St Joseph's Catholic Primary School
Mathematics Policy

Mission Statement
To follow in Jesus' footsteps, caring for each other when we work, play and pray.

This policy describes our values and philosophy in relation to meeting the needs of all mathematical learners at St Joseph's Catholic Primary School. It outlines the framework within which all staff work and gives guidance on planning, teaching and assessment. It is designed to describe how the school intends to meet the needs of mathematics learners of all ages.

In the first instance this will be through working within the Foundation Stage Curriculum using the Early Learning Goals. From Year 1 to Year 6 statutory requirements of the National Curriculum in Mathematics will be met by fully implementing the National Curriculum objectives through the use of the White Rose Mathematics Hub Mastery planning documents and other suitable documents which enhance the teaching of these objectives.

The policy is intended to be read in conjunction with the calculation policy which illustrates strategies and methods outlined in the national curriculum and that are taught from Foundation year to Year 6. It is also important to read the Foundation Curriculum Framework which highlights the Early Learning Goals and the guide of progression in Foundation year.

Mathematics should be taught across the curriculum to develop pupils' mathematical fluency. Confidence in numeracy and other mathematical skills is a precondition of success across the national curriculum, which we hope to achieve at St Joseph's Catholic Primary School.

By fully adopting the mastery approach of Mathematics hub, alongside meeting the three main aims of the National Curriculum for Mathematics, we want all children at St Joseph's to develop into confident and competent mathematical thinkers, who are able to use mathematics in real life situations.

Aims & Objectives

- To ensure that all children are introduced to every aspect of the National Curriculum for mathematics and the Early Years Foundation Stage Framework which are appropriate to their level of development and learning.
- To ensure that mathematics is covered in depth, with regular reinforcement and consolidation in each area.
- To provide a broad, well balanced breadth of learning experiences which are supported by a variety of approaches and resources with regular use of ICT.
- To nurture within each child a sense of enjoyment and confidence in mathematics, alongside a fascination of mathematics.
- To enhance the attainment of children with special educational needs in mathematics, promoting self-esteem through achievement.

The national curriculum identifies three main aims in the primary phase:

- Become **fluent** in the fundamentals of mathematics, including 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
- Can **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.

The national curriculum states 'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.' Therefore, it is organised into distinct domains. However, pupils should make

rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

These domains for KS1 are:
-Number and place value, Addition and subtraction, Multiplication and division, Fractions
-Measures, Geometry: properties of shape, Geometry: position and direction, Statistics

These domains for KS2 are:
- Number and place value, Addition and subtraction, Multiplication and division,
- Fractions (including decimals and percentages), Ratio and proportion, Measures
-Geometry: properties of shape, Geometry: position and direction, Statistics, Algebra

Through combining the national curriculum aims and the Mastery Maths principles our objectives are:

- A dedicated daily mathematics lesson is planned in each class with other mathematical tasks and exercises running throughout. In the Foundation Stage there will be a daily lesson alongside opportunities for mathematical activities through continuous provision.
- Lessons are well structured, lively and delivered at a good pace.
- Lessons are structured to embed mathematical understanding through concrete, pictorial and abstract representation.
- Variation will be used to broaden the children's exposure to the learning objectives in a wide range of context to ensure deeper understanding of concepts.
- The foundations of mental calculation and recall of number facts are established thoroughly through daily starters which consolidate mental recall and informal/written calculations.
- Teaching, questioning and level of support is differentiated for children so that the children are all working towards the same learning objective appropriate to their age group.
- All children will be exposed to challenge through tasks and questioning including further mastery standard problem solving activities for gifted and talent pupils.
- Time is given in other subjects for pupils to develop and apply their mathematical skills.
- Children will actively take part, and are enthusiastic, during their mathematics lessons and will develop an appropriate mathematical vocabulary as modelled by the teachers using guidance from the vocabulary specified in the national curriculum.

Planning

Long Term Planning is based upon the White Rose Maths scheme of work and their lesson overviews are used to inform medium term planning. This is not to say that the White Rose Maths resources are to be used exclusively and it is desirable that other resources are used to enhance the teaching of the subject. The Long term planning is used as a guidance tool in order to pace out coverage of the curriculum throughout the year. Teachers are encouraged to use professional discretion when deciding on how long is needed on particular curriculum area whilst ensuring all objectives are covered by the end of the academic year.

Short term planning (STP) is recorded on Powerpoints where appropriate. These plans outline the topic area /focus with specific learning objectives to be taught each day over the course of the week. The focus area, activity and support children will be carrying out/receiving is also highlighted on the powerpoint although these are adapted as the lesson progresses. Specific representation, fluency, reasoning and problem solving tasks are set

Planning and books are scrutinised by SLT throughout the year with regular monitoring checks completed and feedback provided to staff. Where required, teaching staff are then supported with their planning and delivery of successful Maths lessons. Any action points from monitoring checks, then form the basis for follow-up review.

Cross-Curricular Links

Mathematics is taught mainly as a separate subject but every effort is made to link mathematics with other areas of the curriculum. We try and identify the mathematical possibilities across the curriculum at the planning stage. We also draw children's attention to the links between mathematics and other curricular work so children see that mathematics is not an isolated subject. Teachers are also encouraged to take their mathematic lessons outside of the classroom and where appropriate plan for lessons outside and around the school grounds.

Assessment

At St. Joseph's 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 and track children's progress thus benefiting the pupils and ensuring progress.

Formal assessments take place to help inform teacher judgements. Pupils' attainment is measured against school and national expectations. This is carried out via ongoing Teacher judgements supported by test scenarios. Assessment is a vital tool in the teaching of Mathematics, designed to monitor children's progress and measure attainment. It is also used to inform future planning by staff at this school or the child's next school.

Assessment opportunities are built into the planning of lessons and a range of other methods are used as appropriate. Standards are checked both in school and through external moderation opportunities. These include:

- Children's work marked promptly and in accordance with the school marking policy
- Completion of the Foundation Stage Profile on-entry and at the end of the school academic year
- Summative standardised tests (from Y2 to Y6 with statutory tests at the end of Year 6
- Completion of Multiplication tables check at the end of Year 4
- Self-assessments and peer assessments by the children which may be recorded as a numerical value and / or traffic light are recorded in books
- Completion of end of unit assessments at the end of each strand of learning across the year
- Listening to what children say and questioning them to ascertain their level of understanding
- Termly Teacher Assessments are recorded on our online assessment tracker and are accessed by the SLT and Mathematics Leader to facilitate tracking and analysis.
- Observations of individuals or groups looking for particular skills or concepts to be demonstrated
- Homework set that is appropriate and relevant to the mathematics curriculum being taught

Teachers regularly assess the standard of work against the key objectives for each year group and compare and moderate work to standards as displayed in the national curriculum both within the MAC and local schools.

Resources
Each class is equipped with a range of mathematical resources and apparatus relevant to the year group of that class. All children have access to a range of numeracy aids and manipulatives e.g. place value cards, dice, time table squares and 100 squares.

Areas of need are monitored and equipment purchased in line with need and the School Development Plan (SDP).

Attainment and Progress
Attainment and progress are measured through the assessment process outlined above. Pupil Progress Meetings take place and enable review and discussion of pupils' progress. This information is used by the Mathematics subject leader to discuss any intervention groups and ensure that those children who are not working at age related expectations are provided with the support they need.

Reporting
All parents receive an annual written report on which there is a summary of their child's effort and progress in mathematics over the year. Parents also have opportunities to discuss progress at parents' evenings, here they are given a midterm report and progress targets are given.

Equal Opportunities
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 our teaching attitudes and in the published materials we use with our pupils. Teachers will work closely with the SENCO to ensure work set is both engaging and challenging with regular meetings to monitor the children's progress.

This policy is monitored by the Academy Committee and will be reviewed every two years, or before if necessary.

Reviewed: Autumn 2024