking, and measuring, to show the relevance of maths in real life. Homework tasks often include practical and oracy-based activities that invite pupils

to explain their reasoning or discuss problem-solving strategies with adults at home. By involving families in these conversations, we aim to build confidence, enjoyment, and a shared understanding of the importance of maths beyond the classroom, for children and their adults at home.

Monitoring and review

Monitoring of the standards of 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 headteacher an annual summary in which s/he evaluates strengths and weaknesses in the subject and indicates areas for further improvement. The headteacher 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 named member of the school's governing body is briefed to oversee the teaching of numeracy. This governor meets regularly with the subject leader to review progress.