

## Maths at John Blow Primary School

### Intent

At John Blow Primary School, our intent is to develop confident, resilient, and articulate mathematicians who achieve mastery in mathematics. Using the White Rose Maths scheme, we aim for every child to develop a deep, secure, and sustainable understanding of mathematical concepts through carefully designed small, sequential steps. We believe that all pupils can achieve mastery, which means a thorough understanding of mathematical ideas that enables them to apply their learning fluently and solve increasingly complex problems. Our curriculum nurtures a love of maths, encourages curiosity, and highlights its relevance in everyday life.

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### Implementation

Our mathematics curriculum is implemented through the White Rose Maths mastery approach, which ensures that concepts are taught in a coherent and connected way, allowing children to build their understanding progressively. Key features of our implementation include:

- **A mastery approach** that encourages all pupils to develop a deep understanding of mathematical concepts before moving on, reducing gaps in knowledge.
  - Use of the **Concrete–Pictorial–Abstract (CPA) approach** to solidify understanding and support mastery through multiple representations.
  - **Small step progression** that allows children to explore concepts thoroughly, ensuring strong foundations.
  - **Focused fluency practice** integrated into lessons to build automaticity in key skills.
  - **Reasoning and problem-solving tasks** are central, encouraging pupils to apply their learning and deepen their understanding.
  - Regular **formative assessments** to identify and address misconceptions promptly, supporting mastery for all learners.
  - **Interventions and scaffolding** are tailored to individual needs to ensure no child is left behind in their journey to mastery.
  - Professional development for staff in mastery pedagogy, including collaboration and moderation, to maintain high-quality teaching.
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### Impact

Through the mastery approach, children at John Blow Primary School develop a robust and transferable understanding of mathematics. They demonstrate:

- Secure and fluent recall of facts and procedures, enabling them to work efficiently.
- The ability to reason mathematically, justify their thinking, and make connections across concepts.
- Confidence in solving problems and tackling unfamiliar questions with resilience and creativity.
- Depth of understanding that allows them to move from concrete examples to abstract reasoning with ease.
- Positive attitudes towards maths, viewing challenges as opportunities to deepen their learning.

The impact is reflected in strong attainment and progress across all year groups, positive pupil attitudes, and evidence of mastery in classroom learning, assessments, and pupil discussions.

#### **Early Years Foundation Stage (EYFS) Mathematics Goals (2021 Framework)**

Mathematics in the EYFS is one of the specific areas of learning. The **Early Learning Goals (ELGs)** for maths are:

##### **Number:**

- Children **have a deep understanding of numbers to 10**, including the composition of each number.
- Children **subitise (recognise quantities without counting) up to 5**.
- Children **automatically recall (without reference to rhymes, counting, or other aids) number bonds up to 5** (including subtraction facts) and some number bonds to 10, including double facts.

##### **Numerical Patterns:**

- Children **verbally count beyond 20**, recognising the pattern of the counting system.
- Children **compare quantities** up to 10 in different contexts, recognising when one quantity is greater than, less than, or the same as the other quantity.
- Children **explore and represent patterns within numbers up to 10**, including evens and odds, double facts, and how quantities can be distributed equally.

EYFS focuses on developing strong early number sense, supported by practical, hands-on experiences and rich mathematical talk.

#### **Key Stage 1 (Years 1–2)**

##### **Purpose:**

To ensure pupils develop confidence and mental fluency with whole numbers, counting, and place value.

**By the end of KS1, pupils should:**

- Be fluent in basic addition and subtraction, including number bonds to 20.
- Understand place value (up to at least 100 in Year 2).
- Use standard units to measure length, mass, temperature, and time.
- Recognise, name, and describe 2D and 3D shapes.
- Read and write numbers up to 100 and use ordinal numbers.
- Understand simple fractions ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{3}{4}$  in Year 2).
- Begin to solve problems involving multiplication and division.

**Key Stage 2 (Years 3–6)**

**Purpose:**

To ensure pupils become increasingly fluent with whole numbers and the four operations, develop efficient written and mental methods, and solve a wider range of problems.

**By the end of KS2, pupils should:**

- Have a solid understanding of **place value**, including large numbers and decimals.
- Be **fluent in all four operations** (addition, subtraction, multiplication, division), with formal written methods.
- Know all **times tables up to  $12 \times 12$**  by the end of Year 4.
- Use and convert between **different units of measurement**.
- Work confidently with **fractions, decimals, and percentages**.
- Understand properties of shapes, including angles, symmetry, and perimeter/area.
- Use **coordinate grids**, interpret and construct **graphs and charts**.
- Solve **multi-step problems** and apply knowledge in real-life contexts.

	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>ELM</b>	Match, Sort and Compare Talk About Measure and Patterns It's Me 1,2,3 Circles and Triangles 1,2,3,4,5 Shapes with 4 Sides		Alive in 5 Mass and Capacity Growing 6,7,8 Length, Height and Time Building 9 and 10 Explore 3D Shapes		To 20 and Beyond How Many Now? Manipulate, Compose and Decompose Sharing and Grouping Visualise, Build and Map Make Connections Consolidation	
<b>PINE</b>	Place Value	Addition and Subtraction Shape Consolidation	Place Value Addition and Subtraction	Place Value Length and Height Mass and Volume	Multiplication and Division Fractions Position and Direction	Place Value Money Time Consolidation
<b>OAK</b>	Place Value Addition and Subtraction	Addition and Subtraction Shape	Money Multiplication and Division	Length and Height Mass, Capacity and Temperature	Fractions Time	Statistics Position and Direction Consolidation
<b>BEECH</b>	Place Value Addition and Subtraction	Addition and Subtraction Multiplication and Division	Multiplication and Division Length and Perimeter	Fractions Mass and Capacity	Fractions Money Time	Shape Statistics Consolidation
<b>ASH</b>	Place Value Addition and Subtraction	Area Multiplication and Division Consolidation	Multiplication and Division Length and Perimeter	Fractions Decimals	Decimals Money Time Consolidation	Shape Statistics Position and Direction
<b>MAPLE</b>	Place Value Addition and Subtraction	Multiplication and Division Fractions	Multiplication and Division Fractions	Decimals and Percentages Perimeter and Area Statistics	Shape Position and Direction Decimals	Negative Numbers Converting Units Volume
<b>WILLOW</b>	Place Value Addition, Subtraction,	Fractions Converting Units	Ratio Algebra Decimals	Area, perimeter and volume Statistics	Shape Position and Direction	Themed projects, consolidation and problem solving

	Multiplication and Division					
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