



Maths Policy

Ratified by governing body: Autumn 17

Date for review: Autumn 2020

A handwritten signature in black ink, which appears to read 'Anne Marie Renshaw'. The signature is written in a cursive style.

Reverend Anne Marie Renshaw

Chair of Governors

Introduction

This policy outlines what we are aiming to achieve in respect of pupils' mathematical education. It also describes our agreed approach to the planning, delivery and assessment of the mathematics curriculum.

We believe that it is every child's right to acquire sound mathematical skills to enable them to function confidently within society.

Aims

Mathematics is important in our everyday lives. It is integral to all aspects of life and with this in mind, we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them and enable them to draw upon throughout their lives.

In our teaching of mathematics at Messing Primary School, we aim to:

- Create a learning environment where pupils can develop their mathematical skills and concepts and apply them in a range of situations, in mathematics, in other areas of the curriculum and the outside world.
- To foster positive attitudes, build confidence and enable each child to experience success.
- To develop an interest and excitement in mathematics in all pupils.
- For all pupils to have a growth mind set in mathematics

The school aims to provide pupils with a high-quality mathematics curriculum and teaching to develop individuals who are secondary ready and are numerate, creative, independent, inquisitive, enquiring and confident.

What are children learning?

Year group expectations are available on our website (www.messingprimaryschool.co.uk).

Key Stage 1

During key stage 1 pupils develop their knowledge and understanding of mathematics through practical activity, exploration and discussion. They learn to count, read, write and order numbers to 100 and beyond. They develop a range of mental calculation skills and use these confidently in different settings. They learn about shape and space through practical activity which builds on their understanding of their immediate environment. They begin to grasp mathematical language, using it to talk about their methods and explain their reasoning when solving problems.

Knowledge, skills and understanding

During the key stage, pupils will be taught the knowledge, skills and understanding through:

- practical activity, exploration and discussion
- using mathematical ideas in practical activities, then recording these using objects, pictures, diagrams, words, numbers and symbols
- using mental images of numbers and their relationships to support the development of mental calculation strategies
- estimating, drawing and measuring in a range of practical contexts
- drawing inferences from data in practical activities
- exploring and using a variety of resources and materials, including ICT
- activities that encourage them to make connections between number work and other aspects of their work in mathematics.

Key Stage 2

During key stage 2 pupils use the number system more confidently. They move from counting reliably to calculating fluently with all four number operations. They always try to tackle a problem with mental methods before using any other approach. Pupils explore features of shape and space and develop their measuring skills in a range of contexts. They discuss and present their methods and reasoning using a wider range of mathematical language, diagrams and charts.

Knowledge, skills and understanding

During the key stage, pupils will be taught the knowledge, skills and understanding through:

- activities that extend their understanding of the number system to include integers, fractions and decimals
- approximating and estimating more systematically in their work in mathematics
- using patterns and relationships to explore simple algebraic ideas
- applying their measuring skills in a range of contexts
- drawing inferences from data in practical activities, and recognising the difference between meaningful and misleading representations of data
- exploring and using a variety of resources and materials, including ICT
- activities in which pupils decide when the use of calculators is appropriate and then use them effectively
- using mathematics in their work in other subjects.

Mathematics in the EYFS

Developing mathematical thinking and early vocabulary through:

- Observation – profile information
- Communication
- Listening
- Reading
- Recording
- Manipulating

- Comparing / classifying
- Estimating / measuring
- Prediction
- Choosing / testing
- Drawing conclusions

Pupils have opportunities to initiate their own mathematical learning through the use of engaging resources both inside and outside of the classroom. A balance of directed time, activity and detailed observations inform class teachers of the next steps for learning for individual pupils.

The Early Learning goal for Mathematics states:

Expected:

- 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.

The written calculation policy should be read in conjunction with this policy.

Teaching and Learning

Mathematics contributes to many subjects and it is important the children are given opportunities to apply and use Mathematics in real contexts. At Messing 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.

The children will all participate in a daily maths lesson. This should last about 45 minutes in Key Stage 1 and about 60 minutes in Key Stage 2.

The Structure of the Daily Maths Lesson is more flexible than previously, but will still include:

- teaching time and independent or group work
- a plenary or mini-plenaries

There will be opportunities for the children to work individually, with partners, in small groups and as part of the whole class. The work includes teaching and learning, discussion, mental / oral work, written tasks and practical activities.

The school has its own guidelines on the teaching and learning of calculation.

The written calculation policy details the written strategies for each year group.

Home learning

The mathematics lessons will provide opportunities for children to practise and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These will be extended through home learning tasks. These activities will be short and focused and will be referred to and valued in future lessons.

In KS1 maths games or links to websites are given as homework. Additional information where parents can support pupils is also shared with parents.

In Lower KS2 children have either maths sheet relating to their work in class or an ICT based activity from 'Active Learn' or an alternative website.

In Upper KS2 children have a sheet and an interactive activity to complete each week.

All pupils are encouraged to learn their times tables with the support of adults at home.

Planning

Long term plans: Based upon the requirements of the National Curriculum 2014.

Medium term plans: The school uses Assertive Mentoring to inform medium term plans

Short term plans: Weekly plans are prepared using a consistent planning format which identifies the key objectives, differentiated activities and where support will be used.

How are individual needs supported and developed?

Special Educational Needs

Children with Special Educational Needs, whether they have a specific difficulty or a particular talent in Mathematics have access to the same broadly balanced curriculum as their peers. It is the teacher's role to adapt tasks and activities to the individual needs of each child in his/her class. This should be clearly outlined in the teacher's planning.

Equal opportunities.

Within the teaching of mathematics we aim to ensure that all pupils regardless of age, disability, race, religion or belief, sex, attainment and background, have full access to the mathematics curriculum. Teachers respond to diverse learning needs so that pupils are appropriately supported and challenged to experience success in learning and achieve as high a standard as possible.

As an educationally inclusive school the teaching and learning, achievements, attitudes and well-being of every young person matters. We take into account pupils' varied life experiences and needs, providing equal opportunities for all pupils, whatever their age,

disability, race, religion or belief, sex, attainment and background, to ensure that every child really does matter.

Roles and responsibilities

The role of the mathematics subject leader

- To work with colleagues in developing confidence and skills necessary for the teaching of mathematics.
- To network with colleagues from other schools.
- To have an overall responsibility for monitoring the planning and assessment.
- To analyse data and identify trends and areas for improvement.
- To be responsible for auditing resources and staff skills.
- To bring new developments and ideas to the attention of the staff and Headteacher
- To contribute to the School Development Plan
- To attend INSET and feedback on new initiatives.
- To report to governors.

How do we monitor progress and achievement and report findings?

Planning For Mathematics Assessment

Assessment and record keeping will be carried out in accordance with the school assessment policy and marking and feedback policy.

Assessment for Learning (AFL) is regarded as an essential part of teaching and learning and is a continuous process which is shared with all learners. All class teachers are committed to raising standards of attainment through AFL and are responsible for the assessment of all pupils in their class.

We are continually assessing pupils' progress. We see assessment as an integral part of the teaching process and strive to make our assessment purposeful, allowing us to match the correct level of work to the needs of the pupils, thus benefiting the pupils and ensuring confidence and progress.

Information for assessment is gathered in a variety of ways:

Assessment will be carried out through:

- Talking to the children
- Observing
- Self and peer assessment
- Progress tracking grids
- SATS
- SATS optional tests
- Daily times table practise
- Individual and group pupil target setting

- Marking of pupils' work and feedback
- Pupils response to marking and next steps.
- Assessment for Learning questions

Performance Indicators.

Performance Indicators, which are the criteria for success of the school's mathematics policy at Messing Primary are:

- EYFS results
- KS1 results
- KS2 results
- Pupil progress tracking grids
- Maths Books
- Target tracker progress evidence
- Pupil voice (enjoyment of maths and their ability to talk confidently about what they are doing)

When do we review?

We work with other schools in the Consortium to share good practice and develop new initiatives. Needs of staff are reviewed through performance management and outcomes from monitoring. Staff attend training when necessary and practice is disseminated through the school through staff meetings and informal coaching sessions.