



St Mildred's Primary Infant School

Mathematics Policy

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Heads of School

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Date agreed and ratified by Governing Body:

Date of next review:

Rationale and Intent:

Mathematics is the study of relationships in number, measures, space and data-handling and their application to solving problems in a variety of situations.

Our aim at St Mildred's is for all children to enjoy mathematics and have a secure and deep understanding of fundamental mathematical concepts when they leave us. We want children to see the mathematics that surrounds them every day and enjoy developing vital life skills in this subject.

Our intent is:

- To foster a sense of enjoyment and resilience within the learning of Mathematics. Where children are enthusiastic about their learning, are aware of the learning process and achievements are celebrated.
- To help children to recognise the value of mathematics in everyday life and to equip them to apply mathematical skills to real life situations.
- To provide an interactive learning environment that encourages the development of mathematical concepts in a way that meets the varied needs of learners.

The National Curriculum for mathematics aims to ensure that all pupils:

- 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.
- 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.

Equal Opportunities and Inclusion

All children should have equal access to mathematics in order to develop their personal maths capability. We understand equality to mean treating everyone fairly and with dignity and by valuing their individual characteristics such as their age, disability, gender identity, race, religion, socio-economic circumstances or any other visible or non-visible difference. We carefully plan, monitor and assess to ensure all of our pupils feel valued and make good progress within mathematics. We aim to teach children to uphold where applicable British values and a mutual respect and tolerance of those with different faiths and beliefs.

Implementation

Our school plans using the White Rose Maths Schemes of Learning as a starting point in order to develop a plan that is formed of small, connected steps building on what the children already know.

The focus is on the whole class progressing together but teachers are aware of the 'Ready To Progress' (RTPs) steps that each child needs to achieve.

The White Rose scheme also ensures that all areas of the mathematics curriculum are covered as well as highlighting the RTPs and teaching through the stages of concrete, pictorial and abstract.

We use a variety of teaching and learning styles in mathematics lessons.

Being able to use manipulatives is vital when securing concepts and so we provide children many opportunities to use a wide range of resources such as numberlines, hundred squares, part,part, whole modes, 10 frames, double sided counters, Numicon, digit cards and small apparatus. Wherever possible we encourage the children to use and apply their learning in everyday situations.

Implementation - Mathematics in the EYFS

In the Foundation Stage the organisation and management of mathematics lessons is tailored to meet the needs of the children who arrive from different settings eg. nursery, playgroup etc, and therefore will have had different learning experiences. The teaching programme is based on the White Rose Scheme and is in line with the Early Learning Goals. Mathematics in the Foundation Stage is divided into the two focus areas of: Number and Numerical Patterns (September 2021)

In Reception, a wide range of enhancements alongside the class provision supports the teaching and learning of mathematics, including stories, songs, rhymes, imaginative play, board games and outdoor play. Over a week, the teaching of maths will include short whole class activities eg. counting, discussion of main teaching objectives and enhancements to develop already learnt knowledge available for all children to select. Each term there will also be maths mornings to consolidate children's learning of maths over the term. These are approached flexibly to accommodate the needs of the children.

Implementation - Mathematics KS1

In all classes there are children of differing mathematical ability. We therefore encourage children to select their own level of learning from a series of challenges with an emphasis on:

- Everyone can learn mathematics to the highest levels.
- If you 'can't do it', you 'can't do it **yet**'.
- Mistakes are valuable.
- Questions are important.
- Mathematics lessons are about learning, not performing.

In KS1 the areas of mathematics covered are:

- Number and place value.
- Addition and subtraction.
- Multiplication and division.
- Fractions
- Measurement
- Geometry
- Statistics

The Mathematics Lesson: Year 1

In Year 1 teachers use the White Rose Scheme to plan objective led maths sessions. After a short whole class input, children are able to select a practical activity that compliments and extends the objective that is being taught. In terms 1 and 2 these activities are linked to the EYFS areas of learning with teachers taking teaching into the children's play. From term 3 teaching staff will introduced small mixed ability focus group activities alongside the practical activities that will continue. All recording at this stage is informal with children using a mix of manipulatives, whiteboards or maths books to show calculations. Objectives that have been covered should be indicated and through observation, a note should be made as to whether children are secure in these skills. Teachers will then make amendments to plans according to their assessments of pupil progress.

The Mathematics Lesson: Year 2

In Year 2 teachers continue to use the White Rose Scheme to plan their lessons. In the course of the week each child will receive a variety of mathematics teaching. This will include: **Oral work and mental calculation** in which the whole class works to rehearse, sharpen and develop mental and oral skills.

Main teaching input and pupil activities in which:

- A new topic is introduced, or previous work is consolidated or extended.
- Vocabulary is developed, using correct notation and terms and using new ones.
- New concepts and skills are used and applied.

Problem solving and reasoning:

- At the end of each session children will be given a problem solving or reasoning question linked to the days learning to complete. This will be introduced and modelled as a whole class and then completed independently.

Children are supported to challenge themselves and teachers provide support wherever needed.

At the end of the lesson the children will assess their own learning against the learning objective using a self-assessment face system.

Objectives that have been covered should be indicated and a note should be made as to whether children are secure in these skills. Teachers will then make amendments to plans according to their assessments of pupil progress.

Impact

The Curriculum for mathematics aims to ensure that all pupils:

- Become confident and proficient with number, including fluency with mental calculation and look for connections between numbers.
- Become problem solvers, who can reason, think logically, work systematically and apply their knowledge of mathematics.
- Become independent learners and to work co-operatively with others.
- Appreciate real life contexts to learning in mathematics.

Assessment

In the EYFS progress is monitored and tracked through on going teacher observation and attainment is measured against the Early learning goals at the end of the year.

In KS1 progress is monitored and tracked through continual class assessment and observations to identify the next steps in children's learning and inform planning for future lessons.

Teachers use class tracking objective sheets throughout the year to highlight if a child is emerging, on track or greater depth in each mathematical area.

At the end of KS1 children are judged to be Working Towards the Expected Standard, Working at the Expected Standard or Working at Greater Depth in the Expected Standard by the class teacher from evidence collected throughout the year.

SEND

At St Mildred's we believe that all pupils are entitled to a broad, balanced and relevant curriculum and teachers match the learning to the needs and abilities of all of the pupils. We use a range of strategies to develop the pupils' knowledge, understanding and skills. Where appropriate, materials are modified or support is provided to enable pupils with SEND to access the learning. In every maths lesson there are a range of strategies used to ensure inclusion of all pupils. These include:

- Manipulatives
- Practical activities/ elements to each lesson
- Pre teaching of specific skills prior to the lesson
- Quality first teaching to ensure the way lessons are planned and delivered meet the children's needs
- Three levels of differentiated activities in every lesson for children to self-select
- Small group support
- 1:1 support
- Adaptation of materials for specific needs

As well as these strategies we also meet the needs of specific children with targeted interventions in specific areas of learning.

Signed Date

Chairman of Governors

Signed Date

Headteacher