West Earlham Infant & Nursery School

Our Maths Curriculum (revised September 2026)

Intent

We believe that children are born mathematical and that mathematical understanding develops through rich experiences, purposeful play and high-quality talk. Oracy and the explicit teaching of mathematical language are central to our curriculum, enabling children to think, reason and communicate mathematically.

- From age 2 to the end of Year 2, our maths curriculum is designed to ensure that all children:
- Develop strong foundations in number, with particular emphasis on Mastering Number, number sense and the structure of mathematics.
- Experience mathematics as connected, coherent and cumulative, with concepts revisited and deepened over time.
- Learn to represent mathematical ideas using concrete resources, pictorial representations and abstract symbols (CPA), and to talk about these representations.
- Become confident problem solvers who can explain, justify and reason using accurate mathematical vocabulary.
- Understand that mathematics is meaningful, purposeful and embedded in everyday life

Implementation

A Mastery Curriculum
Our maths curriculum follows a mastery approach underpinned by:

- Small steps in learning
- Depth before pace
- High expectations for all learners
- Intelligent practice and variation

This progression document reflects our whole-school mastery approach, ensuring all children move through learning in coherent small steps, with depth secured before new content is introduced.
In KS1, the National Curriculum is delivered through **White Rose Maths** and **Mastering Number**, ensuring clear progression and consistency. In EYFS, learning is rooted in **Birth to 5 Matters**, with number and spatial reasoning embedded through play, routines and adult-led interactions. In Reception the EYFS statutory framework for maths is delivered through White Rose Maths and Mastering Number.

CPA in All Spaces
Children experience mathematics through:

- **Concrete** – real objects, manipulatives and the environment
- **Pictorial** – drawings, models and representations
- **Abstract** – numerals, symbols and equations

Children move flexibly between representations and are encouraged to **explain how models and images represent mathematical ideas**, strengthening conceptual understanding.

Oracy and Mathematical Language
Oracy underpins all mathematics teaching. Across all phases:

- Mathematical vocabulary is **explicitly taught, modelled and revisited**

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By the end of Key Stage 1, children will: • Have a secure understanding of number and place value. • Recall and apply key number facts fluently. • Calculate efficiently using mental, written and practical strategies. • Reason mathematically, articulating methods and choices clearly. • Apply mathematics confidently across a range of contexts.	• Children use **full sentences and stem sentences** to explain their thinking • Adults model precise language and support children to **clarify, reason and justify** • Talk is prioritised in whole-class teaching, small groups and continuous provision **Mastering Number** From Nursery onwards, there is a deliberate focus on: • Subitising • Composition and decomposition of number • Number bonds and relationships • Fluency and automaticity Children are supported to **talk about number structures**, explain relationships and make connections between representations. **Problem Solving and Reasoning** Problem solving is embedded daily through: • Mathematical talk and questioning • Varied examples and non-examples • Structured problem-solving opportunities • Reasoning prompts and discussion Children are taught to explain their thinking and justify strategies using precise mathematical vocabulary.

Our children will experience:	Nursery	Reception	Year 1	Year 2
Whole school maths challenges. YN, YR, Y1, Y2. Maths Enrichments Days - Maths Monkey's birthday. Maths week	Mathematical learning in Nursery is embedded throughout the year through purposeful play, routines and adult interaction. Children experience	In Reception, mathematical learning is carefully planned and experienced daily through continuous provision, routines and focused adult-led sessions.	In Year 1, mathematical learning is carefully sequenced and experienced daily through focused lessons, routines and continuous provision,	In Year 2, mathematical learning is carefully sequenced and experienced daily through focused lessons, routines and continuous provision, building

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Number challenges NN workbooks Maths Monkey - class mascot for each child to enrich their home maths learning. **<u>Cross-curricular opportunities:</u>** **Communication & Language** Mathematical talk, explaining methods, comparing quantities **Physical Development** Measure, position and spatial awareness through movement and play **Understanding the World** Measuring growth, sorting, pattern, data through real experiences **Expressive Arts & Design** Shape, pattern, rhythm and structure in art, music and construction **English** Word problems, reasoning sentences, sequencing and explanation **Science** Measuring, observing, recording and interpreting data	mathematics daily across continuous provision and the wider environment, both indoors and outdoors. Throughout the year, children are exposed to mathematics through: Counting and number experiences embedded in play, routines, stories, songs and rhymes, supporting one-to-one correspondence and early number sense. Growing, measuring and cooking activities, linked to seasonal changes and key events (e.g. Pancake Day), where children explore quantity, comparison, change and simple measures through real-life contexts. Singing and movement, using nursery rhymes and number songs to develop counting, rhythm and mathematical language. Exploration of shape, space and measure through construction, small world play, water, sand and outdoor learning.	Children deepen their understanding of number, pattern, shape and measure through meaningful, real-life contexts and purposeful play. Throughout the year, children experience mathematics through: Daily maths lessons, following a mastery approach, where children explore concepts through concrete and pictorial representations. Half-termly cooking and food preparation activities, linked to cultural celebrations and stories (e.g. Diwali, Chinese New Year, Pancake Day, traditional tales), where children explore number, quantity, measure, time and sequencing. Measuring in context across provision, including construction, small world, home corner and creative areas, using both non-standard and early standard units. The outdoor environment, which provides opportunities for counting, comparing, measuring,	supporting the transition from EYFS into a more formal mastery approach while maintaining purposeful exploration and talk. Throughout the year, children experience mathematics through: Daily maths lessons, following a mastery approach, where children explore concepts through concrete, pictorial and abstract representations and explain their thinking using precise mathematical language. Daily routines, such as counting how many children are present, using calendars, sequencing days and months, and practising time-related language, supporting fluency and application. Problem solving and reasoning opportunities, embedded throughout the week, where children explore varied examples, discuss strategies and justify answers orally.	on Reception and Year 1 foundations while deepening fluency, reasoning and problem-solving skills across a mastery curriculum. Throughout the year, children experience mathematics through: Daily maths lessons, following a mastery approach, where children explore concepts through concrete, pictorial and abstract representations and explain their thinking using precise mathematical language. Lessons increasingly emphasise reasoning, generalising patterns, and applying knowledge across contexts. Daily routines, such as counting, tracking attendance, using number lines, exploring calendars and time, practising times tables, and working with money, supporting fluency, mental calculation and number fact application. Problem solving and reasoning opportunities, embedded throughout the week, where

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Geography Position, direction, distance, scale and data handling **History** Sequencing, timelines, comparison and number **Art & Design** Shape, symmetry, pattern and proportion **Design & Technology** Measuring, costing, evaluating and problem solving **Computing** Sequencing, algorithms, logic and data **Music** Pattern, counting, rhythm and timing **PE** Time, measure, comparison and spatial awareness **Maths Cafes** in each year group. **Visits/Visitors:** Assembly with chefs, gardeners, construction workers, anybody who uses maths in their work. **Maths and SEND at WEINS:** At our school, maths for children supported by ESPs and those accessing SEND rooms is carefully adapted to be age-appropriate and matched to individual stages of development. Learning is delivered through short, purposeful sessions and is embedded across the environment and through thoughtfully planned	Problem solving in everyday contexts, such as sharing resources, filling and emptying containers, and combining groups of objects. Continuous provision is carefully planned to provide repeated and varied opportunities for children to explore, represent and talk about mathematical ideas. Adults model mathematical vocabulary and support children to use language such as more, less, same, big, small, full and empty as they play. Mathematics is visible and accessible across the learning environment, ensuring children build early mathematical understanding naturally and meaningfully throughout the school day. (See EYFS continuous provision plans for further detail.)	pattern-making and positional language through large-scale play and exploration. Counting songs, rhymes and games, supporting subitising, number recognition and fluent counting. Maths cafés and role-play experiences, where children apply number skills such as counting, comparing quantities and using simple number facts in meaningful contexts. Daily mathematical routines, including counting how many children are present, using calendars, sequencing days of the week and discussing the passage of time. Growing and changing over time, such as measuring height, observing seasonal changes and sequencing events, linking mathematical thinking to the world around them. Continuous provision is deliberately designed to ensure children explore, represent and talk about mathematical ideas	Maths cafés and real-life role play, including contexts such as shops and cafes, where children apply number facts, counting and calculation skills meaningfully. Mathematics is linked to wider curriculum learning, including science (e.g. measuring plant growth, observing change over time), geography and history, allowing children to apply mathematical skills in purposeful contexts. Measuring in context across provision areas such as construction, creative and small world play, using standard and non-standard units. Adult-led challenges within continuous provision, designed to revisit and deepen key concepts, particularly number, place value and calculation. Continuous provision is deliberately planned to provide repeated opportunities to practise, represent and reason about mathematical ideas. Adults model and reinforce	children explore varied examples, discuss strategies, justify answers orally, and reflect on alternative methods. Fridays provide a dedicated focus on problem solving and reasoning consolidation. Maths cafés, real-life scenarios and role play, including contexts such as shops, cafes and funfairs, where children apply number facts, calculation strategies and measurement skills meaningfully. Cooking and practical activities, providing opportunities to measure, sequence, calculate and explore fractions and proportions in context. Mathematics linked to wider curriculum learning, including: Science: observing, measuring and recording plant growth and changes over time, presenting data in tally charts, tables or bar graphs. Adult-led challenges within continuous provision, designed

enhancements to continuous provision. This approach allows children to revisit key concepts frequently, build understanding over time, and apply their learning in meaningful, practical contexts. Oracy is a central feature of this provision, with adults modelling mathematical language, encouraging children to explain their thinking, make choices, and use talk to reason and problem-solve. This ensures that, in line with a mastery approach, children develop secure foundations, deep conceptual understanding, and confidence in expressing their mathematical ideas, regardless of starting point.		using concrete resources, pictorial representations and early abstract recording. Adults model precise mathematical vocabulary and support children to explain their thinking using full sentences and mathematical language. Mathematics is visible and accessible across the indoor and outdoor environment, enabling children to build secure foundations in number and measure and to communicate their understanding confidently. (See EYFS continuous provision plans for further detail.). Reception children engage in Mastering Number several times per week, building secure foundations in subitising, composition and early additive reasoning.	accurate mathematical vocabulary and support children to articulate strategies using full sentences and stem sentences. Mathematics is visible and accessible across the indoor and outdoor environment, ensuring children develop fluency, confidence and the ability to talk mathematically throughout the school day. Each maths session ends with a short Mastering Number fluency input to strengthen number sense, automaticity and confidence. Fridays include structured problem-solving opportunities where children apply the week's small steps through reasoning, discussion and collaborative exploration.	to revisit, consolidate and deepen key concepts. Adults model and reinforce accurate mathematical vocabulary and support children to articulate strategies using full sentences and stem sentences. Mathematics is visible and accessible across the indoor and outdoor environment, ensuring children develop fluency, confidence and the ability to talk mathematically throughout the school day. Each maths session ends with a short Mastering Number fluency input to strengthen number sense, automaticity and confidence. Fridays provide a dedicated mastery session focused on reasoning, problem solving and addressing misconceptions.

Progression of skills			
Nursery Concrete exploration → early pictorial marks	**Reception** Concrete + pictorial → emerging abstract	**Year 1** CPA used daily; children move flexibly between	**Year 2** CPA used to deepen reasoning and efficiency;

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		representations	abstract methods become more prominent
(Some strands not applicable at this stage) **Place Value: Counting** • Join in with counting songs and rhymes. • Count objects using one-to-one correspondence in play. • Say some number names in sequence. **Place Value: Represent** • Represent quantities using real objects and informal marks. • Match objects to numerals in meaningful contexts. **Place Value: Compare** • Use language such as more, less, same, big and small to compare quantities. **Place Value: Problem Solving & Reasoning** • Solve simple problems in play, such as sharing resources or finding more. • Explain choices using simple language or gestures. **Addition & Subtraction: Recall, Represent, Use** • Combine and separate groups of objects through play. • Find totals by counting all objects. **Multiplication & Division: Recall, Represent, Use**	**Place Value: Counting** • Verbally count beyond 20, recognising the pattern of the counting system. • Subitise quantities to 5. • Count forwards and backwards within 10. **Place Value: Represent** • Represent numbers to 10 using objects, fingers, drawings and marks. • Match numerals to quantities. **Place Value: Compare** • Compare quantities using more than, fewer than and equal to. • Order small sets of numbers. **Place Value: Problem Solving & Reasoning** • Explain how quantities are the same or different. • Solve practical counting and comparison problems. **Addition & Subtraction: Recall, Represent, Use** • Use vocabulary involved with addition and subtraction. • Find totals by counting all or counting on. • Automatically recall number bonds to 5 and some to 10, including doubles. **Addition & Subtraction: Calculations**	**Place Value: Counting** • Count to and across 100. • Count in 2s, 5s and 10s. **Place Value: Represent** • Represent numbers to 100 using objects, pictorial models and number lines. • Read and write numbers to 100. **Place Value: Compare** • Compare and order numbers to 100 using <, > and =. **Place Value: Problem Solving & Reasoning** • Solve missing number problems using place value knowledge. • Explain reasoning using mathematical vocabulary. **Addition & Subtraction: Recall, Represent, Use** • Recall number bonds within 20. • Represent calculations using part-whole models, bar models and number lines. **Addition & Subtraction: Calculations** • Add and subtract within 20. • Add and subtract one-digit and two-digit numbers to 20 using CPA. **Addition & Subtraction: Solve Problems** • Solve one-step problems involving addition and subtraction.	**Place Value: Counting** • Count in steps of 2, 3 and 5. • Count in tens from any number. **Place Value: Represent** • Represent numbers using different models and number lines. • Read and write numbers to at least 100. **Place Value: Compare** • Compare and order numbers using place value understanding. **Place Value: Problem Solving & Reasoning** • Use place value to solve problems and explain reasoning. • Estimate and justify answers. **Addition & Subtraction: Recall, Represent, Use** • Fluently recall addition and subtraction facts to 20. • Derive related facts to 100. **Addition & Subtraction: Calculations** • Add and subtract two-digit numbers using efficient strategies. • Use inverse relationships to check calculations. **Addition & Subtraction: Solve Problems**

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• Share objects informally and notice equal groups. **Measurement: Using Measures** • Use comparative language for size, weight and capacity. • Explore measure through sand, water and construction play. **Geometry: 2D & 3D Shapes** • Explore shapes in the environment. • Name some simple shapes through play. **Geometry: Position & Direction** • Use positional language such as in, on, under and next to.	• Add and subtract single-digit numbers using concrete resources. **Addition & Subtraction: Solve Problems** • Solve one-step problems involving combining and separating sets. **Multiplication & Division: Recall, Represent, Use** • Solve problems involving doubling, halving and sharing. • Recognise equal and unequal groups. **Fractions: Recognise & Write** • Recognise and find half of objects and quantities. **Measurement: Using Measures** • Measure and compare length, height, weight and capacity using non-standard units. **Measurement: Money** • Recognise coins and use money in role play. **Measurement: Time** • Use time language such as before, after, today and tomorrow. • Sequence daily events. **Geometry: 2D & 3D Shapes** • Recognise and name common 2D and 3D shapes. • Describe simple properties.	**Multiplication & Division: Recall, Represent, Use** • Recognise multiplication as repeated addition. • Use arrays and equal groups. **Multiplication & Division: Calculations** • Solve multiplication and division calculations using concrete and pictorial representations. **Multiplication & Division: Problem Solving** • Solve problems involving grouping and sharing. **Fractions: Recognise & Write** • Recognise and find 1/2 and 1/4 of shapes and quantities. **Measurement: Using Measures** • Measure and record using standard units (cm, m, kg, l). **Measurement: Money** • Recognise coins and notes. • Find totals and make amounts. **Measurement: Time** • Tell the time to the hour and half past. • Sequence events in chronological order. **Geometry: 2D & 3D Shapes** • Recognise and name common 2D and 3D shapes.	• Solve two-step problems involving addition and subtraction. **Multiplication & Division: Recall, Represent, Use** • Recall multiplication and division facts for the 2, 5 and 10 times tables. • Represent using arrays and bar models. **Multiplication & Division: Calculations** • Calculate multiplication and division using known facts. **Multiplication & Division: Problem Solving** • Solve problems involving multiplication and division in context. **Fractions: Recognise & Write** • Recognise, find and write 1/3, 1/4, 2/4 and 3/4. **Fractions: Compare** • Recognise equivalence of 1/2 and 2/4. **Algebra** • Solve missing number problems. • Use inverse relationships to find unknowns. **Measurement: Using Measures** • Choose appropriate units.

	Geometry: Position & Direction • Describe position and movement using everyday language.	• Describe properties. **Geometry: Position & Direction** • Describe position, direction and movement, including turns.	• Compare and order measurements. **Measurement: Money** • Solve problems involving money, including finding change. **Measurement: Time** • Tell and write the time to five minutes. • Solve problems involving duration. **Geometry: 2D & 3D Shapes** • Identify, describe and compare properties of shapes. **Geometry: Position & Direction** • Use precise mathematical language to describe position, direction and movement.

Key Vocabulary, STEM sentences and questions to boost Oracy.

Oracy develops from naming and describing (Nursery), to explaining and justifying (Reception & Year 1), to reasoning, comparing and evaluating strategies (Year 2).
New vocabulary can be introduced or highlighted through Word Kapow sessions, where definitions, examples and sentence stems are explored and added to working walls.

Nursery	Reception	Year 1	Year 2
Number & Counting count, number, one, two, three, more, lots, none, all, same **Comparison & Measure** big, small, bigger, smaller, full, empty, heavy, light, long, short	**Number & Counting** count, numeral, how many, altogether, total, one more, one less, equal **Addition & Subtraction (Early)** add, take away, plus, minus, makes, double, half	**Number & Place Value** ones, tens, digit, number line, greater, less, equal **Addition & Subtraction** addition, subtraction, difference, equals, number sentence, fact	**Number & Place Value** place value, partition, estimate, compare, order **Addition & Subtraction** calculate, inverse, efficient, strategy, justify

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Position & Shape in, on, under, next to, up, down, round, square **Oracy focus:** naming, repeating, using language in context ("more blocks", "big tower") Mathematical Talk Adults model short, repeated phrases and label thinking: • *"Let's count together."* • *"You have more blocks."* • *"The cup is full."* • *"I can see two."* Focus: **naming, repetition, turn-taking**	**Comparison & Measure** longer, shorter, heavier, lighter, taller, time, before, after **Shape & Space** 2D, 3D, circle, triangle, square, rectangle, cube, sphere **Oracy focus**: explaining using simple sentences ("I know because...", "I counted...") Mathematical Talk Adults encourage explanation using simple sentences: • *"I know because I counted."* • *"Altogether there are..."* • *"This is the same as..."* • *"I made 5 by..."* Focus: **explaining and describing**	**Multiplication & Division (Introductory)** share, group, equal groups, array, repeated addition **Measure & Geometry** measure, length, height, mass, capacity, clockwise, anti-clockwise **Oracy focus:** explaining strategies and representations ("I partitioned...", "I used a number line...") Mathematical Talk Adults model reasoning and representation: • *"I partitioned the number into tens and ones."* • *"I used a number line to help me."* • *"The equals sign means the same as."* • *"My answer is reasonable because..."* Focus: **strategy and justification**	**Multiplication & Division** multiply, divide, groups of, times, factor, quotient **Fractions** fraction, half, third, quarter, whole, equal parts **Measure & Geometry** perimeter, temperature, minutes, hours, right angle, turn **Oracy focus:** reasoning and justification using stem sentences ("I know this is correct because...", "This method is efficient because...") Mathematical Talk Adults expect reasoning and comparison: • *"This method is efficient because..."* • *"I used the inverse to check."* • *"Both methods work, but..."* • *"I know this is correct because..."* Focus: **reasoning, efficiency, justification**