

# SUBJECT OVERVIEW

# Maths

At Keevil, we recognise that maths is an essential life skill which helps children understand the world and enables them to think logically & problem solve.



*Intent: We aim to...*

Deliver a mastery curriculum that allows children to deepen their understanding of mathematical concepts through reasoning & problem solving

Provide children with essential number skills that will be life-long and help them succeed in the world.

Encourage children to see the significance of Maths and feel confident using Maths skills outside of Maths lessons.

Have high expectations of all children and support those who need help grasping concepts with scaffolded support.

Create a 'can do' culture in Maths lessons where children develop positive attitudes to Maths; feel they are able to achieve; and enjoy number work.



*Implementation: How do we achieve our aims?*

We believe that the mastery approach to the teaching of Maths brings all of the skills they acquire together for the children, and, using small steps, achievable targets and increasing fluency as they progress through the units of learning. Pupils are exposed to many different representations of the underlying structure of mathematical methods; they attempt problems in different ways, leading to making connections and mastery whilst finding the most efficient ways of problem solving and, ultimately, developing confidence and resilience in their learning.

## A Consistent Approach

At Keevil, we follow the White Rose Maths scheme of learning, which is an ambitious, connected curriculum accessible to all pupils from Reception to the end of Year 6. This scheme allows us to teach mathematics through three broad concepts - fluency, reasoning and problem solving. Throughout Maths lessons, children will have opportunities to develop a range of key skills. This continued development of skills allows for more competence.

## Deep Understanding of Concepts

The White Rose Maths schemes of learning are designed to give sufficient time for teachers to explore and understand concepts in depth rather than covering them superficially and revisiting several times. This practice and consolidation helps children to grasp the links between topics and to understand them more deeply. Prior content is carefully interwoven with new content to help children grasp links between topics and to understand them more deeply.

## Strong Foundations

In our EYFS class you will see...

- Teaching is embedded within a language-rich environment & appropriate Maths vocabulary is introduced.
- Children explore Maths resources that they will use in KS1 e.g. Numicon, scales etc.
- As children progress through reception, there are more opportunities for them to work in adult-led groups, ensuring they are 'Year 1 ready'.
- Children have access to opportunities to experience maths/numbers in everyday life.

## Mastery Approach

**Coherence** - Lessons broken down into small connected steps.

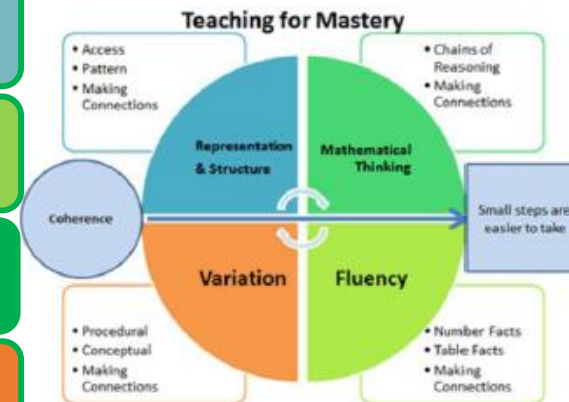
**Representation and Structure** - Used to expose the mathematical structure being taught.

**Mathematical Thinking** - Thinking deeply about maths, mathematical thinking reasoning and discussing ideas.

**Fluency** - Supporting fluency in number facts and mathematical procedures.

**Variation** - Learning practices thinking through standard & non-standard examples.

Teaching draws on the Five Big Ideas, drawn from research evidence, underpinning teaching for mastery.



## Mathematics at Keevil

### Fluency

Pupils work on fluency regularly in class. This enables them to build on their arithmetic skills. This develops efficient recall of facts, which is vital to achieving success in maths as they move through the school. In order to build fluency with our children, they also have access to TT Rockstars and complete weekly '99 club' number fact and multiplication tests.

### Retrieval Practice

The school is developing its application of retrieval practice across the school. Children are regularly completing retrieval activities in order to ensure learnt topics are being retained in the long-term memory, enabling children to make links within the mathematics curriculum and build on retrieval strength through assessments.

## Assessment

### Keevil Steps System

At Keevil, we have developed our own assessment system based on the National Curriculum and the White Rose Scheme. Teachers employ a variety of summative and formative assessments via live marking, discussions, and specific assessment activities. Each child is judged as working at exploring, achieving or exceeding, at the end of every term. Progress is tracked and teachers act on misconceptions which influences their future planning.

### Summative Assessment

End of unit assessments are part of regular practice from Y1 and up, this ensures progression and identifies gaps in the children's learning and next steps. NFER tests & past SATs papers (for Y2 & Y6) are used termly to monitor attainment against a national benchmark. Progress and attainment is then discussed and monitored across the year.

## Vocabulary

From Reception, children are taught age-appropriate vocabulary linked to each part of the Maths curriculum (this is available through our vocabulary progression document). These words and phrases become increasingly more complex and in depth as they progress through the school. These words are displayed on working walls throughout the year and regularly referred to by teachers.

### Quality First Teaching

All teachers will have high expectations of all children. High quality, inclusive teaching is provided for every child. Learning is personalised to the individual needs of children and aims to narrow the attainment gap. For some work will be differentiated and scaffolded by resource/adult support; for others this includes an additional challenge in order to stretch the children and develop a deeper understanding.

### Manipulatives and Visuals

Practical resources are used regularly in all classes, accessed by all children. Resources are carefully selected by teachers to best demonstrate mathematical concepts. Models and images enable children to 'see' and understand the maths they are being taught rather than a reliance on it to 'do' the maths. This will enable them to reason and problem solve more effectively. Key resources are identified for each year group to ensure a consistent and progressive approach through which children build on knowledge year-on-year.

✓ **Impact:** how will we know we have achieved our intent?

Through consistent teaching and high expectations, children at Keevil will become fluent in mathematical understanding and reasoning.

Children can confidently recall number facts appropriate for their age, such as number bonds and times tables, with most Year 4 children passing the times table check.

Children use mathematics in other lessons (particularly Science and D&T), demonstrating transferable knowledge and skills.

Children achieve the age related expectations. Attainment is tracked using the Keevil Steps and through NFER and standardised tests systems.

Children have positive attitudes to Maths and persevere in their learning. They see any mistakes as learning opportunities.