



St Matthew's Church of England Primary School

'With God nothing is impossible'.

Maths Policy

OUR VALUES

St Matthew's CE School is a caring community, whose values are built on Christian foundations; encouraging mutual trust and respect for all. We aim to promote a Christian ethos, whilst respecting other people's faith and welcome the involvement of parents and other members of the local community. The Christian ethos is implicit throughout the life and work of the School and explicit through planned activities that have continuity and progression and allow for the individuality of each child and their parents. The whole curriculum is informed by the Christian faith.

INTRODUCTION

Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills and the ability to think in abstract ways.

Mathematics is important in everyday life, many forms of employment, science and technology, medicine, the economy, the environment and development and in public decision-making. Different cultures have contributed to the development and application of mathematics. Today, the subject transcends cultural boundaries and its importance is universally recognised. Mathematics is a creative discipline. It can stimulate moments of pleasure and wonder when a pupil solves a problem for the first time, discovers a more elegant solution to that problem, or suddenly sees hidden connections.

At St Matthew's CE Primary School we recognise that it has an impact across a number of other curriculum areas and that, while it is a subject in its own right, we want to take into consideration the needs and interests of children in order to engage them.

AIMS

1. The teaching of mathematics at our school is focused around the idea of mastery. This means that given time and quality instruction, all pupils can and will eventually master the core intended learning.
2. We aim to increase pupil's confidence in maths, so that they are able to express themselves and their ideas, using the language of maths.

3. We are continually aiming to raise standards, across the school, to positively impact on the attainment of all children.

ORGANISATION

In EYFS, Key Stage 1 and Key Stage 2 Maths is taught on a daily basis.

Early Years Foundation Stage (EYFS)

In EYFS, the curriculum is guided by: the New EYFS Guidance; Development Matters Bands and the National Curriculum objectives, supported by the Framework for Mathematics .

There are four themes of the EYFS which underpin all the guidance:

1. A Unique Child
2. Positive Relationships
3. Enabling Environments
4. Learning and Development

The principles behind these themes form the basis for all maths teaching.

Maths is a prime area and is planned for and taught in two areas:

1. Numbers
2. Shape, space and measure

Mathematical experiences in the Foundation Stage are further underpinned by the five themes of Using and Applying.

Solving Problems – developing mathematical ideas and methods to solve practical problems throughout the day and across the curriculum.

Representing – Matching sets of objects, images, pictures and numerals that represent their mathematical thinking.

Enquiring – Making and justifying choices and decisions.

Reasoning – Making and using connections between different parts of mathematics. This involves recognising relationships and patterns.

Communicating – Describe solutions to practical problems drawing on experience, talking about their own ideas, methods and choices. It is through discussion and talk that children establish the connections that need to be made from the connective model. Adults model the use of mathematical vocabulary and language – they have an expectation that the children will use the language themselves appropriately and accurately.

Maths teaching in the EYFS will include:

- Opportunities for mathematics in both the inside and outside environment, this would include the construction of a number rich, or “numerate” environment;
- Awareness of mathematics in the wider world;

- Direct teaching that is strategic and based on assessment for learning;
- The use of flexible grouping, play based activity and guided work;
- A level of challenge that will allow a child to experience struggle;
- Links across and within the curriculum;
- Assessment that is based on observation and discussion - assessment should be used as the basis for quality teaching.

Key Stage 1 and Key Stage 2

At St Matthew's CE Primary School we follow the National Curriculum for Mathematics. The key aims are to ensure children:

- 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.
- Can **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.

There are seven programmes of study:

1. Number – Number and Place Value
2. Number – Addition and Subtraction
3. Number – Multiplication and Division
4. Number – Fractions
5. Measurement
6. Geometry – Position and Direction
7. Geometry – Properties of shape
- 8.

Planning

Planning for Maths takes place at two levels.

Medium-term plans cover termly periods. They outline the teaching objectives to be taught over that period.

Short-term plans cover a weekly period. The plan will specify objectives from the medium term plans as well as objectives for the arithmetic sessions.

Planning is monitored by the Maths Leader, each half term, during book and planning scrutiny sessions. Feedback will be given in order to celebrate success, share good practice and offer support and guidance.

TEACHING METHODS AND APPROACHES

Teachers use the principles and approaches behind Talk for Writing to deliver units of teaching (see attached Appendix 1). This approach focuses on taking children :

- Orally rehearsing the learning
- Developing vocabulary and talk around Maths

- Teachers' modelling learning and making the learning visible
- Co-constructing toolkits to help children embed knowledge, skills and procedures.

The teaching of Maths, at St Matthew's CE Primary School, provides opportunities for:

- Group work
- Paired work
- Whole class teaching
- Individual work

Guided Maths

As part of our rich Maths curriculum, at St Matthew's CE Primary School we use guided maths to effectively to support and challenge all pupils at various stages within the teaching sequence. We use Guided Maths to:

- Pre-teach concepts and vocabulary
- Assess understand
- Offer feedback
- Focus on a concept, skill or strategy that a group has not learnt or understood
- Accelerate slow moving children
- Challenge more able
- Support less confident children

CALCULATIONS POLICY

At St Matthew's CE Primary School we have developed a consistent approach to the teaching of written calculations, in order to establish continuity and progression throughout the school (see appendix 2).

Children should be able to choose an efficient method: mental or written to solve any given task.

At St Matthew's CE Primary School, before carrying out a calculation, we encourage children to consider:

- Can I do it in my head?
- What is the size of an approximate answer? (Estimation)
- Could I do jottings to keep track of the calculation?
- Could I use a number line?
- Do I need to use a written method?

Arithmetic

At St Matthew's CE Primary School, we aim to establish a secure understanding of mental and written calculation strategies (appropriate to each child's age and stage of mathematical development). This is embedded in the National Curriculum and is planned for on a weekly basis.

Children's knowledge and rapid recall of number facts is crucial to all calculating. At St Matthew's, our children are supported to develop proficiency, confidence and speed recall of facts through our Rapid Maths Programme (see attached programme).

This programme gives children the chance to rehearse, recall and apply number facts relevant to their year group, everyday, through fun and engaging games.

Working Walls

At St Matthew's the Maths' working wall is a place where teachers' display the key facts, vocabulary and models linked to the learning. It is used by the children as a support tool and point of reference, when working independently.

Working walls will contain:

- Vocabulary

In each classroom there should also be a working maths wall with maths vocabulary and enquiry questions.

- Concrete, Pictorial and Abstract Representations

In each classroom we also display models and images to stimulate mathematical thinking, as part of the teachers' modelled examples or to support understanding of mathematical processes.

- Key conversion tables for measures and time

- Examples of written strategies, appropriate to year group

RESOURCES

Classrooms have all the necessary equipment for delivering the Maths Curriculum, in Maths Boxes. However, where there are units of work that require more bulky or specialist resources, which are stored centrally.

CROSS-CURRICULAR LINKS

Mathematics is mainly taught as a discrete subject, but at St Matthew's we take every opportunity (in other subject areas) to use and apply mathematical principles and knowledge. This helps children to see that Maths is not a subject in isolation and makes learning experiences more real.

Mathematics contributes significantly to the teaching of English, in our school by actively promoting the skills of reading, writing, speaking and listening. We also use Maths within Science to support the presentation and explanation of data.

A Maths task is included in Topic Week, on a half termly basis.

ICT

At St Matthew's CE Primary School we use ICT to stimulate and engage learning in Maths lessons. We use the whiteboard to display models and images to stimulate mathematical thinking and use specific PowerPoint Software to support mental and oral sessions

In addition, the laptops and Ipads will be utilised where appropriate to support learning in maths.

HOMEWORK

It is our school policy to provide parents and carers with opportunities to work with their children at home. At St Matthew's CE Primary School we use a programme called Maths Whizz.

Maths Whizz is an online homework programme that devises activities at each child's specific level. Children work on Maths Whizz at school and are expected to do 30 minutes at home per week.

Children's progress on Maths Whizz is monitored, by teachers. Teachers are able to send emails, give out stickers and support/guide the children.

PUPIL TARGETS

At St Matthew's, all pupils have maths targets, to ensure that they understand the next steps in their learning. We use these targets to encourage children to self-assess their progress and to review and improve their own work.

ASSESSMENT, RECORDING AND REPORTING

Assessment

At St Matthew's we integrate assessment for learning into our daily delivery of the Maths curriculum. We use this to effectively to inform class teachers of changes and adaptations that need to be made to their daily lesson delivery.

Alongside these, we formally assess children every term, in order to monitor the progress.

On a termly basis, Maths Teacher Assessment is moderated, using the Step Up Materials.

At St Matthews's, teachers complete a Venn diagram of children's progress towards Mastery in Maths, Reading and Writing. This informs the teacher's groupings and planning. The information is correlated by Subject Leaders, to inform intervention work.

Reporting

All parents receive a written report on their children's progress in Mathematics, during the year.

At the end of KS1 and KS2 each pupil's levels of attainment is measures against national standards. This judgement is included in the report to parents.

It is our policy to keep parents informed of their children's progress throughout the year, through informal meetings and termly parents' days, homework, newsletters and inspire workshops.

INTERVENTIONS

At St Matthew's Primary School, we aim to provide a broad and balanced education to all pupils. Quality Maths teaching is considered an entitlement for all pupils.

Effective pupil tracking enables identification of pupils who may benefit from early 'intervention'. We have two teaching assistants trained in 1st Class at Number (Year 2 – Year 4 and Success@Arithmetic (Year 5 and 6)

We also recognise, and aim to make provision for, pupils who have a particular gift in Mathematics, through our work with Academic Excellence, who offer enrichment work, for specific children across the school.

SEND

Children with SEND are taught within the daily mathematics lesson and are encouraged to take part in differentiated activities.

Where applicable, children's ILPs incorporate suitable objectives 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.

Within the daily mathematics lesson, teachers not only provide activities to support children who find mathematics difficult, but also activities that provide appropriate challenge for children who are working at Mastery and Greater Depth.

In the case of specific difficulties, it may be necessary for the class teacher, to work in conjunction with the Subject Leader/Inclusion Lead, to devise an individual programme of work to accommodate the child's need and facilitate progress, towards agreed objectives.

EQUAL OPPORTUNITIES

We provide Maths opportunities for all pupils in which equality of opportunity is supported. This is irrespective of gender, race, creed and disability, taking into account the individual needs of all children.

The SLT will monitor the implementation of this policy on a regular basis.

Written by Tracey Adams – Maths Leader – July 2016

Policy to be reviewed in July 2017