

THE INTENT, IMPLEMENTATION AND IMPACT OF OUR MATHEMATICS CURRICULUM

Our vision is that all our children will be confident, independent and resilient mathematicians who relish the challenge of maths and appreciate the wider application of their mathematical skills.

INTENT

At Wildmoor Heath, we aim to deliver a curriculum that meets the needs of our children through our unique curriculum drivers, which are Opportunities, Communication, Community, Creativity, Environment and Well-Being.

We aim for all our learners to be confident, happy and resilient mathematicians who relish the challenge of maths. We want to create independent and reflective learners whose skills not only support them in maths but also helps across the whole curriculum and in later life.

In addition to this, our aims align with that of the national curriculum, which are to develop learners who: are fluent in the fundamentals of maths; are able to reason mathematically and are able to apply their maths to a range of problem-solving scenarios.

IMPLEMENTATION

At Wildmoor Heath, children participate in daily maths lessons, covering a broad range of mathematical concepts including, number, calculation, geometry, statistics, and measures.

To support the teaching of mathematics, the school follows a widely used scheme by White Rose Maths Hub – a scheme that developed by leading maths researchers and practitioners from across the world. Using this scheme, teachers break down key concepts in to small manageable steps. The Mathematic yearly overviews are below.

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			Measurement: Money	Statistics		Measurement: length and perimeter			Number - Fractions		Consolidation
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		Consolidation
Summer	Geometry- Properties of Shapes		Problem solving			Statistics		Investigations				Consolidation

To support children when learning new concepts and skills we use a CPA (concrete, pictorial, abstract) approach.

- Concrete—learners should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.
- Pictorial—alongside the concrete, learners should use pictorial representations; we use these representations to help visualise, reason and solve problems.
- Abstract—both concrete and pictorial representations should support learners' understanding of written methods.

We work hard to ensure that the learning moves from the working memory into the long-term memory. Regular rehearsal of skills plays a central role to this so, at the beginning of each lesson, teachers plan a recall session including four questions based on previous learning.

Using effective assessment, teachers plan sessions that are appropriately differentiated and inclusive so that all children are supported and challenged at their own level. Children who require support have smaller group support in lessons and where appropriate participate in follow-up interventions. Children are challenged with a range of reasoning and problem-solving scenarios designed to deepen their understanding of concepts.

Maths Number Facts Mastery Sessions

As well as daily mathematics lessons, the children also complete a daily 10/15 minute Number Fact Mastery session. In these sessions, children rehearse key facts, such as number bonds and times tables, so that they can be readily applied in all areas of maths. A range of strategies from singing songs to rote rehearsal are used to secure automaticity of these facts.

Times Table Rockstars (TTR)

As part of home learning, children are to rehearse these facts further 4/5 times a week. All children have access to Times Table Rockstars, an online program which gives children the opportunity to rehearse multiplication and division facts at home. Children who do not have access to the internet or an electronic device, receive printed worksheets. Each week, the children complete a Times Table test using TTR where the number of correct answers and the speed in which they are answered are recorded.

The global pandemic during the academic year 202-21 saw Mathematics lessons provided remotely for all pupils, with some learners being in school and receiving the same lessons under teacher guidance. Despite some educational visits and outings being restricted the curriculum was enriched through the use of White Rose lesson and video tutorials and Deepening Understanding resources.

IMPACT

Learners at Wildmoor Heath make good progress in maths and are well prepared with a range of strategies and skills for their transition to secondary school. Termly assessments highlight learning that the children have retained over time and informs staff on what to teach next. Our children are able recall age appropriate number facts quickly and this supports them in other areas of learning. We judge the impact of our mathematics curriculum based on our results at the end Year 2 (KS1) and Year 6 (KS2).

Pupil Mathematics Results - July 2019	Wildmoor Heath Results	National Results
Year 2 Mathematics SATs (age 7) <ul style="list-style-type: none">- Passed at Expected Level- Passed at Higher Standard	83% 30%	75% 22%
Year 6 Mathematics SATs (age 11) <ul style="list-style-type: none">- Passed at Expected Level- Passed at Higher Standard	83% 17%	79% 24%
Year 6 Progress in Mathematics	- 1.0 in line with national	0.00 national benchmark

We also judge our Impact based on children's attitudes; our learners have a positive attitude towards maths and enjoy the challenges the subject provides. They can also apply their skills to real life concepts and, importantly, explain their methodology to others.