St. Columba's Catholic Primary School

Maths Policy

Reviewed December 2023

Introduction

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at St Columba's Catholic Primary School. The policy has been drawn up as a result of staff discussion, parental consultation and has the full agreement of the Governing body. The implementation of this policy is the responsibility of all teaching staff.

Rationale

Mathematics is important in everyday life. It is integral to all aspects of life and with this in mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them. Mathematics provides pupils with a means of making sense of the world in which they live. Building on experiences, it encourages thinking and reasoning skills to grow. It embraces natural curiosity and develops the confidence to tackle situations that arise in mathematics and other curriculum areas.

Aims

We aim to provide all pupils with a mathematics curriculum which will produce individuals who are literate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can make connections and develop their mathematical skills to their full potential.

At St. Columba's Catholic Primary School, we aim for each child to:

1. Have a positive attitude towards mathematics.
2. Have self-confidence in their ability to deal with mathematics.
3. Be able to work systematically, co-operatively and with perseverance.
4. Be able to think logically and independently.
5. Experience a sense of achievement regardless of age and ability.
6. Understand the appropriate underlying skills, concepts and knowledge of number, measurement, shape, space and handling data.
7. Be able to apply previously acquired concepts, skills, knowledge and understanding and connections to new situations both in and out of school.
8. Understand and appreciate pattern and relationships in mathematics.

9. Be able to communicate with peers and adults, ideas, experiences, questions, clearly and fluently, using the appropriate mathematical language.
10. Be able to explore problems using the appropriate strategies, predictions and deductions.
11. Have equality of opportunity regardless of race, gender or ability.
12. Be aware of the uses of mathematics beyond the classroom.
13. Encourage the use of mental calculations and efficient strategies to work out the answers.

For parents to:
1. Be actively involved in their children's mathematical learning both in school and at home. (Maths no Problem videos on website for parents, TTRockstars)
2. Understand and support the school's mathematics and homework policy and scheme of work.

Provision
From September 2016, St Columba's Catholic Primary School, has been using the Maths No Problem to teach mathematics in Y4, Y5, Y6. This was introduced into Year 1 - 3 from September 2017. The Maths No Problem way of teaching mathematics places great emphasis on: problem solving and comprehension, allowing students to relate what they learn to prior knowledge; careful scaffolding of core competencies of: visualisation (as a platform for comprehension), mental strategies (to develop decision making abilities) and pattern recognition (to support the ability to make connections and generalise) and more emphasis on the foundations for learning and not on the content itself so students learn to think mathematically as opposed to merely reciting formulas or procedures.

Foundation
In early years, the curriculum is guided by the Early Learning Goals, which mirror the Reception Learning Objectives in the Renewed Framework and guidance provided in the Development Matters document. Mastering Number scheme and planning in Reception as well as Maths No problem to cover shape and Space. The Autumn Term planning section of Mastering Number scheme for reception is used in Nursery.

Organisation of Teaching and Learning
Mastering Number Years Rec- Year3 - This should be an extra 10 min per day outside of the Maths lesson to consolidate understanding of number. The resources are on the NCETM axis which will be adapted to fit each class and child. This will

really help with any catch up and give children deeper knowledge of numbers and help them make more connections.

In Key Stage 1

In maths lessons are held on a daily basis and last for approximately 45 minutes (Using Maths No Problem scheme). Children are taught in mixed ability classes. **Mastering Number Continues in Year 1, 2 and 3** - This should be an extra 10 min per day outside of the Maths lesson (This is in place of Fluent in 5) to consolidate the children's understanding of number. The resources are on the NCETM axis which will be adapted to fit each class and child. This will really help with any catch up and give children deeper knowledge of numbers and help them make more connections.

In Key Stage 2

The daily maths lessons (years 3- 6) last for at least one hour (Using Maths No Problem scheme). The children are taught in mixed ability classes. **Fluent in 5** (Years 4-6) for KS2 – an extra 5-10 minutes of basic maths per day. This will consist of the following:

- Quick and sharp for consolidation of areas covered. (5-10min)
- Reinforcing topics that have been covered.
- Year 4 and 5- Fluent in 5 for 5-10 mins and then straight on with the lesson
- Year 6 do daily arithmetic tests in place of fluent in 5.

Singapore Maths Lesson Structure:

- **Fluent in 5** for KS2 – an extra 5-10 minutes of basic maths a day. This will consist of :
- Quick and sharp for consolidation of areas covered.
- Reinforcing topics that have been covered.
- Year 4 and 5- Fluent in 5 and then straight on with the lesson.
- Year 6 do daily arithmetic tests in place of fluent in 5.

- **Explore/Master** – At the start of the session children are presented with a problem. Using manipulatives on the table, children try and solve the problem. Children offer their methods to the teacher and given the opportunity to review other methods given by their peers. The teacher models methods on the board and children choose their preferred method.
- **Guided Practice** – Children are guided through first question by the teacher, children will then have time to practice the rest of the questions and become familiar with using their new skills and methods to answer problems.

- **Workbook** – Children have the opportunity to use their new skills and methods learned to answer familiar and unfamiliar problems independently.
- **Challenge** – to challenge children's knowledge and understanding further.(Only when completed all of the above)

Planning

Maths Mastery (Maths No Problem) - Each member of teaching staff plans their weekly Maths lessons using Power Point presentation, which requires them to plan in detail, each part of the Maths lesson structure (outlined above). Using the online planning guide, teachers can receive guidance on: which methods children are most likely to come up with; questions to help promote deeper thinking; ideas to extend the learning of able pupils and also how to cater for less able children. Fluent in 5 (Years 4-5-Basic Maths) will also take place 5-10 min every day before the Maths lesson. This can involve recap areas from prior lessons, arithmetic, Fluent in 5 (third space learning) or concentration on specific areas in Maths that the teacher feels needs extra consolidation.

Recording Work

All maths work is completed in pencil and there is an agreed format to the setting out of maths work. **Explore and Guided Practice section** - All children from year 1 onwards work in a designated Maths book. All are expected to note down and practise their preferred method to answer the problems in the Mastery section of the lesson. Children then go on to a variety of hands on activities which aids discussion. All children have a Maths No Problem Workbook, which has worksheets to support each lesson, where children can demonstrate their new skills independently. During this activity children may choose to use a different methods. All children should be encouraged to explain their workings out and give reasons for their answers. Maths books will also be used to record answers during Fluent in 5 /Basic Maths. Some Fluent in 5 can be also completed on whiteboards.

Assessment and Record Keeping

Assessment is regarded as an integral part of teaching and learning and is a continuous process. At St Columba's Catholic Primary School, we are continually assessing our pupils and recording their progress, allowing us to match the correct level of support/challenge to the needs of the pupils and to identify children who are in need of additional / targeted support. Children who are working towards expected will have their Maths age assessed at 3 points in the year to track progress.

Assessment is carried out on three levels:

Short Term Assessment

Maths No Problem scheme and planning to teaching mathematics is structured into chapters. At the end of each chapter, children complete the chapter consolidation (chapter assessment) to demonstrate the progress they have made. Also teachers to use immediate feedback and questioning.
Teachers use Insight Tracking to record the programmes of study covered and attained.

Medium Term Assessments

We make medium-term assessments to measure progress against the key objectives (Insight Tracking), and to help us plan the next unit of work.

Long Term Assessment

We make long-term assessments towards the end of the school year, and we use these to assess progress against school and national targets during Pupil progress meetings. 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 (Puma), Insight Tracking and teacher assessments. We use the national tests for children in Year 2 and Year 6, plus the Puma tests for children at the beginning and end of Years 1, 3, 4 and 5.

Marking

Work is marked on a regular basis and this includes self-marking of the work in KS2, where possible with the child concerned. This informs part of the on-going teacher assessment. Immediate feedback given during lessons and methods modelled again in their books to help with any misconceptions (school marking policy).

Pre-teach Intervention

Due to the nature of the Maths No Problem scheme, the emphasis placed on the children becoming independent learners, teachers and teaching assistants are able to conduct more thorough assessment of children's understanding. Sessions with these children will happen in the afternoons, for teaching assistants/teachers to visit objectives that children will be studying in the next lesson. These sessions will focus on children who are not confident or who have not been very involved in class discussions and as a result struggle.

Cross-curricular links

Mathematics is taught mainly as a separate subject but every effort is made to link maths with other areas of the curriculum. Opportunities will be sought to draw

mathematical experiences out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

Resources

A full audit of Maths resources was conducted in Autumn Term 2023 by each class teacher. Teachers should complete order form but check with Maths Lead before placing order to ensure consistency of resources throughout the school. Each class will have their own resources supply on display for easy access. While topic specific resources e.g. scales and weights are stored centrally. Maths No Problem Textbooks and Workbooks are purchased for each class, yearly.

Reporting to parents

Parents are given the opportunity to sign up to Class Do Jo/Seesaw where they can receive more frequent updates about their child's progress.
All parents receive an annual written report on which there is a summary of their child's efforts and progress in mathematics over the year and targets for the coming years. At the end of Key Stage 1 and Key Stage 2 each pupil's level of achievement against national standards is included as part of their annual written report.

Parental Involvement

At St Columba's Catholic Primary School, we encourage parents to be involved by:

- Inviting them into school twice yearly to discuss the progress of their child.
- Inviting parents into school in the summer term to discuss the yearly report.
- Holding workshops for parents e.g. focusing on the teaching of mathematical calculations (KS2, EYFS).

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 SEN, both in our teaching attitudes and in the published materials we use with our pupils.

Special Educational Needs

Teachers will aim to include all pupils fully in their daily mathematics lessons. Teachers will differentiate to meet the needs of such pupils and use Teaching Assistants to support such pupils where appropriate. However a pupil whose difficulties are severe or complex may need to be supported with an individualised programme.

More Able Pupils

More able pupils will be taught with their own class and stretched through differentiated work and extra challenges. When working with the whole class, teachers will direct higher order questions to the more able.

Information and Communication Technology

ICT is used in various ways to support teaching and motivate children's learning. Many sources of ICT are used including; various mathematical software programmes, ITPs and many Smart board resources from the National Whiteboard Association.

Homework

Where appropriate teachers set homework for pupils in order to consolidate work taught in a lesson or in preparation for a future lesson. Not all homework is written work and pupils are encouraged to continually practise their mental/oral skills, in particularly learning times tables using TTockstars. There is also SATs companion and White Rose worksheets to set homework on as well.