

September 2021



Montalbo Primary School

Mathematics Policy





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Aims and objectives

Mathematics is a creative and highly interconnected 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 in most forms of employment. A high quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject. This revised policy takes into account the new National Curriculum (2014)

We aim to develop lively, enquiring minds encouraging pupils to become self motivated, confident and capable in order to solve problems that will become an integral part of their future.



National Curriculum

The National Curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through **varied and frequent practice** with increasingly complex problems over time, so that pupils have **conceptual understanding** and are able to **recall and apply** their knowledge **rapidly and accurately** to problems
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.



Maths in EYFS

In EYFS maths follows White Rose objectives which are applied through 'Development Matters'.

Reception

- Whole class input which develops across the week
- Children access a carousel of activities
- Teacher led
- Teaching Assistant Lead
- Independent Tasks
- Children access differentiated maths provision in the classroom which allows them to apply the skills they have learnt.

Nursery

- Whole class inputs
- Mathematical enhancements in the provision
- Adult focussed activities



Maths in KS1 and KS2

We have a 'teaching for mastery' approach to mathematics. In essence this means;

- The majority of the class will be taught together, learning the same maths at the same time.
- A carefully planned learning journey of small steps will be taken in order to ensure that all children master the concepts before moving on and that no child is left behind.
- If a pupil requires extra support, this is identified quickly and where possible same day intervention takes place.
- Lesson design ensures that the 3 aims of the National Curriculum are covered; fluency, reasoning and problem solving
- Children learn concepts following a concrete – pictorial – abstract sequence.
- Questions are carefully devised in order to make explicit use of patterns and connections
- Stem sentences are used in order to ensure clarity of the small step and a deep understanding that is not lost over time.



Programme of Study

- Maths will be taught in blocks following the White Rose structure.
- All year groups will start with place value then move on to addition and subtraction, then multiplication and division.
- Once these fundamental concepts are embedded, alternative areas of mathematics are explored.



Year 1 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)				Geometry: Shape	Number: Place Value (within 20)		Consolidation
Spring	Number: Addition and Subtraction (within 20)				Number: Place Value (within 50) (Multiples of 2, 5 and 10 to be included)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10 to be included)			Number: Fractions		Geometry: position and direction	Number: Place Value (within 100)		Measurement : money	Time		Consolidation



Year 2 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place value		Number: Addition and Subtraction					Measurement: Money		Number: <u>Multiplication</u> and Division		
Spring	Number: Multiplication and <u>Division</u>		Statistics		Geometry: Properties of Shape			Number: Fractions			Measurement: length and height	Consolidation
Summer	Position and direction		Problem solving and efficient methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations			



Year 3 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number – Place Value			Number – Addition and Subtraction				Number – Multiplication and Division				Consolidation
Spring												Number - Multiplication and Division
Summer	Number – fractions			Measurement: Time		Geometry – Properties of Shapes		Measurement: Mass and Capacity			Consolidation	



Year 4 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number – Place Value				Number- Addition and Subtraction			Measurement - Length and Perimeter	Number- Multiplication and Division			Consolidation
Spring	Number- Multiplication and Division			Measurement - Area	Fractions			Decimals			Consolidation	
Summer	Decimals	Measurement- Money		Time	Statistics		Geometry- Properties of Shape		Geometry- Position and Direction		Consolidation	



Year 5 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number – Place Value			Number – Addition and Subtraction		Statistics		Number – Multiplication and Division		Perimeter and Area		Consolidation
Spring	Number – Multiplication and Division			Number – Fractions						Number – Decimals & Percentages		Consolidation
Summer	Number – Decimals				Geometry- Properties of Shapes			Geometry- Position and Direction	Measurement- Converting Units		Measures Volume	Consolidation



Year 6 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number- Place Value		Number- Addition, Subtraction, Multiplication and Division				Fractions				Geometry- Position and Direction	Consolidation
Spring	Number- Decimals		Number- Percentages		Number- Algebra		Measurement Converting units	Measurement Perimeter, Area and Volume		Number- Ratio		
Summer	Geometry- Properties of Shapes		Problem solving			Statistics		Investigations				



Marking in Maths

It is important to distinguish between a pupil's simple slip and an error that reflects a lack of understanding:

- For slips, it will be indicated where each slip occurs and will be corrected in purple pen.
- If errors demonstrate lack of understanding, alternative courses of action will be taken. For instance, with a small number of pupils, there may be a same-day intervention while for a large number of pupils, the errors will be addressed in the next lesson.

Self and peer marking is encouraged in purple pen. Marking done in green pen has been carried out by a teacher.



Assessment in Maths

Assessment is key to see where a child is and what support they need to ensure their learning is secure. We follow White Rose's assessment.

- At the end of every block, an assessment is carried out to measure progress across the topic.
- At the end of each term, an assessment is carried out to measure progress across the term in a range of topics.