

ST MARGARET'S CE PRIMARY SCHOOL

POLICY FOR MATHEMATICS

This document is a statement of the aims, principles and strategies for teaching and learning of mathematics at St Margaret's CE Primary School.

AIMS

At St. Margaret's, we aim to ensure that all children are:

- Fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time so that pupils confidently develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- Able to reason mathematically by following a line of enquiry and develop an argument, justification or proof using mathematical language
- Able to solve problems by applying their mathematics to a variety problems, including breaking down problems into a series of simpler steps and persevering in seeking solutions

TEACHING AND LEARNING OF MATHEMATICS

Mathematics is a core subject in the National Curriculum. The fundamental skills, knowledge and concepts of the subject are described in the National Curriculum where they are categorised into five programmes of study:

1. Number – number and place value
2. Numbers – operations and fractions
3. Measurement
4. Geometry
5. Statistics

Most pupils will move through the programmes at the same pace. Pupils who master concepts rapidly will be challenged through being offered problems before acceleration through new content. Those who are not sufficiently fluent will consolidate their understanding, including additional practice, before moving on.

HOW IS MATHEMATICS TAUGHT?

Mathematics is taught as a discrete subject with cross curricular links made whenever possible.

Early Years

There are five 10-15 minute sessions over a fortnight period, which involve counting and promoting mental fluency. These are followed by small focused group teaching sessions. Opportunities are provided for the children to use a range of equipment to initiate their own mathematical learning.

Key Stage One and Two

Mathematics is taught each day in an hourly session with the children taught in mixed ability classes.

Mathematics is taught through a combination of class teaching, group, paired and individual work appropriate to the learning objectives.

The needs of all children in the classroom are met by teachers and teaching support staff by providing differentiated activities.

Gifted and Talented children are identified within each class and listed on the school register. They are provided with opportunities to attend enrichment days. Within class, they are provided with a range of extension activities, challenges, problems and investigations.

WHAT IS TAUGHT?

Early Years

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Early Learning Goals

Key Stage One

The aim is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources.

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. They should use a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

Key Stage Two – years 3 and 4

The aim is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. They should draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. They should show they can use measuring instruments with accuracy and make connections between measure and number.

Key Stage Two – years 5 and 6

The aim is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Through geometry and measures, they should consolidate and extend knowledge developed in number. Pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them.

National Curriculum, 2014

ASSESSMENT

Assessment is an integral and continuous part of the teaching and learning process. It is carried out informally by teaching staff.

Teachers integrate the use of assessment strategies such as:

- * Effective questioning
- * Clear learning objectives
- * The use of success criteria
- * Effective feedback and response in teaching and marking including next steps
- * Observing children participating in activities

The National Curriculum requires that each child is assessed and assigned a level of attainment. This is to be carried out at the end of Key Stage One and at the end of Key Stage Two. Parents are informed of the results of these assessments.

Each child's mathematical understanding and progress is discussed during the Autumn and Spring consultation meetings. An annual report is published for parents in the Summer which gives details of progress and attainment in all subjects.

THE MATHS FACULTY

A team of teachers from across the primary age range meet together each half term to review the teaching and learning in the school. They discuss ways to provide support for staff and ensure the children's learning needs are met.

RESOURCES

Each classroom has a range of wall displays to assist with children's mathematical understanding. Children have access to various resources to support their learning. A central store of additional equipment is located outside the year five classrooms.

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