

## LEGACY

## DIVERSITY

## ENQUIRY

# Maths

**Intent-** We aim to...

have a maths curriculum that allows children to make better sense of the world around them by making connections between mathematics and everyday life.

enable children to become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time.

develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

develop mathematical reasoning by following a line of enquiry, developing an argument, providing justification and proof using mathematical language.

give opportunities for children to solve problems by applying their mathematics to a variety of routine and non-routine problems.

## Implementation- How do we achieve our aim?

### Key Knowledge

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

EYFS	KS1
At CREATE we understand the importance of early experiences of maths and have committed to embedding the Power Maths scheme. This approach places a significant emphasis on developing a strong grounding in number, understanding that this is a necessary building block for children to excel in the subject.	In Key Stage One we teach to the objectives set out in the National Curriculum for Year One and Year Two, supplemented by the Power Maths Scheme. "The principal focus of mathematics teaching in key stage 1 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 [for example, concrete objects and measuring tools]."
LKS2	UKS2
In Lower KS2 our main priority is to ensure children are becoming increasingly fluent with the four operations (including efficient methods), number facts and place value (including simple fractions and decimals) and are able to problem solve.	In Upper KS2 our main priority is to ensure that children are: Extending their understanding of the number system and place value to include larger integers. Developing connections between multiplication and division with fractions, decimals, percentages and ratio. Developing 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. Introduced to the language of algebra as a means for solving a variety of problems.

### Key Skills

Our Maths curriculum offers opportunities for enquiry-led learning using different types of enquiry. Children investigate key questions and, for some enquiry types, follow a process of stating predictions, carrying out practical activities, recording results, analysing data, and drawing conclusions.

### Strong Vocabulary Development

All classrooms display mathematical vocabulary, and these words are explored with children to strengthen their understanding. These are shared on Working Walls. There will be scaffolding within all class settings with the consistent use of sentence stems. These have been carefully chosen to supplement the learning.

### Cross Curricular Links

Maths links well with other STEM subjects. In D&T, children have opportunities to draw upon their mathematical knowledge, thus learning how knowledge in Maths is transferable. In addition, presenting data allows children to use tables and graphs, therefore practising learning in Science.

## Implementation (continued)

Our Maths curriculum provides breadth and balance, is relevant and engaging and is differentiated to match the needs and abilities of all our children to ensure that all pupils are able to excel. As a school, we believe in the importance of following the concrete-pictorial-approach as a means to developing a solid understanding of mathematical concepts which can be applied in a variety of contexts through reasoning and problem-solving challenges.

**Impact-** How will we know we have achieved our aim?

## Strong Foundations

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.

By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.

## Blocked Planning

Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. These teaching blocks are broken down into smaller steps, to help children understand concepts better. This approach means that children do not cover too many concepts at once which can lead to cognitive overload.

Each lesson phase provides the means for children to achieve greater depth, with children who are quick to grasp new content being offered rich and sophisticated problems, within the lesson as appropriate.

This approach is well sequenced and has been adapted to suit our children and how they learn. This has been well thought-out and follows a clear, concise programme.

**As a Mathematician leaving CREATE, every child will:**

be able to show resilience and a high level of perseverance towards maths.

be confident to ask their own questions and use their mathematical skills to try to discover the answers.

make connections and apply mathematical knowledge both within maths lessons and across the curriculum.

have a firm grounding in the disciplines of maths and a secure bank of knowledge and enquiry skills which they can build on in the next stage of their maths education.

understand, and be inspired by the fact, that maths plays such a huge part in and can change our lives.