

Waterthorpe NI School Rationale and Overview Year 2, 2025 -2026



At Waterthorpe in Year 2, we continue to follow the White Rose Maths mastery approach, providing pupils with the depth of understanding, confidence, and fluency they need to become independent and enthusiastic mathematicians. Building on the foundations of Year 1, the Year 2 curriculum develops children's ability to reason mathematically, solve problems, and apply their learning in a variety of contexts.

Our aim is to ensure that all pupils develop a secure understanding of number and the relationships between mathematical ideas, preparing them for the transition into Key Stage 2.

Our Approach

- **Small Steps for Deep Understanding:**

Learning is carefully sequenced into small, progressive steps that build on prior knowledge. This approach ensures that concepts are mastered before moving on and that misconceptions are addressed early.

- **Concrete-Pictorial-Abstract (CPA) Progression:**

Pupils continue to use concrete resources (such as base ten, place value counters, and number lines) to explore and represent mathematical ideas. These experiences are then linked to pictorial representations and abstract symbols to strengthen conceptual understanding.

- **Fluency, Reasoning, and Problem Solving:**

Every unit of work incorporates opportunities to practise number fluency, reason about patterns and relationships, and apply skills to solve a range of problems. Children are encouraged to explain their thinking, use mathematical vocabulary precisely, and approach challenges with perseverance.

- **Mastery for All:**

All pupils are supported to move through the curriculum at a similar pace. Differentiation is achieved through depth and challenge rather than acceleration. Those who grasp concepts quickly are encouraged to deepen their understanding through complex reasoning and problem-solving tasks, while those who need additional support receive targeted scaffolding and practice.

- **Mathematical Talk and Reasoning:**

Discussion and explanation are integral to every lesson. Pupils learn to articulate their reasoning, justify their answers, and make links across different areas of mathematics, developing clarity and confidence in expressing mathematical ideas.

Essential knowledge.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value Numbers to 20 Count objects to 100 by making 10s Recognise tens and ones Use a place value chart Partition numbers to 100 Write numbers to 100 in words Flexibly partition numbers to 100 Write numbers to 100 in expanded form 10s on the number line to 100 10s and 1s on the number line to 100 Estimate numbers on a number line Compare objects Compare numbers Order objects and numbers Count in 2s, 5s and 10s Count in 3s	Number: Addition and Subtraction: Bonds to 10 Fact families - addition and subtraction bonds within 20 Related facts Bonds to 100 (10s) Add and subtract 1s Add by making 10 Add three 1-digit numbers Add to the next 10 Add across a 10 Subtract across 10 Subtract from a 10 Subtract a 1-digit number from a 2-digit number (across a 10) 10 more, 10 less Add and subtract 10s Add two 2-digit numbers (not across a 10) Add two 2-digit numbers (across a 10)	Measurement: Money: Count money - pence Count money - pounds (notes and coins) Count money - pounds and pence Choose notes and coins Make the same amount Compare amounts of money Calculate the money Make a pound Find change Two-step problems Number: Multiplication and Division (This will continue in Spring 2)should I split it up? Recognise equal groups Make equal groups	Measurement: Length and Height Measure in cm Measure in m Compare lengths and heights Order lengths and heights Four operations with lengths and heights Measurement: Mass, Capacity and Temperature Compare mass Measure in grams Measure in kilograms Four operations with mass Compare volume and capacity Measure in millilitres Measure in litres	Number: Fractions Introduction to parts and wholes Equal and unequal parts Recognise a half Find a half Recognise a quarter Find a quarter Recognise a third Find a third Unit fractions Non-unit fractions Recognise the equivalence of a half and 2 quarters Recognise three quarters Find three quarters Count in fractions up to a whole Measurement: Time O'clock and half past	Statistics Make tally charts Tables Block diagrams Draw pictograms (1-1) Interpret pictograms (1-1) Draw pictograms (2, 5 and 10) Interpret pictograms (2, 5 and 10) Geometry: Position and Direction Language of position Describe movement Describe turns Describe movement and turns Shape patterns with turns

	Subtract two 2-digit numbers (not across a 10) Subtract two 2-digit numbers (across a 10) Mixed addition and subtraction Compare number sentences Missing number problems Shape Recognise 2-D and 3-D shapes Count sides on 2-D shapes Count vertices on 2-D shapes Draw 2-D shapes Lines of symmetry on shapes Use lines of symmetry to complete shapes Sort 2-D shapes Count faces on 3-D shapes Count edges on 3-D shapes Count vertices on 3-D shapes Sort 3-D shapes	Add equal groups Introduce the multiplication symbol Multiplication sentences Use arrays Make equal groups - grouping Make equal groups - sharing The 2-times table Divide by 2 Doubling and halving Odd and even numbers The 10 times-table Divide by 10 The 5 times-table Divide by 5 The 5 and 10 times-tables	Four operations with volume and capacity Temperature	Quarter past and quarter to Tell the time past the hour Tell the time to the hour Tell the time to 5 minutes Minutes in an hour Hours in a day	
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