

Our Maths Vision



Our GEM threads

Values: Our children will adopt and celebrate the schools GEM powers

Knowledge: Our children will learn an enriched and ambitious curriculum

Progression: Our children will 'do more, know more and remember more.'

Language and vocabulary: Our children will use oracy to be confident communicators

Experience rich: Our children will receive culturally diverse opportunities to thrive.

Why is it important to teach maths?

Mathematics may not teach us to add love or subtract hate, but it gives us hope that every problem has a solution.'

Anonymous

What does Maths look like at our Federation?

In our schools we teach challenging and engaging daily Maths lessons across the school that aim to provide children with the skills they will need in everyday life. We ensure challenge and support for all children from their individual starting points through our well planned and child centred lessons and through the use of apparatus and pictorial representations. Children develop and demonstrate their understanding through reasoning and real-life problem solving.



Our maths Intent

Our mathematics philosophy – the mastery approach

Our philosophy is based on the mastery teaching approach.

The aim is the mastery of mathematics for all pupils and a belief that pupils can achieve mastery of the key ideas. This is secured by through deep, long term, secure and adaptable knowledge and understanding. Key elements of our philosophy:

- Exploring content in greater depth instead of accelerating through it.
- Focussed, detailed and rigorous whole class quality-first teaching tailored to the needs of the learners in each class.
- Rapid intervention to overcome misconceptions.
- The development of the 'can do' growth mindset attitude in pupils and staff so success is linked to effort and working on overcoming difficulties, and a love of maths is instilled.
- The use of mistakes and misconceptions as an essential part of learning along with the provision of challenge through rich and sophisticated problems.
- The recognition that ability in maths is not fixed and that every pupil can achieve and succeed in the subject given time.
- Presentation of mathematical concepts using a range of representations including concrete (apparatus), pictorial and abstract forms.
- Use of varied and high-quality questioning to explore and develop pupil understanding.
- Pupils learning together and supporting each other. To achieve mastery in mathematics, we aim for pupils become proficient at

Pupil voice

The Maths Lead questions the children about their teaching, attitude, enjoyment and participation in maths, encouraging them to be an active participant in their own learning • Children collaborate with and supporting peers .

Implementation

Knowledge and skills based implementation

Progression led implementation

Language and Vocabulary rich implementation:

Experience rich implementation:

Events and learning opportunities:

Knowledge and skills-based implementation:

From reception to Year 6, maths learning is planned from the National Curriculum statements, which are grouped into units and divided into manageable steps using 'White Rose Maths'. The knowledge and skills needed in each year group are carefully planned out in manageable steps. In each session, pupils are given starter questions which feed in to the main teaching.

Progression led implementation:

Manageable steps build progressively over time. Each lesson follows on from the previous lesson and children are involved in the marking of their work in order to identify common misconceptions before moving on to the next step of their learning.

Language and Vocabulary rich implementation:

Every lesson highlights important vocabulary specific to the unit of work in order to enable children to articulate their learning using the correct terminology. Many lessons will also have stem sentences which children are encouraged to verbalise to help solidify their knowledge.

Experience rich implementation:

Visual, pictorial images, concrete manipulatives and real-life examples are used where possible to give children something to "pin" their maths talk on. There are also examples of where common misconceptions occur which enables children to see where mistakes can happen and how they can be corrected.

Impact

Maths is assessed formatively in every session. At the end of a unit, all children complete an 'end of unit' assessment. These papers are always analysed using question level analysis. This information then feeds into planning meetings where teachers choose their priorities for the term ahead. Pupils who require continued support will be highlighted and intervention sessions provided to progress their learning. Each term, the Maths KAT meets several times to discuss the progress and learning being undertaken and progress made throughout the school. During the year, the KAT scrutinizes planning, carry out learning walks, book looks, pupil conferences and report to the Senior Leadership Team and class teachers. At the end of each term, teachers assess individual children's progress against the appropriate National Curriculum statements for the aspects that have been taught. Our children, using our Gem Threads, will receive a high-quality Maths curriculum that will enable them to be confident, articulate learners in all aspects of mathematics.