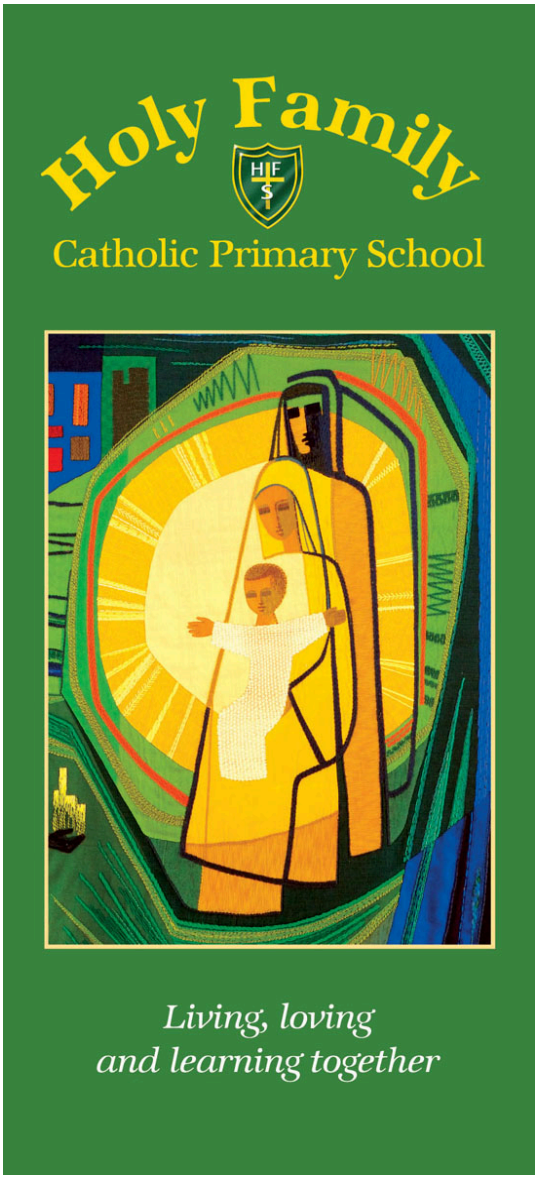
Holy Family Catholic Primary School

The Rosary Trust



Mathematics Policy

MATHEMATICS POLICY

Mission Statement

This policy has been written in line with the School's Mission Statement.

'In our Catholic School, with God at the centre of our lives,
we offer every child a high standard of education.
We meet individual needs, in a caring and loving community,
which celebrates our faith'.

.....Living, Loving, Learning, Together. with Jesus.....

1. **Introduction**
   This policy outlines the teaching and organisation of the mathematics taught and learned at Holy Family School. The school's policy for mathematics is based on the National Curriculum 2014. The policy has been drawn up as a result of staff discussion and has the full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

2. **Aims**
   The National Curriculum 2014 aims to ensure that all pupils:

   - 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.

   Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It enables children to understand relationships and patterns in both number and space in their everyday lives. They should be provided with rich and enjoyable experiences related both to their individual needs, and to the wider requirements of society. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.

3. **Objectives**
   We aim for each child to:

   - Have a positive attitude towards mathematics and enjoy learning through practical activity, investigations, exploration and discussion.
   - Be able to work systematically, cooperatively and with perseverance.
   - Be able to think logically and independently.
   - Achieve their full potential and achieve a level of mastery regardless of age, race, gender or ability.
   - Develop confidence and competence with numbers and the number system.

- Develop the ability to solve problems through decision making and reasoning in a range of contexts.
- Develop a practical understanding of the ways in which information is gathered and presented.
- Explore features of shape, space and develop measuring skills in a range of contexts.
- Understand the importance of mathematics in everyday life.

For parents to:

- Be actively involved in their children's mathematical learning both in school and at home.
- Understand and support the school's homework policy with regard to mathematics.

4. **Teaching Mathematics**

Teaching Time

To provide adequate time for developing mathematical skills, each class teacher will provide a daily mathematics lesson. In Foundation, mathematics teaching will form part of the teaching every day as part of their 'Continuous Provision' learning journey. Links will also be made to mathematics within other subjects as appropriate, so that pupils can develop and apply their mathematical skills. A daily recap of previous learning is addressed during the day at a time to suit, e.g. KS1/KS2 morning work, Foundation and KS1 Rekenrek Mastery fluency sessions, Y3/4 Number Sense sessions (times tables) to revisit personalised gaps in learning and to improve fluency of basic facts.

Class Organisation

All pupils will have a dedicated daily mathematics lesson. The highest percentage of time is spent with the children talking, working or problem solving with guidance and support from the teaching staff on the learning objectives of the session.

Lesson Structure

The overall structure of the lesson will follow a similar format.

- Reflect and recap on previous learning.

- The main teaching activity. To include teaching input. Begin with teacher-led thinking aloud through worked examples using models to support this. Practice together using models again and with partners to build confidence and understanding of procedure and skills. (Sometimes referred to as I do…We do…you do…)

- Practice and apply session (sometimes referred to as Strive for 5). Children work independently to complete questions while the teacher circulates to check understanding and provide immediate live feedback as appropriate to move learning forward. Some children may work with other staff or the teacher if needing extra support. If misconceptions arise, feedback as immediately as possible following the Feedback Policy. Once completed, for those who are **quick graspers**, deepen challenges can be provided to increase core fluency practise or to assess Greater Depth Mastery using e.g., First4Maths planning, Nrich, Youcubed are examples of places to access these type of challenges.

Checkpoints and marking work completed so far throughout the lesson may occur to ensure children are on task and misconceptions or common mistakes can be corrected or groups can be supported as necessary;

- Marking work in class. Work is marked together to assess understanding and points to consider in next lesson. Plans should be adapted according to ongoing live assessments.

- Reflect Session. This may be used to reinforce and develop pupils' learning in the session, address misconceptions that have arisen or prepare for the next step in the learning journey.

Referring to the Calculation Procedure document, models, images and equipment are demonstrated by the teacher and introduced to support children's understanding of new concepts and should be readily available for them to select in lessons if required.

Throughout the lesson, feedback is provided to children promptly so that learning can continue to make progress and be challenged and support provided immediately.

If there is a clear whole class issue with a topic, plans should be adapted and the topic should be continued until the majority of the class have a secure grip of the learning to be taking place.

DFE: Criteria for Ready to Progress materials are used as a guide of the most important facts and skills to focus on for those that may take longer to grasp concepts securely. At the beginning and end of a topic, assessments are used to recognise prior learning and to support future planning - especially where a high percentage of children may not yet have grasped a topic fully.

Planning
First4Maths is the main scheme used to support teacher's planning which directly links to NCETM plans that can also be used to support teaching and learning which follows mastery principles. This also ensures consistency of procedures and calculations throughout the school. Other recommended planning to refer to when doing so are: NCETM Mastery documents *(https://www.ncetm.org.uk/resources/46689)*, Classroom Secrets – all of which have excellent examples of mastery challenges within subject areas.

Homework
The mathematics lessons will provide opportunities for children to practise and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These may be extended through homework. These activities will be short and focused and will reflect current learning taking place. All children will be expected to practise times tables as part of their homework from Year 2 to ensure that by the end of Year 4 they are confident and competent in their times tables knowledge and related division facts up to 12x12. TTRS is used to support this.

5. **Inclusion**
All pupils will be taught with their own class and as much as possible. All children will access the daily lesson and challenged through deepening tasks to extend and challenge. At Holy Family School we have high expectations for all our pupils. All staff support children of various needs using a variety of resources and support using the guidance in the First4Maths guidance and teach planning videos.

How we cater for pupils with particular needs
Some children may focus on Prioritised Objectives from the Ready to Progress documents if they struggle to retain information in topics so that they can still work within their own year group expectations.
Some children may have personalised maths targets on One Plans, in which case they may follow a more individualised programme as part of the main part of the lesson to fulfil their personal mathematics targets.
Selected pupils may follow specific maths intervention programmes which are delivered on a one-to-one basis or within a group outside of the daily maths lesson to help support their needs, e.g. Number Stacks, First4Maths intervention programmes.

If a child is a quick grasper, they will have challenges and extensions set by deepening their understanding, rather than moving them to the next year group's expectations.

How we work in the Foundation Stage
Foundation follow 'Continuous Provision' principles. The classes are organised to promote social skills and the development of mathematical language and understanding. Teaching will be based on the objectives in the current Foundation Stage documents following First4Maths topic order. All the children have ample opportunity to develop their understanding and vocabulary of number, measurement, pattern, shape and space, through varied activities that allow them to enjoy, explore, practise and talk confidently about maths. A whole class mathematics session takes place daily, though may not follow the same structure as Y1-Y6. In Foundation and KS1 classes, all children follow the NCETM Mastering Number programme using Rekenrek equipment to support them to master knowing fluency facts.

6. **Information and Communication Technology**
ICT is used in various ways to support teaching and to enhance and motivate children's learning where appropriate, e.g. Top Marks website and TTRS on kindles. Interactive whiteboards are used effectively to present information visually, dynamically and interactively, so that children can understand concepts more quickly.
As well as the use of interactive teaching programmes, the use of the internet and software, other uses of ICT include the use of calculators, Roamers and Beebots, Kindles and Ipads.

7. **Assessment for Learning**
Assessment will take place at three connected levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment ***(refer to Assessment Policy)***. Teaching a unit of work will need careful initial and ongoing planning, informed by an assessment of children's prior attainment.

Short-term assessments will be an informal part of every lesson to check understanding and give the teacher information, which will help to adjust day-to-day lesson plans (including opportunities to learn outside of the classroom).

Medium-term assessments will take place half-termly to assess where the children are attaining with reference to their end of year group expectations. Termly assessments are made using teacher-designed topic assessments, PUMA booklets from Foundation Summer Term to Year 6. Twinkl and White Rose end of term assessments are also used to support planning and recognise gaps in learning.

All results are shared with the Subject Leader via Excel tracking grids on Google Drive to monitor the attainment and progress children are making.

DFE Criteria to Progress documents are used regularly to assess the 'prioritised objectives' in mathematics objectives and to gain an overview of a child's current attainment. Assessment for these are based on results from medium-term assessments, ongoing observations, children's work and notes made at the end of a topic. This helps teachers to notice any 'gaps' in topics that need teaching.

Long-term assessments take place towards the end of the school year to assess and review pupils' progress and attainment based on the end of year expectations. These are made through compulsory National Curriculum mathematics tests for pupils in Year 6. Years 1, 2, 3, 4 and 5 carry out their own assessments to provide an overview of every child's learning towards the age-related expectations.

Teachers will also draw upon their class record of attainment against National Curriculum learning objectives and supplementary notes and knowledge about their class. Accurate information is reported to parents and the child's next teacher. Year 4 take the statutory Multiplication Check in June.

Assessment in the Foundation Stage
Assessment in the Foundation Stage is ongoing against the Early Learning Goals and this informs the Foundation Stage Profile document. Tapestry is used to record attainment and progress.

Mathematics Subject Leader - Zoey Scott
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