



# St Thomas of Canterbury Catholic Primary School

Where every child is special

## Mathematics Policy

Policy compiled by:

Maths Leaders

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The  
**CHILD**



Nothing but  
the **CHILD**

### OUR SHARED VISION

*Every child* at St Thomas of Canterbury is special and will achieve their full potential academically, socially, spiritually and emotionally through the provision of a loving community and rich and varied learning opportunities and the highest quality teaching and learning.

*Every staff member* at St Thomas of Canterbury will feel valued and enabled to provide the opportunities that we want for our children and to do so as part of a loving community which has the highest expectations of and for all.

*Every Governor* at St Thomas of Canterbury will feel valued and enabled to act as a critical friend to the School and to be accountable for the School's strategy. They will play a visible role supporting all children, their parents and staff at School and in the wider community, to provide the best environment possible for learning and spiritual growth.

### OUR MISSION STATEMENT

*God's love is at the heart of our Catholic School family.*

*We show this in our respect, kindness and love for others and by treating other people as we wish to be treated ourselves.*

*We will encourage everyone to be the best that we can be.*

### OUR AIMS

- *To guide our children to grow in the love of God and build relationships that will enable them to make a positive contribution to the School and society.*
- *To develop an exciting, challenging and creative curriculum that produces confident and successful learners who are the best that they can be.*
- *To develop high quality learning that enables every child to flourish, to discover their talents and be lifelong learners.*
- *To establish a teaching and learning environment that encourages everyone to enjoy, to achieve, to be inclusive, to be healthy, and to stay safe.*
- *To nurture a strong partnership between home and School.*
- *To have respect and understanding for our School, our community and our world, helping our children to become responsible citizens and good role models.*



## OUR GOLDEN RULE

We treat others as we would like to be treated.

## INTRODUCTION

This document is a statement of the aims, principles and strategies for the teaching and learning of Mathematics at St. Thomas of Canterbury Catholic Primary School.

## AIMS AND OBJECTIVES

*'Mathematics is effectively learnt only by experimenting, question, reflecting, discovering, inventing and discussing. Thus, for children, Mathematics should be a kind of learning which requires a minimum of factual knowledge and a great deal of experimenting with situations using particular kinds of thinking skills.'*

*Better Mathematics*

Our aims for the development of Mathematics in the school are to produce pupils who are numerate and have the ability to think for themselves; benefitting from a mastery curriculum, working in an environment that is enjoyable and fun and encourages a happy and relaxed attitude towards Mathematics.

We aim to ensure that all pupils:

- 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.
- 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

We aim to create opportunities for each child to develop mathematical skills based in the fluency, reasoning and problem solving that is put in place by our mastery curriculum. This allows children to deepen their knowledge and understanding of mathematical concepts and hence apply this learning to practical tasks and real life situations laying the foundations for future study and lifelong love of learning.

We hope to provide a working environment that will encourage opportunities for every child to develop their skills, knowledge and understanding to the full. Using the appropriate methods and teaching strategies including the use of concrete resources and pictorial methods that will lead to a deeper understanding of abstract concepts.

Mathematics will provide opportunities for all children to develop their independence by selecting the resources that best suit the learning needs of the individual and working at their own pace. Co-operation and collaboration when working with peers and exchanging ideas is also encouraged.

## PRINCIPLES OF TEACHING AND LEARNING MATHEMATICS

Mathematics is important because:

“Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of



employment. 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.”

*From Mathematics, National curriculum in England: Mathematics Programmes of study: 2014.*

Mathematics is a core subject in the National Curriculum. The fundamental skills, knowledge and concepts of the subject are set out in the National Mathematics Strategy, Revised Framework for teaching Mathematics and the Foundation Stage Profile within the Foundation Stage.

The creative Mathematical curriculum will support the children’s development of thinking skills and key skills for learning and life. Where possible, teacher will look for links in other curriculum areas in order to bring their mathematical learning into the real world.

Teachers must have a thorough understanding of new National Curriculum for Mathematics and use a wide variety of mastery teaching methods. These must include the direct interactive teaching strategies, directing, instructing, modelling, explaining and illustrating, questioning and discussing, consolidating, evaluating pupil’s responses and summarizing in terms of the fluency, reasoning and problem solving elements maths lessons at St. Thomas’ incorporate

Appropriate resources, including ICT, will be available to ensure that pupils can fulfil the requirements of the National Curriculum.

## **STRATEGIES FOR TEACHING AND LEARNING**

*‘Children’s chances of succeeding in education and life will be maximised if they develop deep and lasting procedural and conceptual mathematical understanding.’*

NCETM, 2017.

We deliver a Mastery curriculum in Mathematics, following the teaching blocks and steps to progression as advised by the Surrey Maths Hub. In doing so the strategies for teaching and learning aim to provide children with a deep, long-term adaptable and secure understanding of the subject.

Mastery of mathematics in the Early Years will mostly be evident when the pupils initiate their mathematics successfully. They will use their maths consistently and without overt adult support when they are secure with a concept. (Early Years Handbook, December 2015).

At the EYFS Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure.

*Pupils in the EYFS must be supported in developing their understanding of Problem Solving, Reasoning and Numeracy in a broad range of contexts in which they can explore, enjoy, learn, practice and talk about their developing understanding. They must be provided with opportunities to practice and extend their skills in these areas and to gain confidence and competence in their use.*

The programmes of study are set out year-by-year for key stages 1 and 2.

For most year groups it is divided into four areas:

1. Number, which is subdivided into number and place value; addition and subtraction; multiplication and division and fractions (including decimals and percentages.)
2. Measurement (including time.)
3. Geometry, which is subdivided into the properties of shapes and position and direction.
4. Statistics, (not in year 1)



In year 6 the children will also study ratio and proportion and algebra.

Mathematics is taught as a discrete subject each weekday and is applied to other subjects via cross curricular links where appropriate. The planning of lessons for the mathematics is the responsibility of individual class teachers.

A typical lesson in years 1-6 will include some or all of the following elements:

- Fluency
- Reasoning
- Problem Solving
- A plenary
- An opportunity for children to evaluate their learning either independently or with a learning partner.
- An opportunity for children to correct or improve their work based on teacher or partner evaluations.

Mathematics homework will be set on a regular basis in line with the homework policy. Homework tasks will include written work, tables practice, mathematics games and ICT.

Pupils with special needs receive extra support in the classroom in terms of concrete resources or from an adult where this help is available. Work should be set in terms of our Mastery Curriculum where all students follow the same objective, however this can be differentiated in line with this to suit the needs of all pupils.

More able children should be challenged through the depth of their knowledge and understanding; being offered rich, sophisticated problems and reasoning tasks to allow for a comprehensive understanding of mathematics to be gained rather than being accelerated through new content.

## **ASSESSMENT FOR LEARNING**

Assessment is used to guide the individual pupils in Mathematics. It involves identifying each child's progress in each aspect of the subject, determining what each child has learned and what therefore should be the next stage in his/her learning.

*In the EYFS, the Foundation Stage, the Foundation Stage Profile is used to assess learning. (see Assessment Policy)*

In KS1 and 2, progress is recorded against end of year expectations using Class Track to ensure continuity of learning within a year group and from one year group to another. Assessment is mostly carried out informally by teachers in the course of their teaching. Some tasks for assessment include:

- Day to day assessment - Assessment for learning, peer and self-assessment Child engagement and immediate feedback.
- Periodic assessment - Broader view of progress for teacher and learner, use of national standards in the classroom and improvements to curriculum planning. This could also be in line with the End of Block Assessments provided by the Maths Hub.
- Transitional Assessment - Formal recognition of achievement, reported to parents or carers and next teacher or school. May use tests or tasks from a range of sources.

It is our aim that children become involved in their own assessment. Children's self-evaluation and peer evaluation is a key element of assessment for learning and is carried out regularly in lessons.



## REPORTING

Staff will transfer information about the children's performance in mathematics as outlined in the assessment folder. Reporting to parents is done on a termly basis through parent interviews and annually through a written report.

## EQUAL OPPORTUNITIES

All pupils, including ethnic minorities, gifted pupils and those with special educational needs should be able to benefit from their mathematical education in school.

Although our mathematics curriculum is a mastery one, with the majority of children working on the same objective, additional support, resources and simplified problems will be provided to ensure that individual children are working at a level in keeping with their abilities. Pupils with special needs will receive support from teachers and teaching assistants. Materials are provided to augment the main scheme of work to support differentiation where a child may be not yet be working at their Age Related Expectation.

Children identified with specific learning difficulties in mathematics will be provided with an individual educational profile (IEP.) See Special Needs Policy.

Children on the English as an additional language (EAL) register have full access to the mathematics curriculum. (Refer to the EAL policy.)

## STAFF ROLES AND RESPONSIBILITIES

The mathematics leads will:

- Take the lead in policy development and the production of schemes of work designed to ensure progression and continuity in mathematics throughout the school.
- Support colleagues in their delivery of Mathematics lessons.
- Monitor progress in mathematics through class observations, monitoring planning, work sampling and analysis of pupil progress through O Track. Finding will be reported to the senior management team and used for formulate a development plan.
- Take responsibility for the purchase and organization of central resources for mathematics.
- Keep up-to-date with developments in mathematics education and disseminate information to colleagues as appropriate.

The class teacher will:

- Decide the objectives for the teaching of the mathematics in their class.
- Prepare teaching plans for the mathematics lessons with reference to the next steps as identified through AFL (including suitable resources and challenges to match the different abilities of children within the class).
- Assess the work and progress of pupils in learning mathematics.
- Support children in their learning and showing them their next step.
- Keep records of children's progress in mathematics and report to parents on a termly basis.
- Devise success criteria with the children and use the steps to success proactively with the children to monitor their progress.
- Reinforce both the discrete math's skills and other generic skills required to achieve the learning objective.
- Provide opportunities for verbal and written reasoning.
- Ensure children know and understand key vocabulary.
- Have access to relevant resources.



## **STRATEGIES FOR USE OF RESOURCES**

At present the mathematics resources for topics, such as capacity and shape, are stored in one main central area, the mathematics cupboard. Other resources are kept in individual classrooms.

The curriculum leader will be able to buy new resources within the budget agreed by the Governing Body. Staff will be informed and familiarised with new resources as they are acquired.

*This policy of St Thomas of Canterbury School upholds the school's ethos and Mission Statement. It must be read in conjunction with and implemented in accordance to the school's policies for Health & Safety Equal Opportunities, Inclusion and Safeguarding. Copies of these policies are available from the school website.*