Highly-engaging | Building schemas | Retrieval practice | Expert modelling and exposition | Adaptive Teaching

# Maths LTP

MOSSBOURNE FEDERATION

## Intent

At MRA, we believe the habits of thinking mathematically are life-enriching. Our Maths curriculum has been designed on principles to provide learners with a deep understanding of the subject and to be able to articulate underlying mathematical structures. Our curriculum ensures that every child has a rich and meaningful mathematics education. It is designed to enable pupils to master mathematical topics to ensure they deepen their mathematical knowledge and enables children to apply mathematical methods and concepts to new contexts and situations. Through our curriculum, pupils develop fluency in arithmetic which means they can rapidly recall number facts to solve more complex problems. They recall prior mathematical knowledge daily and build on the skills and methods learnt across previous years. Our curriculum is language rich, to ensure pupils can articulate their mathematical thinking and through this, deepen their learning further. Through our curriculum, pupils learn the importance of maths, not just within maths lessons but to their wider life.

## Implementation

The Mathematics Mastery programme is used to deliver our maths teaching. The Maths Mastery programme is carefully sequenced to enhance pupils' understanding of maths. It is underpinned by the Dimensions of Depth, which address conceptual understanding, language & communication and mathematical thinking. These support mathematical problem solving and enable pupils to make connections between topic areas, draw on representations to support their thinking and be prepared to articulate, justify and explain their thinking. 'Maths Meetings' take place daily and are an opportunity for pupils to consolidate and recall their prior knowledge in an engaging way. Providing integrated, consistent professional development, is at the heart of Maths Mastery programme which supports our teachers to improve student outcomes. Fluent in Five and Timestable Rockstars are used alongside Maths Mastery to enhance our maths curriculum, ensuring progression in fluency, reasoning and problem solving. In EYFS, opportunities are provided for pupils to develop their mathematical thinking and consolidate prior learning within the continuous provision inside and also outside. Mathematical vocabulary is used consistently across the school to ensure children can confidently articulate their mathematical thinking and are able to build and develop their mathematical vocabulary.

## Impact

Through our maths curriculum, pupils can make connections between topic areas, draw on representations to support their thinking and are prepared to articulate, justify and explain their thinking. 'Maths Meetings' result in an excellent start to the day, where pupils are focused, engaged and thoroughly enjoy recalling their maths knowledge. Pupil voice has highlighted that children thoroughly enjoy the Maths Meeting. Through our curriculum, pupils can rapidly recall number facts and are confident with the timetables appropriate to their age group. Pupils are confident using concrete manipulatives to support their mathematical thinking and can use pictorial representations to support their learning. Pupils are then able to use abstract representations and methods to solve problems and are taught a range of methods to solve equations so that they can select the most appropriate method to solve mathematical problems.

## Progression

Our maths curriculum is cumulative, building on learning and allowing pupils to make deep connections across topics. Concepts are sequenced so that established ideas can be linked to new learning, supporting pupils in developing mastery by understanding the coherent and connected nature of the subject. Maths lessons are carefully sequenced to allow for progression across the lesson. The 'New Learning' feeds into the 'Talk Task' where children can practise a new skill. The 'Develop Learning' then moves the children on further so they can apply their new learning to the 'Independent Task'. Pupils first learn a new mathematical concept through concrete materials, when this is understood they move on to a pictorial representation, and eventually extend their understanding to include abstract forms. Children progress from using basic concrete resources such as Numicon to more complex concrete resources such as Cuisenaire rods. Representing ideas in different forms helps to deepen their understanding and enable them to apply ideas and skills in different contexts.

## Enrichment

Pupils have access to high quality, concrete resources which enhances their mathematical learning. Through our links with West Ham United, pupils learn how maths is important in society and, in particular, how maths is important within sport. Pupils have opportunities to take part in Timestable Rockstar competitions across the year where they compete internally across MRA and externally, against other primary schools.

# Maths LTP
# Unit Map

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| Year Group | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| EYFS | Unit 1: Early Mathematical Experiences<br>Unit 2: Pattern and Early Number | Unit 3: Numbers within 6<br>Unit 4: Addition and Subtractions within 6<br>Unit 5: Measures<br>Unit 6: Shape and Sorting | Unit 7: Numbers within 10<br>Unit 8: Calendar and time<br>Unit 9: Addition and subtraction within 10<br>Unit 10: Grouping and sharing | Unit 10: Grouping and sharing<br>Unit 11: Number patterns within 15<br>Unit 12: Doubling and halving<br>Unit 13: Shape and pattern | Unit 14: Securing addition and subtraction facts<br>Unit 15: Number patterns within 20<br>Unit 16: Number patterns beyond 20 | Unit 17: Money<br>Unit 18: Measures<br>Unit 19: Exploration of patterns within number |
| Year 1 | Unit 1: Numbers to 10<br>Unit 2: Addition and Subtraction within 10<br>Unit 3: Shape and Patterns | Unit 4: Numbers to 20<br>Unit 5: Addition and Subtraction within 20 | Unit 6: Time<br>Unit 7: Exploring calculation strategies within 20<br>Unit 8: Numbers to 50 | Unit 9: Addition and subtraction within 20 (comparison)<br>Unit 10: Fractions<br>Unit 11: Measures: Length and Mass | Unit 12: Numbers 50 to 100 and beyond<br>Unit 13: Addition and subtraction (applying strategies)<br>Unit 14: Money | Unit 14: Money<br>Unit 15: Multiplication and division<br>Unit 16: Measures: Capacity and volume |
| Year 2 | Unit 1: Numbers within 100<br>Unit 2: Addition and Subtraction of 2-digit numbers<br>Unit 3: Addition and Subtraction word problems | Unit 4: Measures – Length<br>Unit 5: Graphs<br>Unit 6: Multiplication and division: 2,5,10 | Unit 7: Time<br>Unit 8: Fractions<br>Unit 9: Addition and subtraction of 2-digit numbers (regrouping and adjusting) | Unit 10: Money<br>Unit 11: Faces, shapes and patterns; lines and turns | Unit 12: Numbers within 1000<br>Unit 13: Measures: Capacity and volume<br>Unit 14: Measures: Mass | Unit 15: Exploring calculation strategies<br>Unit 16: Multiplication and division: 3 and 4 |
| Year 3 | Unit 1: Number sense and exploring calculation strategies<br>Unit 2: Place Value<br>Unit 3: Graphs | Unit 4: Addition and subtraction<br>Unit 5: Length and perimeter | Unit 6: Multiplication and division<br>Unit 7: Deriving multiplication and division facts | Unit 8: Time<br>Unit 9: Fractions | Unit 10: Angles and Shape<br>Unit 11: Measures | Unit 12: Securing multiplication<br>Unit 13: Exploring calculation strategies and place value |
| Year 4 | Unit 1: Reasoning with 4-digit numbers<br>Unit 2: Addition and subtraction | Unit 3: Multiplication and division<br>Unit 4: Interpreting and presenting data | Unit 5: Securing multiplication facts<br>Unit 6: Fractions<br>Unit 7: Time | Unit 8: Decimals<br>Unit 9: Area and perimeter | Unit 10: Solving measure and money problems<br>Unit 11: 2-D Shape and Symmetry | Unit 11: 2-D Shape and Symmetry<br>Unit 12: Position and Direction<br>Unit 13: Reasoning with patterns and sequences<br>Unit 14: 3D Shape |
| Year 5 | Unit 1: Reasoning with large whole numbers<br>Unit 2: Problem solving with integer addition and subtraction<br>Unit 3: Line graphs and timetables | Unit 4: Multiplication and division<br>Unit 5: Perimeter and area | Unit 6: Fractions and decimals<br>Unit 7: Angles | Unit 8: Fractions and percentages<br>Unit 9: Transformations | Unit 10: Coverting units of measures<br>Unit 11: Calculating with whole numbers and decimals | Unit 12: 2-D and 3-D shape<br>Unit 13: Volume<br>Unit 14: Problem solving |
| Year 6 | Unit 1: Integers & Decimals<br>Unit 2: Multiplication and division | Unit 3: Calculation problems<br>Unit 4: Fractions<br>Unit 5: Missing angles and length | Unit 6: Coordinates and shape<br>Unit 7: Fractions<br>Unit 8: Decimals and measures | Unit 9: Percentages and statistics<br>Unit 10: Proportion problems | Consolidation | Consolidation |