

The Vines Maths Curriculum

Intent

At The Vine Schools, our intent is for all children to develop confidence and proficiency in mathematics, enabling them to think critically and apply their skills in a range of contexts throughout their lives. We strive to cultivate a love of mathematics, fostering an environment where children experience success and are motivated to persevere with challenging concepts.

We aim for all children to:

- Develop a deep and secure understanding of mathematical concepts.
- Approach problem-solving with resilience, selecting appropriate and effective methods independently.
- Engage confidently in reasoning activities, articulating their thought processes with clarity and precision.
- See mathematics as a creative and enjoyable subject, applicable to real-life scenarios.

We believe that a secure mathematical foundation is vital for every pupil, not only for success in education but also for navigating the challenges of an increasingly data-driven and analytical world.

Implementation

Our maths curriculum is designed to ensure high-quality teaching and learning across all year groups. It is underpinned by the **White Rose Maths** scheme, which provides a consistent and well-structured approach while allowing for adaptation to meet the needs of individual classes and pupils.

Teaching is sequenced across four distinct phases to ensure progression and continuity:

1. **EYFS:** Children explore mathematical concepts through hands-on activities and play, developing number sense, spatial awareness, and the ability to problem-solve in practical contexts.

2. **Year 1/2:** A focus on building fluency in key number and calculation skills, supported by concrete resources and visual representations. Pupils begin reasoning and problem-solving in manageable steps.

3. **Year 3/4:** Fluency is extended into more complex calculations and multi-step problems. Pupils develop flexibility and begin applying their skills to a range of contexts, solidifying their understanding through reasoning.

4. **Year 5/6:** Pupils focus on mastering mathematical concepts, with opportunities to apply their learning in real-world situations and through sophisticated reasoning and problem-solving tasks.

Our Approach to Teaching:

Mathematics lessons follow a clear structure to ensure clarity, depth, and pupil engagement:

Teachers model new concepts step by step, using high-quality concrete, pictorial, and abstract representations. Modelling is precise and designed to reduce cognitive load, ensuring pupils fully understand the processes involved.

Pupils practise alongside their teacher in guided activities, receiving targeted support and feedback to consolidate their understanding.

Pupils work independently, applying their knowledge to demonstrate fluency, reasoning, and problem-solving skills.

Mathematical Vocabulary

We recognise the critical role of vocabulary in helping pupils articulate their mathematical reasoning and deepen their understanding of concepts. Key vocabulary is explicitly taught, displayed, and reinforced throughout lessons. Working walls feature key vocabulary for the current unit, and teachers model its use in context. Pupils are encouraged to use mathematical terminology confidently and accurately in discussions, explanations, and written work.

Key Features of Our Implementation

- **Working Walls:** Dynamic and interactive displays support pupils' learning, evolving alongside the unit of work. They include vocabulary, modelled examples, and representations of key concepts, providing a reference point for pupils throughout the lesson sequence.

- **Scaffolded Learning and Challenge:** White Rose Maths is adapted to meet the needs of all learners. For those requiring additional support, scaffolding and concrete resources are provided. For those ready for greater challenge, extension activities deepen their understanding and encourage creative problem-solving.

•**Concrete, Pictorial, Abstract (CPA) Approach:** This approach underpins all teaching, enabling pupils to develop a secure conceptual understanding by moving flexibly between physical resources, visual representations, and abstract methods.

•**Weekly Lesson Structure:** Lessons incorporate varied fluency practice to ensure methods are accurate and consistent. Pupils are challenged to apply their skills through reasoning and problem-solving activities that deepen understanding.

•**Assessment for Learning:** Ongoing formative assessment ensures teaching is responsive to pupil needs. Teachers adapt lessons and provide timely feedback to ensure all pupils progress securely through the curriculum.

Impact

By the time children leave The Vine Schools, they will have developed:

- Confidence and fluency in mathematics, enabling them to solve problems independently and with resilience.
- A deep understanding of mathematical concepts and the ability to apply their skills flexibly to unfamiliar situations.
- Strong reasoning skills, using precise mathematical vocabulary to explain their thinking and justify their solutions.
- A positive attitude towards mathematics, viewing it as an enjoyable and valuable subject.
- A strong foundation for further study, equipped to meet the demands of secondary education and the wider world.

Our curriculum ensures that children not only achieve academic success in mathematics but also gain the skills and attitudes needed to use mathematics confidently and effectively in their everyday lives.

EYFS	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
MATHS	<p>Numbers and counting to 10</p> <p>Positional language</p> <p>Length/weight</p> <p>Estimating</p>	<p>1 more/less to 10</p> <p>Order numbers to 10</p> <p>Simple patterns</p> <p>2D/3D shapes</p>	<p>Numbers and counting to 20</p> <p>Order numbers to 20</p> <p>Time</p> <p>Capacity</p>	<p>1 more/less to 20</p> <p>Simple addition and subtraction</p> <p>Ordinal numbers</p> <p>Money</p>	<p>Doubling and halving.</p> <p>Numbers and counting to 20 and beyond.</p> <p>2D/3D shapes</p>	<p>Addition and subtraction of single digit numbers</p> <p>Simple problem solving</p>

Year 1/2	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 Y1 - numbers to 20 Y2 - numbers to 100			Number : Addition and Subtraction Y1 – Numbers within 20 (including money) Y2 – Numbers within 100 (including money)						Number : Place Value Y1 – Place Value to 50 and multiplication Y2 - Multiplication		
Spring	Number : Y1 – Division and consolidation Y2- Division		Year 1 – Numbers to 100		Measurement: Length and height	Geometry Y1 – Shape and consolidation Y2 – Properties of Shape			Number Y1 – Fractions and consolidation Y2 - Fractions		Consolidation	
			Y2 - Statistics									
Summer	Geometry: Position and Direction	Measurement: Time		Problem solving and efficient methods	Measurement Y1 – Weight and Volume Y2 – Mass, Capacity and Temperature				Consolidation and Investigations			

Year 3/4	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			
Spring	Number : Multiplication and Division		Measurement: Length Area and Perimeter		Number : Fractions				Y3 Measurement – Mass and Capacity		Consolidation	
									Y4 Number : Decimals			
Summer	Number: Decimals including Money			Measurement: Time		Statistics		Geometry: Properties of Shape Including Y4 Position and Direction			Consolidation	

Year 5/6	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 : Four Operations					Number : Fractions				
Spring	Number : Decimals and Percentages			Y5 Number: Decimals	Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Y5 - Consolidation		Statistics		
				Year 6 Number : Algebra				Y6 Number: Ratio				
Summer	Geometry: Properties of Shape		Geometry: Position and Direction	Y6 SATS		Investigations and consolidation						