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Mathematics Policy
2026- 2027

Rationale

At St. Joseph's RC Primary School, we believe that Mathematics is a key skill that helps us to make sense of the world around us. 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 understand and apply their knowledge to solve real life problems.

At St. Joseph's RC Primary School, we also believe that Mathematics equips children with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life, it is vital in many forms of employment, science and technology, medicine, the economy, the environment and development and in public decision-making. Different cultures have contributed to the development and application of mathematics. Today, the subject transcends cultural boundaries, and its importance is universally recognised.

> *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 (National Curriculum in England – Mathematics Programme of Study – Key Stages 1 and 2).*

Aims - Intent

Based on the National Curriculum for mathematics, the aims for successful mathematics provision at St Joseph's RC Primary School is to ensure that all pupils:

- Have a sense of the size of a number and where it fits into the number system
- Know by heart number facts, such as number bonds, multiplication tables
- Use what they know by heart to figure out answers mentally
- Calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies
- Recognise when it is appropriate to use a calculator, and be able to do so effectively
- Become fluent in the fundamentals of mathematics, 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;
- 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;
- Acquire the necessary skills and fluency to recognise and make links between areas of mathematics and to move between representations of mathematical ideas;
- Apply their mathematical knowledge to science and other subjects.
- Develop and build on metacognitive knowledge and skills
- Explain their methods and reasoning, using correct mathematical terms
- Judge whether their answers are reasonable, and have strategies for checking them where necessary
- Suggest suitable units for measuring, and make sensible estimates of measurements
- Explain and make predictions from the numbers in graphs, diagrams, charts and tables.

Implementation of Policy

St. Joseph's RC Primary 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 by stretching and challenging the children in ambitious ways.

We do this through a daily lesson that has a mix of whole-class and group 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 appropriate to their age and attainment level.

At St. Joseph's RC Primary School, ICT is used in mathematics lessons for modelling ideas and methods to enhance the learning taking place. Wherever possible, we encourage the children to use ICT and apply their learning in everyday situations.

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 by organising the children to work in pairs on open-ended problems or games and we use teaching assistants to support targeted groups and to provide feedback to ensure that work is matched to the needs of individuals.

At St. Joseph's RC Primary School, we do this through careful planning and preparation, ensuring that throughout the school children are given opportunities for:

- practical activities and mathematical games
- the development of mental and oral strategies with an emphasis on speed recall of number bonds and multiplication tables
- the development of mathematical vocabulary
- developing their problem solving skills
- individual, group and whole class discussions and activities
- open and closed tasks
- a range of methods of calculating e.g. CPA model and mental strategies
- understanding mathematics through a process of enquiry and experiment
- regular use of ICT games to reinforce, develop and enthuse learning

The National Curriculum

The National Curriculum order for mathematics describes what must be taught in each key stage. St. Joseph's RC Primary School follows the primary mathematics framework, which provides detailed guidance for the implementation of the orders and ensures continuity and progression in the teaching of mathematics.

Every teacher in St. Joseph's RC Primary School has access to the framework for teaching mathematics and the curriculum overview outlining progression, which has been designed by the subject leader to meet the needs of children in our school. In Early Years, the curriculum is guided by the Early Learning Goals.

At St Joseph's RC Primary School, we:

- use the National Curriculum and the Statutory Framework for the Early Years Foundation Stage as our programmes of study and follow the statements outlined in these documentations to ensure full coverage for teaching and learning and to ensure that pupils achieve or exceed their age-related expectations. The school ensures that there are a variety of resources to supplement these.
- have adopted the White Rose Scheme for the delivery of mathematics lessons. All year groups have access to the programme to aid with planning and resources if necessary.
- teach a dedicated daily mathematics lesson, which includes a mental oral starter activity; main teaching input; pupil's independent task and plenary session (Year 1-6).
- revisit and practice areas of mathematical learning through starter activities, questioning, assessment strategies and home learning support.

By adopting a mastery approach to mathematics, we aim for pupils to develop a deep understanding of mathematics rather than being able to memorise key procedures or resort to rote learning. Mastering maths means pupils acquiring a deep, long-term, secure and adaptable understanding of the subject.

Early Years Foundation Stage

At St. Joseph's RC Primary School, children follow the Early Years Foundation Stage curriculum. Within the Foundation Stage, children follow the Mathematics Mastery programme which meets the requirements of the Statutory Framework for EYFS. Practitioners take into consideration pupil's learning characteristics and interests to provide a broad and balanced curriculum.

We give all children the opportunity to talk and communicate in a widening range of situations and to practise and extend their range of vocabulary and numeracy skills. They have the opportunity to explore, enjoy, learn about, and use mathematics in a range of situations. Mathematics is taught daily and assessed using the criteria from the Early Learning Goals. Mathematics is taught both as a discrete subject and within the whole Early Years curriculum to give children opportunities to use their numeracy skills in real life situations.

Key Stages 1 and 2

At St. Joseph's RC Primary School, mathematics lessons are taught daily for one hour. There are medium term plans for each term's work. There are also weekly plans, which cover the daily content of each lesson. The teachers are guided in their planning by the objectives set out in the National Curriculum Programmes of Study 2014.

In Year 1 - 6, the White Rose Scheme is followed, and this is fully in line with teaching and learning expectations outlined in the National Curriculum Programmes of Study 2014. Weekly plans provide a detailed outline of lessons, the teaching methods to be used during the lesson as well as activities for all pupils in the class.
Mathematics lessons typically have three parts; a mental oral starter, a main teaching input and the opportunity for pupils to work independently or in groups on work set by the teacher. This is followed by a plenary session which re-visits what has been learnt during the lesson and moves learning on further by providing a question that allows pupils to use and apply their newly gained skills. Teachers plan the lessons with their year group partners to ensure parity.

Number

The Programme of Study specifies a progression of number-based skills for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St. Joseph's RC Primary School will ensure that:

- *Children will be encouraged to use mental calculations where appropriate*
- *Children will have the opportunity to discuss and develop a range of calculation strategies*
- *Teaching will encourage flexibility of thinking and utilisation of connections within mathematics*
- *Children's computational skills will be developed and consolidated using a balance between practice and application in meaningful contexts*
- *Opportunities will be provided for children to develop their estimation skills, and will be encouraged to estimate answers before completing calculations*
- *Teaching will place a strong emphasis on ensuring children gain a sound understanding of the Place Value basis of the number system*

Shape and Space

The Programme of Study specifies a progression of skills in Shape and Space for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St. Joseph's RC Primary School will ensure that:

- *Teaching will place emphasis on observing and understanding the properties of 2-D and 3-D shapes*
- *Opportunities will be provided for the practical construction and investigation of shapes*
- *Children will be given opportunities to explore position and movement in real-life contexts.*

Measures

The Programme of Study specifies a progression of skills in measures for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St. Joseph's RC Primary School will ensure that:

- *Children will use a range of measuring equipment in meaningful contexts, and be encouraged to make choices regarding the most suitable equipment*
- *Children will follow a progression beginning with direct comparison, through measuring with non-standard units, to measuring with standard units with increasing accuracy*
- *Children will be given opportunities to develop estimation skills in all measures*
- *Teaching will place strong emphasis on ensuring that children understand that all measurement is approximate, and that they can make sensible decisions on the accuracy necessary in different situations.*

Handling Data

The Programme of Study specifies a progression of skills in handling data for children to acquire as they develop their mathematical ability. In order to facilitate this, the teaching staff in St. Joseph's RC Primary School will ensure that:

- Teaching *will be designed to ensure that children understand that the collection, representation and interpretation of data is a means through which real-life decisions can be made*

- *Handling data skills are used as a means of solving problems, through a four-point process: Pose a question; Collect data; organise, display & interpret data; Answer original question*

- *Children will be given opportunities to make decisions regarding what information is collected, how it is collected, how information is processed and how it is displayed*

- *Children will be given opportunities to apply data handling skills in a range of contexts, across subject areas*

- *Children will be given opportunities to develop an increasing range of ICT based handling data skill*

Teaching Methods and Approaches

The expectation is that the majority of pupils will move through the programmes of study provided by the National Curriculum at broadly the same pace. However, decisions about when to progress, is based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly, are challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material, consolidate their understanding, through additional practice, before moving on. All lessons therefore are appropriately differentiated to fully meet the needs of all pupils in class.

The teaching of mathematics provides opportunities for:

- *Group work*
- *Paired work*
- *Whole class teaching*
- *Individual work*

Children engage in:

- *The development of mental strategies*
- *Written methods*
- *Practical work*
- *Investigational work*
- *Problem- solving*
- *Mathematical discussion*
- *Consolidation of basic skills and routines*

At St. Joseph's RC Primary School, we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced. We use the mathematical vocabulary when planning to help determine the appropriate vocabulary to use in our teaching and children are expected to use it in their verbal and written explanations.

We endeavour to set work that is challenging, motivating and encourages the children to talk about what they have been doing.

Parental Involvement

At St. Joseph's RC Primary School, we recognise that parental involvement is an important factor in helping children achieve their best and actively encourage parents to become involved with their children's development in Mathematics through:

- *Parents' meetings three times a year, along with opportunities to look at children's work*
- *The school's 'open' attitude to visits from parents/carers, where teachers make themselves available whenever a discussion need is identified.*
- *Maths competitions for example, London Rocks, Maths week, Times-table-a-thon.*
- *Use of the Home Learning Materials, maths games and subscription to MyMaths and TimesTablesRockStars online learning for use at home*
- *Class newsletters informing parents of curriculum information and how they can further support their children at home.*

Home-Learning

Home-learning is an integral part of mathematics teaching at St Joseph's RC Primary School. Home-learning is set weekly, this can be a set of calculations to answer, investigations or real life word problems. Teachers also use websites such as, 'MyMaths' or 'TimesTablesRockStars' to set home learning activities. Through completion of home-learning activities pupils are given the opportunity to practise and consolidate mathematical skills and knowledge learnt at school. Furthermore, it provides information to parents about what area of mathematics their child is learning at the time.

The aim of home-learning is to provide pupils with the opportunity to practise new skills learnt in lessons and consolidate knowledge. The benefits of mathematics home-learning:

- Through regular practice, pupils improve their ability to problem solve becoming better at making links with all areas of mathematics and they pick up new ideas quickly in order to move on more readily to the next steps of learning;
- Provides the teacher extra assessment opportunities where the pupils understanding is confirmed allowing for further explanation and ironing out of possible misconceptions.

Assessment and Record Keeping

Assessment is related to the schools' vision statement in that we value each child and provide opportunities for them to fulfil their true potential. Assessment is an integral part of teaching and learning and we endeavour to make our

assessment purposeful. The purpose of Assessment for Learning is to find out how well the whole class, groups and individual pupils have learnt and progressed in the lesson and what they have achieved based on what they can or cannot do. Assessment helps teachers to plan the next steps in teaching and learning so that effective progression can take place. Teachers use appropriate assessment to set targets which are deliberately ambitious. Areas of difficulty are identified and addressed from the outset.

Formative Assessment

Formative Assessment is an ongoing process, which enables teachers to adjust day-to-day lesson plans and deploy support staff effectively to assist pupils as and when needed. These daily assessments help with the next steps in teaching and learning. Teachers are constantly assessing pupil's knowledge, skills and understanding during the lesson in various ways, such as:

- Through direct teaching and discussion, pupils are given oral feedback to help clear up any misconceptions.
- Teachers use 'diagnostic marking' to further identify misconceptions or to provide next steps to challenge those who achieved well.
- Pupils are given the opportunity to respond to teacher comments and complete challenge questions set in order to make improvements or extend their knowledge, skills and understanding.

Summative Assessment

The school uses a variety of formal summative assessments dependent on year group:

• EYFS use the 'Development Matters' documentation to provide integrated or discreet teaching and learning opportunities throughout the year to ensure that pupils make progress and achieve the Early Learning Goals. At the end of the academic year, pupils are judged as to whether they have met the Early Learning Goals.
• In Years 1 to 6, teachers use Rising Stars assessment tests termly to support their judgements about pupils understanding in relation to the mathematics curriculum. Alongside this, teachers use marking of pupils work to measure how well pupils achieve the learning objectives set in the mathematics lesson.
• In Year 2, pupils will undertake statutory KS1 assessment tasks which will inform the teacher's judgement of whether the pupil is working in line with, below or above the expectations for Year 2. This teacher judgement will be reported to the Department for Education.
• In Year 6, pupils sit the KS2 Mathematics tests (one arithmetic paper and two reasoning papers) in the summer term, which are assessed externally. The results of that will give a scaled score and will indicate if a pupil is working in line with, above or below the expected standard for Year 6.
The result of these tests and assessments are used to track pupils' progress throughout the Key Stages, year on year. At the end of the academic year, parents receive an annual report, which informs them of their child's progress.

Levels of achievements are updated at the end of each term and are recorded on a database used by the school to identify pupils who are:

• making less than expected progress
• making expected progress
• exceeding expected progress

This information is used by the school to set up intervention/academic study groups in mathematics to ensure that all pupils meet or exceed their expected target.

Reporting

At St. Joseph's RC Primary School all parents receive an oral termly report of their child's progress and an annual written report on which there is a summary of their child's effort and progress in mathematics over the year. Parents have opportunities to discuss progress at parent's academic review meetings and a 'Meet the Teacher' presentation. Within curriculum newsletters, parents will receive information on areas of study in mathematics for their child.

Equal Opportunities

At St. Joseph's RC Primary School, as a staff, we endeavour to maintain an awareness of, and to provide for equal opportunities for all our children in mathematics. All pupils at St Joseph's RC Primary School will have full access to the Mathematics curriculum regardless of gender, race, cultural background or any physical or sensory disability. We aim to take this into account both in our teaching attitudes and in the published materials we use with our children, in order to help them achieve their full potential. All weekly plans will show teaching and learning activities and the support provided.

Special Educational Needs

At St. Joseph's RC Primary School, we aim to fully include SEND children 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.

Where necessary teachers will, in consultation with the SENCO, draw up a target within 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.

Teachers set high expectations for every pupil, whatever their prior attainment. When planning, teachers will try to address the child's needs through tasks matched to their attainment (simplified and modified or challenging and extended tasks). In addition, support staff will be deployed effectively to offer focus pupils appropriate support or challenge.

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 often group children so that they can work together, and we give them a chance to discuss their ideas and results. The study of famous mathematicians around the world contributes to the cultural development of our children. Mathematics contributes to children's spiritual development. Children can find shapes and pattern in nature. They can see the order, logic and pattern that numbers offer.

Role and Responsibilities of Mathematics Subject Leader

- *Monitor planning, teaching and learning in mathematics, to ensure continuity and progression.*
- *Ensure there is well sequenced and progressive curriculum map which contains the key knowledge, skills and vocabulary children need to be procedurally fluent in mathematics.*
- *Monitor standards in mathematics throughout the school, including SEND, more able, etc.*
- *Identify strengths and areas for improvement and to lead and drive improvements within the school.*
- *To carry out pupil-conferencing to take into account pupils' view of mathematics provision in the school and act upon it.*
- *Keep up to date with new initiatives and train staff on these (also to facilitate in or out of school training for staff).*
- *Feed back to the Head teacher on standards in mathematics*

Monitoring and Review

At St. Joseph's RC Primary School, the subject leader supports colleagues in their teaching, by keeping informed about current developments in mathematics, and by providing a strategic lead and direction for this subject; gives the head teacher an annual summary report in which she evaluates the strengths and weaknesses in mathematics and indicates areas for further improvement.

St. Joseph's RC Primary School uses allocated management time to review evidence of the children's work, and to observe mathematics lessons across the school. The quality of teaching and learning in mathematics is monitored and evaluated by the head teacher as part of the school's agreed cycle of lesson observations. A named member of the school's governing body is briefed to oversee the teaching of mathematics. The mathematics link governor meets with the subject leader to review strengths and areas for development.