

MATHS POLICY

HOLY TRINITY & ST JOHN'S C E P SCHOOL

**St Johns Road
Margate
Kent
CT9 1LU**

Telephone: 01843 223237

Fax: 01843 230875

**Reviewed and ratified at: Virtual Full Governors
Meeting: February 2021**

Amended March 2021

Email: office@htsj.school

Web Site: www.holytrinitymargate.co.uk

Through our lives we will have HOPE and aspiration for ourselves and our community, we will come to know and BELIEVE that God loves us and wants the very best for us because we are uniquely and wonderfully made and that we will fulfil our God-given gifts in order that we might ACHIEVE and enjoy life in all its fullness.

HOPE | BELIEVE | ACHIEVE

To develop confident, curious, independent, resilient life-long learners within a Christian environment

Philippians 4: 13 I have the strength to face all conditions by the power that Christ gives me.

Trust | Friendship | Hope | Compassion | Respect | Forgiveness

Intent

At Holy Trinity and St John's CoE Primary School we aim to:

- Meet the requirements of the National Curriculum.
- Provide a foundation of mathematical knowledge, skills and understanding.
- Encourage the development of confident, independent and life-long learners with a positive attitude towards mathematics.
- To become active mathematicians, applying mathematical language when communicating and explaining, working both individually and as part of a group.
- Encourage children to uphold a positive attitude towards mathematics and an awareness of the relevance of mathematics in the real world.

In order to achieve our aims, we have set out the following objectives. During their time in our school, children should:

- Follow an inclusive Maths Mastery approach – (explained in further detail below)
- Learn maths number facts - a large proportion of time is spent reinforcing number to build competency.
- Develop their knowledge and rapid recall of all multiplication tables, including related division facts.
- Become confident in their use of all four operations including being able to select efficient methods (mental, written and calculator) when calculating.
- Learn to identify the most efficient mathematical strategies, processes and methods to solve problems, whilst reasoning in a variety of contexts.

The teaching of Mathematics

What is Maths Mastery?

Teaching maths for mastery offers all pupils access to the full maths curriculum. This inclusive approach, and its emphasis on promoting multiple methods of solving a problem, builds self-confidence and resilience in pupils (NCETM)

Pupils at Holy Trinity and St Johns CEP Primary School are taught mathematics in mixed-ability classes in EYFS, KS1 and KS2. As of the academic year 2020-21 Year 5 and 6 will set the classes helping prepare the children for their SATS. Each class teacher is expected to provide a daily lesson for mathematics, which should last for at least an hour. The approach to teaching recommended by the National Curriculum for Mathematics is based on three key principles: fluency, reasoning and problem solving, which are the fundamental of mathematics. Pupils practice fluency through varied and frequent practice, so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Pupils are taught to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. Pupils build up to solving problems by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. Lessons are supported

Philippians 4: 13 I have the strength to face all conditions by the power that Christ gives me.

using a variety of manipulatives and language to support pupils learning (see the Calculation Policy which illustrates the progression of manipulatives and methods practiced).

Mathematical Vocabulary

Teachers aim to incorporate opportunities for pupils to use and apply their maths skills and the correct Mathematical vocabulary within every lesson. STEM sentences are used as a scaffolding tool to support pupils with using accurate Mathematical language, using interactive resources (PowerPoint and Smart Board slides). Teachers ask open ended questions and can set open-ended activities in any part of the lesson. Pupils will be supported with their speaking and recording to reinforce key Mathematical concepts and explanations via modelling and support.

Implementation

Holy Trinity and St John's following the White Rose Scheme of Learning which has been written in conjunction with the National Curriculum for Maths (2014) and the Early Years Framework for Reception. White Rose has been written in line with the National Curriculum Objectives by a team of enthusiastic and passionate teachers from up and down the country, who are experts in their particular year group.

Teachers record plans in concept blocks (i.e. place value, four operations, fractions, geometry). The lesson structure followed in the planning sheet is outlined below:

- Mixed up mental or oral starter activity (to reinforce prior learning).
- Learning Objectives and Success Criteria (children can generate the success criteria in some lessons to support confidence and independence).
- Direct teaching using concrete and pictorial representations.
- An independent fluency task (usually between 5-8 questions, with support if required).
- Reason and problem solving task (supported based on the level on need in the class).
- Teaching Assistants will be used to facilitate, scaffold and support learning in all parts of the lesson.
- Plenary, used to review the aims and consolidate pupils' learning.
- Key Vocabulary, children are encouraged to justify their responses using relevant mathematical talk and vocabulary e.g. STEM sentences, talk partners, key questions and adults.
- Resources required during the lesson including appropriate use of ICT and manipulatives.

Teachers use the White Rose 'Lesson by Lesson overview' which provides clear and succinct coverage across the school. Teachers plan 'skeleton' lessons for the week and block but are expected to adapt plans during the week to allow for teacher assessment to be accounted for. Year group teaching colleagues discuss ideas for teaching particular objectives/small steps. Then, each teacher tailors the lessons individually to suit the needs of the children in their class.

Philippians 4: 13 I have the strength to face all conditions by the power that Christ gives me.

Planning and support materials

Teachers use the White Rose Maths Hub Scheme of Learning documents and resources to support their planning and progression. Teachers also use additional materials such as Target Your Maths, Maths No Problem, the NCETM mastery documents with appropriate questions, pitch and expectations. The children will also be taught how to use the Bar Model when appropriate. Work is differentiated, providing targeted support. Teachers should plan and tailor the learning resources to their individual classes, focusing on the starting points necessary for the children: using concrete, then pictorial approaches. Abstract recording (numbers and symbols) will take place once children are secure on the concept covered.

Assessment

The assessment of pupils learning, aims to:

- inform teachers of pupils' progress in relation to a learning objective;
- enable teachers to plan lessons which suit the ability and age range of pupils;
- ensure progression of pupil learning;
- inform other parties of pupil progress, e.g. Headteacher, parents, etc.

Teachers use the following assessment methods:

Formative Assessment

Daily informal assessments of pupil progress in relation to the learning objective is completed, through interaction with pupils during direct teaching, activities, plenary sessions, marking of work, and teaching assistant feedback. Daily assessments are used primarily to make adjustment to subsequent lessons, or to inform interventions (including Keep Up Catch Up sessions); where further input is required to achieve the learning objective or to ascertain which pupils can be moved on. The daily assessment is recorded on a 'Small Step Tracker' Excel Document, which allows teachers to have a clear understanding of progression and attainment. End of Block assessments for each concept covered will be used at the beginning of a block to assess pupil's prior understanding of the concepts being taught, then again at the end of the block to support teachers with assessment.

Summative Assessment

In the Autumn and Spring Terms pupils' will be assessed using the White Rose 'End of Term Assessments'. In the Summer Term pupils will be assessed using the NFER tests (years 3-5) and SATS (years 2 and 6) to provide a standard set of scores for our pupils'. These along with teacher judgements will be used to assign a 21 step value.

Philippians 4: 13 I have the strength to face all conditions by the power that Christ gives me.

To achieve 'working at expected standard' within the year group children need to have mastered fluency, reasoning and problem solving from the National Curriculum Programme of Study. A child will be awarded 'working towards the expected standard', if they have not achieved all of the objective for their year group. Children who show a deeper understanding of fluency and problem solving will be awarded 'working at greater depth' within a year group.

Statutory SATS are used in Year 2 and Year 6. Analysis of results is performed by each teacher in order to track pupil progress and to identify strengths and weaknesses within the class and is used to inform planning. Gap Analysis and pupil progress is discussed at Pupil Progress Meetings with the Senior Leadership Team. Pupils who are underachieving or not on track to meet targets will, where possible, be targeted through focused intervention groups. Findings may also be used by the Senior Leadership Team and Maths Leader to identify weaknesses common to all year groups and set targets that aim to improve pupil performance in these areas through focused programmes and staff CPD.

Home learning

All pupils are expected to practise a number fact theme on a daily basis at home e.g. number bonds or times tables. Timestables Rock Stars and NUMBOTS (via times Table rock Stars app and website) is available to support this, teachers may also set individual and class homework where extra reinforcement is required.

Liaison with parents

Parents are regularly informed of pupil progress through the sharing of assessment outcomes, parents' evenings and formal reports. These aim to celebrate pupils' successes and highlight areas where pupils could improve. For pupils in Years 2 and 6 the end of year report includes pupils' results in the SATs. Teachers will inform parents of any programmes/support that pupils are receiving and encourage them to support pupils in their learning. Teachers may also arrange a parent meeting to offer support to the parent, modelling the appropriate mathematical methods applied in school, helping the child to complete homework, and classwork if necessary. In the event of a lockdown pupils' will continue to follow the White Rose Scheme of Learning, using videos and worksheets which will be provided to parents/carers.

Interventions

The school aims to ensure that pupils have the opportunity to maximise their achievement through interventions. Teachers will work with targeted pupils who would benefit from additional support, delivered outside of the maths lesson e.g in the afternoons during the timetabled 'Keep Up, Catch Up' sessions, clubs and pre-teaching.

Philippians 4: 13 I have the strength to face all conditions by the power that Christ gives me.

Equal Opportunities and Special Educational Needs

Teaching materials (adapted from the White Rose Scheme of Learning) are chosen to reflect the cultural and ethnic diversity of our society. We avoid stereotyping by gender or race. Pupils' performance is monitored to ensure that no group of pupils is disadvantaged. In lessons, the full participation of both girls and boys is encouraged and care is taken to ensure the emphasis on whole class teaching does not disadvantage any gender or racial group. Care is taken to ensure that stereotypes are challenged through positive promotion, e.g. by ensuring that both boys and girls are given equal opportunities to demonstrate their understanding and achievements. Pupils should be enabled to demonstrate their ability in mathematics. This is achieved through: targeted support for pupils with additional educational needs, differentiated activities planned to meet pupil's educational needs, self-differentiation in some lessons to enable children the choice of which level they would like to work at, teaching strategies and techniques to match pupils preferred learning style where appropriate, assessment techniques which enable all pupils to demonstrate their level of mathematical understanding.

All pupils should have the opportunity to work independently during each school week. To best meet the needs of pupils, however, some children may undertake tasks targeting their needs outside of the classroom. This may happen during the Starter or a lesson or during pupil activity times. All pupils working within their Key Stage should be present for any direct teaching. Pupils with Additional Educational Needs in maths may be given targets on their Provision Map.

Cross Curricular Links

We try and identify the mathematical possibilities across the curriculum. It is important that pupils see that mathematics is a life skill and not an abstract subject. Pupils should also be provided with additional opportunities, outside the daily maths lesson to consolidate their skills and apply them. Therefore, teachers should identify areas across the curriculum where pupils' mathematical knowledge and skills can be applied at the planning stage, e.g. statistical analysis/time/measurement, co-ordinates, graphs and tables in Foundation Subjects.

Pupil's attention should be drawn to the application of mathematics in other subjects by discussion and identifying the mathematical learning objective being applied. We use Cornerstones Education to support the school's curriculum design, providing a broad and balanced coverage.

Resources

Essential teaching resources are allocated to each classroom. Further resources to support the teaching of maths are held in a central resource area. Each class is provided with a range of resources to promote effective teaching and ensure availability. The maths leader buys in new resources in response to teachers' needs. Teachers are also kept informed of online/website

Philippians 4: 13 I have the strength to face all conditions by the power that Christ gives me.

resources and encouraged to give feedback on their usefulness. It is imperative that resources are used throughout the school in Maths lessons.

Impact

To develop pupils that are positive about mathematics, build their resilience and enjoy being in school. Facilitate pupils to become curious, confident, resilient and independent. Furthermore, this policy will be used to ensure that our pupils have detailed knowledge and skills across the mathematics curriculum and, as a result, make progress and achieve well, so they are ready for the next stage of their education.

Monitoring and Evaluation

The maths subject leader monitors and evaluates the teaching of maths. Along with Senior Leadership we undertake Book Looks, learning walks, data monitoring, moderations and observations. Any observations are undertaken in line with the school improvement plan. Opportunities for teachers to review the scheme, policy and support materials are given during staff meetings.

Role of the Maths Leader

The subject manager will:

- Take the lead in policy development, personalizing the maths curriculum, tailoring schemes of work which are designed to ensure progression and continuity on maths throughout the school.
- Support colleagues (including NQT's and new members of staff) in their implementation of the scheme of work and in the assessment and record keeping
- Support teachers (Yr-6) with plans, coverage, differentiation and assessment.
- Monitor the delivery of the maths curriculum and advise the Senior Leadership team on the action required.
- Take responsibility for the purchase and overall organisation of resources for Maths.
- Keep up-to-date with developments in maths and disseminate information to colleagues as appropriate.

Reviewed by: Miss Furiel - Maths Lead