

# Methley Primary School Policy for Mathematics

## Why do we study Mathematics at Methley Primary?

- 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 an ability to think in abstract ways.
- Pupils need to acquire a wide range of mathematical knowledge, skills and techniques to help them to prepare for adult life.
- Despite its complexities, mathematics can be exciting, creative, imaginative and most of all an enjoyable challenge. At Methley we promote this!

## What are the main skills pupils will be taught:

We aim to develop in each child;

- An ability to work in a systematic way independently and co-operatively.
- An ability to apply skills and knowledge to a variety of situations.
- An ability to use mathematical tools confidently.
- A positive, questioning and enthusiastic approach to mathematics.
- Knowledge of the basic structure, patterns, language and presentation techniques of mathematics, including written methods.
- An appreciation of how mathematics can be used in other areas of the curriculum and its application to everyday life.
- An ability to use investigation and problem solving skills.
- An ability to talk fluently about their mathematics and to be able to reason as to why an answer is correct/incorrect, throughout all strands of mathematics.

## Examples of key activities and visits:

**MEGA MATHS** - a whole school initiative where children take part in real life maths (where they are given a 'real life' problem to solve using problem solving skills).

## Key Questions in this area are:

What do you need to find out?

What is the problem asking?

What strategies are you going to use?

Will you solve it mentally?

Will you use resources/written methods?

What tools will you need?

Where else will you use these skills?

How would you describe the problem in your own words?

How did you tackle similar problems to this one?

Can you estimate, check and explain your reasoning?

## What parents can do to help:

Attend any mathematical curriculum evenings where parents and children are invited to take part in mathematical learning alongside each other. If helping

## What is the focus in each year group?

Every year group will apply their skills in the context of living things, materials and physical processes.

Foundation:

To introduce number through song and rhyme to develop confidence and enjoyment of counting in 1's to 10, then 20 and beyond. Then moving on to 2's and 10's. To consolidate 1:1 counting of objects to 10, then 20 and then beyond. To recognise numbers of significance in their environment, then reading, writing and ordering numbers to 20 and beyond.

To recognise differences in quantities and find 1 more and 1 less than a given number to 20. To begin to recognise and use mathematical language and respond to language involved in addition and subtraction to solve problems. To add and subtract single digit numbers using quantities and objects and to count on and back to find the answer working towards using number tracks. To develop a range of practical calculating strategies to solve problems involving doubling, halving and sharing. To record their calculations using their own methods which they can interpret and explain.

To develop their mathematical language to talk about, compare and solve problems involving shape, space and measures in real life contexts and when using the areas of provision.

Year 1: To improve mental maths recall, counting in 2's, 5's and 10's in both directions as well as counting to 100 from a given number in steps of 1, To become fluent in knowledge of whole numbers and place value and understand what the tens and units (ones) represent in a 2 digit number. To understand the vocabulary associated with addition and subtraction as well as recognise the signs and develop an awareness of all 4 operations (with the support of number lines, numicon and 100 square). Respond to language associated with addition and subtraction and apply these skills in real life contexts. Draw, compare and sort a range of different shapes. To describe and compare quantities including length, mass, time, capacity, time and money. Recognise  $\frac{1}{2}$  and  $\frac{1}{4}$  of shapes and numbers

Year 2: Use a thorough knowledge of place value to enable the children read, order and partition numbers to 100. To be fluent in recall of number bond to 20. To solve all 4 operations on a number line independently (resources still acceptable). Understand the relationship between addition and subtraction. To improve mental maths skills by being able to count reliably by being able to count in 2's, 3's and 5's and derive the associated multiplication and division facts to answer quick fire questions. To understand how to calculate the double and half of a number using mental and written strategies. To compare and order number to 100 using < and >. Recognise a range of fractions, including those that are equivalent.

Year 3: To be able to count in multiples of 3, 4, 8, 50 and 100 and recognise 100 more and less. To know the value for each digit in 3 digit numbers and compare and order numbers to 1000. To use mental strategies to solve problems. To be able to record working out for mathematical statements involving all 4 operations, using column method for addition, finding the difference for subtraction, grid method for multiplication and chunking method for division, using the inverse to check their working. Find fractions of number, show equivalent fractions, order, compare fractions with the same denominator as well as adding and subtracting them. Estimate and read time to the nearest minute and compare the duration of events. Solve problem involving length, mass capacity/volume and perimeter.

Year 4: Know multiplication facts up to 12x12 and derive the associated division facts. Recognise the place value of 4 digit number and count back past 0 into negative numbers. Be able to round any number to the nearest 10, 100 or 1000. Solve addition and subtraction in 2 step problems involving 4 digit numbers. Recognise and write decimal equivalence for tenths and hundredths. Compare decimal number and round them to the nearest whole number. Convert between different units of measure and convert times from analogue to digital. Find the perimeter and area of shapes

Year 5: Have knowledge of numbers to up 1,000,000. Use knowledge of factors, multiples, square numbers and cube numbers. Write a fraction that is equivalent to the one given, recognise and convert mixed numbers and improper fractions. Convert decimals to fractions to percentages and work with numbers to 3dp.

Year 6: Pupils will be fluent in the 4 operations as well as fractions, decimals and percentages. Recognise and know the value of digits up to 10,000,000. Identify common factors, multiples and prime numbers. Add and subtract fractions with different

with mathematical work at home, please follow the Methley methods shown in the calculation policy.

denominators. Multiply pairs of fractions, giving the answer in the lowest form.

Methley Primary School follows the National Curriculum Guidelines and ensures that the curriculum is tailored to meet the needs of ALL our pupils.

Teaching and learning strategies are all detailed in the Teaching and Learning Policy

Agreed by Governors:

Signed by the Headteacher: