

St Thomas of Canterbury Catholic Primary School



Mathematics Policy 2018

Introduction

At St Thomas of Canterbury school we are committed to providing each child within our care with the opportunities to reach their full mathematical potential. In our teaching of mathematics we therefore strive to enable each pupil to develop within their capabilities, the mathematical skills and understanding which they will require for adult life.

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solutions 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. (National Curriculum 2014)

Aims

Using the Programmes of Study from the 2014 National Curriculum and the Early Years Foundation Stage 2012, these are our aims:

- To foster a positive attitude towards mathematics so that it is appreciated as an interesting, enjoyable and worthwhile subject.
- To give an appreciation of the purpose and relevance of mathematics by providing opportunities to solve practical tasks and genuine real life problems.
- To provide pupils with the opportunities and skills needed for tackling mathematical concepts in other curriculum areas.
- To develop a strong sense of number.
- To provide opportunities for the development of practical skills,
- To provide opportunities for practice in performing calculations both mentally and on paper, using a range of methods including those devised by the child.
- To enable pupils to appreciate the relationship between different aspects of mathematics, for example, addition and subtraction, fractions with decimals and percentages.
- To encourage each child to develop clear and logical verbal and written reasoning, to describe things accurately, noticing resemblances and differences, commenting how they are related to each other.
- To develop in children an ability to communicate mathematics:
 - orally - using appropriate vocabulary
 - in writing - by recording work as jottings at first, then with greater accuracy, improving neatness and working systematically
 - visually - using diagrams and charts
- To foster in each child an appreciation of beauty and pattern through work on shape, space and relationships.
- To provide stimulating and enjoyable work which will 'open doors' into a wide variety of mathematical experiences, thus encouraging a fascination and enthusiasm for the subject.

Provision

Yearly objectives are taken from the National Curriculum for Mathematics and the programmes of study are accessed for the appropriate year group. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next phase of learning. Pupils who grasp concepts rapidly will be challenged through opportunities for deeper thinking around rich and sophisticated problems rather than any acceleration through new content. Those who are not sufficiently fluent with earlier material will consolidate their understanding, including through additional practice, before moving on.

All year groups spend at least 10 minutes each day focused on the non-negotiable key maths facts. Teachers will use resources such as the 'Big Maths Beat It' resource to develop children's mental recall of these facts.

Mathematics lessons will routinely include mental/oral work, review of prior learning, skills practise/application, and rich dialogue around shared problems. Teachers will use their professional judgement to determine the activities, timing and organisation in each lesson in order to suit the teaching objectives. In all lessons, there will be an appropriate amount of differentiation through carefully planned teacher questioning and adult support to meet the needs of individual learners.

The teaching of mathematics at St Thomas of Canterbury Primary provides the following opportunities:

- high quality teacher input/whole class teaching
- group work
- paired work
- individual work.

Pupils engage in:

- the development of mental strategies
- informal and formal written methods
- practical work
- investigational work
- problem solving
- mathematical discussion of reasoning and justifying
- consolidation of basic skills and number facts.

At St Thomas of Canterbury Primary we recognise the importance of establishing a secure foundation in mental calculation and recall of number facts before standard written methods are introduced as outlined in our Policy for Mental to Written Calculation. Teachers use correct mathematical vocabulary when planning and delivering lessons to model appropriate terminology to children who are expected to use it in their verbal and written explanations.

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use mathematics in real contexts. At St Thomas of Canterbury Primary we encourage staff to make cross curricular links where possible

in order to provide meaning and context to the teaching. This will allow the children to gain an understanding of how mathematics fits in to everyday life and make connections with the real world.

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

Curriculum Planning

Years One to Six follow the Maths No Problem textbook approach for long and medium term planning. All planning is adapted, where necessary, to suit the needs of each cohort of children. The Mathematics subject leader supports all teachers in making these adaptations.

All teachers plan using the textbooks, making notes that are specific to their class into the agreed school weekly maths planning format.

Typed planning is to be uploaded onto Teacher Share every week.

Learning Objectives

Learning objectives appear in Medium term and Weekly planning. Learning objectives describe the content and skills that we want our pupils to acquire. The learning objectives should be shared with pupils both orally and visually at the beginning and end of a mathematics lesson and unit of work.

Teaching and Organisation

Each class teacher is responsible for the mathematics in their class in consultation with, and with guidance from, the Mathematics subject leader.

The approach to the teaching of mathematics within the school is based on three key principles:

- A mathematics lesson/activity every day.
- An 'in focus/hook' task to engage children, structured learning opportunities from the text book, opportunities for guided practice and independent application of the day's learning.
- An emphasis on jotting thinking down and talking with others.

Each Key Stage One and Two class teacher organises a daily lesson of 60 minutes for mathematics.

Special Educational Needs

Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible. Where applicable, children's IEP's incorporate suitable objectives from the National Curriculum/EYFS for mathematics and teachers keep these objectives in mind when planning work.

When additional support staff are available to support groups or individual children, they work collaboratively with the class teacher in ensuring that children have full access to the curriculum.

Within the daily mathematics lesson, teachers not only provide activities to support children who find mathematics difficult but also activities that provide appropriate challenges for children who are high achievers in mathematics in order for them to master the mathematical concepts for their year group.

Pupil's record of their work

There are occasions when it is both quick and convenient to carry out written calculations. It is also important to record aspects of mathematical investigations. Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording.

Children are encouraged to use mental strategies before resorting to a written algorithm.

Children are given daily opportunities to explore visual and written methods in their maths journals/books.

Exercise Books for Recording

It is school policy that all year groups use squared paper in mathematics books as this supports pupils in recording work neatly and reducing the possibility of errors from untidy work. All children are expected to work tidily and neatly when recording their work. When using squares one square should be used for each digit.

Marking

The quality of marking is crucial. We believe that a simple 'X' is of little assistance to a child unless accompanied by an indication of where the error occurred, together with an explanation of what went wrong. Marking should be both diagnostic and summative and our school policy believes that it is best done through conversation with the child but acknowledges that constraints of time do not always allow this. Teachers strive to identify children who need further support/practice, and find time (perhaps following the lesson or the following day) to deal with misconceptions or barriers to learning.

Guided mathematics activities are carried out daily, during which the teacher/TA provides structured learning for pupils who require this. Teachers strive to provide verbal support/feedback at the point of learning and this is noted in the pupil's book. Please see School Marking Policy for further detail.

Assessment

We continually assess children's work in mathematics in order to make swift interventions if children are not making sufficient progress and to enable us to identify and break down barriers to their learning.

Teachers make short-term assessments within mathematics lessons which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives.

Teachers use half-termly formal assessments as a way of recording children's progress in objectives covered across that specific half-term. The outcomes of these assessments indicate whether a child is emerging, developing, secure or exceeding each stage.

Within the Early Years Foundation Stage all children are assessed against the Early Learning Goals at the end of Reception. Years Two and Six sit the National SATs tests during the summer term.

Homework

All children regularly receive mental and written homework for mathematics as outlined in the School Homework Policy.

Reporting to Parents

Reports are completed at the end of the summer term and parents are given opportunity to discuss their child's progress during the autumn and spring term parent consultation evenings.

Teachers use the information gathered from their termly assessments and from their ongoing assessments through each unit of work to help them comment on individual children's progress.

Monitoring and review

Monitoring of the standards of children's work and of the quality teaching in mathematics is the responsibility of the mathematics subject leader and Senior Leadership Team. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, keeping informed about current local and National developments in the subject, and providing a strategic lead and direction for the subject in the school. The head teacher allocates regular management time to the mathematics subject leader so that reviews of samples of children's work and lesson observations of mathematics teaching across the school can be undertaken. A named member of the school's governing body is briefed to oversee the teaching of mathematics. This link-governor meets regularly with the subject leader to review progress and evaluate current developments in mathematics within our school.

Signed:

Date:

Mr M Cain

Mathematics subject Leader

Signed:

Date:

Mr. P Bolton

Mathematics subject Governor

Policy date: June 2018

Reviewed at FGB 27.9.18