



Mathematics

Subject Intent for Maths

We aim to provide a maths curriculum that is engaging and creative; one that inspires confidence in every child so that they become resilient and independent learners. We aim to develop the skills necessary for children to use and apply their knowledge both in lessons and in the outside world. They will understand problems, become 'deep thinkers' and be able to reason about the world around them. They will know the purpose of their learning, relate it to real life and use it in their everyday lives. Most importantly they will develop a love of maths that is evident in the 'buzz' for learning that exists for each child.

Aims for Maths

- **Fluency:** Ensuring all pupils have a solid understanding of mathematical facts and concepts, developing rapid recall of number facts, and applying these to solve problems.
- **Reasoning:** Encouraging pupils to explain and justify their thinking, developing logical arguments, and building resilience in problem-solving.
- **Problem-Solving:** Engaging pupils in tasks that require them to apply their knowledge to unfamiliar situations, fostering creativity and adaptability in mathematical thinking.
- **Communication:** Enabling pupils to articulate their mathematical understanding clearly, using appropriate vocabulary, and using mathematical notation to support their explanations.

Overview of Coverage

Key Stage 1

In Key Stage 1, pupils will build a solid foundation in core mathematical concepts. The curriculum will cover:

- **Number and Place Value:** Understanding numbers up to 100, comparing and ordering numbers, and developing the concept of place value.
- **Addition and Subtraction:** Developing mental and written methods to add and subtract, using number bonds and fact families to support fluency.
- **Multiplication and Division:** Understanding multiplication and division as grouping and sharing, learning multiplication tables up to 10.
- **Measurement:** Exploring length, weight, volume, and time, understanding units of measurement, and solving simple word problems.
- **Geometry:** Identifying and describing 2D and 3D shapes, understanding symmetry, and exploring position and direction.
- **Fractions:** Recognizing and working with simple fractions such as $\frac{1}{2}$, $\frac{1}{4}$, and $\frac{1}{3}$.



Key Stage 2

In Key Stage 2, pupils will extend their understanding of mathematical concepts, with an emphasis on reasoning and problem-solving. The curriculum will cover:

- **Number and Place Value:** Deepening understanding of numbers up to 1,000,000, including rounding, comparing, and ordering larger numbers.
- **Addition, Subtraction, Multiplication, and Division:** Building fluency in multi-digit operations, using formal written methods for addition, subtraction, multiplication, and division.
- **Fractions, Decimals, and Percentages:** Extending understanding of fractions, exploring equivalent fractions, and linking fractions to decimals and percentages.
- **Measurement:** Solving problems involving perimeter, area, volume, and converting between different units of measurement.
- **Geometry:** Understanding angles, properties of shapes, symmetry, and coordinates, alongside classifying shapes according to their properties.
- **Statistics:** Interpreting data presented in tables, charts, and graphs, and calculating averages.
- **Algebra** (in upper KS2): Introduction to algebraic thinking, patterns, and sequences.

White Rose Maths Scheme

We use the **White Rose Maths Scheme**, which is carefully structured to support the development of fluency, reasoning, and problem-solving across all stages. This scheme:

- Provides a **coherent progression** of learning that builds on prior knowledge to deepen understanding.
- Ensures **consistency** and **sequencing**, enabling pupils to consolidate their learning and make connections between concepts.
- Focuses on **mathematical reasoning**, ensuring pupils are not only able to complete procedures but also to understand the why and how behind them.
- Offers a balance of **conceptual understanding** and practical application, with a variety of tasks and problem-solving opportunities.

Each lesson is carefully designed to cover the objectives for each year group while providing opportunities for mastery, through guided practice, independent tasks, and challenge activities. The White Rose approach ensures that learning builds cumulatively, enabling pupils to revisit and strengthen key concepts regularly.



Lesson Structure and Frequency

Pupils will receive **five hours of mathematics per week**, with a dedicated mathematics lesson each day. This will allow for:

- A balance of **fluency** practice, **problem-solving** activities, and **reasoning** tasks.
- Time for **assessment** and **recap** of prior learning to reinforce key concepts.
- **Opportunity for adaptation**, ensuring all pupils are supported and challenged appropriately.

Maths lessons will usually follow this structure.

EYFS

Recap of Previous Learning	Input for the maths session	Applying Learning: Through provision opportunities
	Small group work to consolidate and apply	

Key Stage 1 and 2

Warm Up

(Fun, engaging, pacey, challenging)

Consolidates Prior Learning	OR	'Maths Talk' / conjecture / true or false	OR	Questions related to forthcoming input
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Main Lesson Input

Slides	OR	Practical demonstration	OR	Using Whiteboard input	OR	Active Maths
Vocabulary is shared						



Independent/Guided Group Learning

Practical Activities	or	Whiteboard activities	or	Questions (Sheets or Board)
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Which (usually) include:

Practice (fluency)	Reasoning	Problem-solving
Appropriate challenge throughout each activity		

Extra challenge can be provided through:

Practice (fluency)	or	Reasoning	or	Problem-solving
Greater Depth questions				

Assessment Procedures

Maths assessments will be integrated into teaching and learning to ensure continuous progression and understanding. These assessments will include:

- **Termly White Rose Assessments:** At the end of each term, pupils will complete a **White Rose assessment** that covers the content taught during the term. These assessments will provide valuable insights into each pupil's understanding and identify areas for further support or extension.
- **End of Unit Assessments:** Both **Key Stage 1 and Key Stage 2 pupils** will complete end-of-unit assessments at the end of each teaching block. These assessments will help ensure that children have mastered the objectives for that unit and are ready to progress to the next.

Classroom Learning Environment

The **classroom environment** will play a key role in supporting pupils' mathematical development. Classrooms will be equipped with:

- **Maths Vocabulary Displays:** Key terms and definitions will be displayed prominently in every classroom to support children's language development and understanding. This will include words such as "sum", "difference", "multiply", "fraction", "perimeter", and "symmetry".
- **Modelled Examples:** Key mathematical concepts will be modelled regularly, with visual aids and worked examples displayed. This will ensure that pupils can see step-by-step how to approach different types of problems.
- **Maths books and resources:** Pupils will have access to high-quality materials, including concrete resources, pictorial representations, and abstract concepts, to support their learning.