Maths Curriculum Overview

Maths at Bridge Junior School

We use White Rose as our dedicated Maths scheme within a mastery approach. Carefully sequenced learning helps every child build secure understanding, connect ideas and use mathematics confidently.

Secure the foundations

Children develop number sense, fluent recall and reliable calculation methods. New learning is connected to what they already know and revisited over time.

Think mathematically

Children use objects, diagrams, symbols and precise language to notice patterns, explain relationships and justify their reasoning.

Apply with confidence

Children choose efficient strategies, solve problems in familiar and unfamiliar contexts, learn from mistakes and grow as resilient mathematicians.

By the end of Year 6, children have secure mathematical foundations, can explain and apply their thinking, and are ready for the demands of secondary school.

What we want our children to know...

Number and calculation

Children understand place value, number facts and the four operations. They develop accurate mental and written methods and learn when each is useful.

Representation and connections

Children move between practical equipment, pictures, diagrams and symbols. They see how mathematical ideas connect rather than learning isolated procedures.

Reasoning and problem solving

Children use precise mathematical language, explain why a method works, compare approaches and apply their knowledge to increasingly complex problems.

How we teach Maths at Bridge...

White Rose blocks are broken into carefully ordered small steps. Teachers use assessment, questioning and practice to help children secure each important idea and connect it to prior learning.

1 Explore a small step

Introduce one manageable mathematical idea through a purposeful example or problem.

2 Represent and discuss

Children use manipulatives, images, diagrams and precise language to reveal the structure and make connections.

3 Model strategies

Teachers think aloud and compare methods. Children explain what is the same, what changes and why a strategy works.

4 Practise

Children practise key facts, representations and procedures so they become accurate, efficient and flexible.

5 Reason and apply

Children solve varied problems, justify decisions, spot errors and apply learning in different contexts.

Keep-up support

Teachers respond quickly to misconceptions with extra modelling, adapted representations and timely practice.

Depth and challenge

Children deepen understanding by making connections, explaining generalisations and solving richer problems, rather than simply racing ahead.

How we know that our children are doing well...

They recall and calculate

Children recall important number facts and carry out mental and written calculations accurately, efficiently and with increasing flexibility.

They represent and explain

Children move confidently between equipment, diagrams and symbols, and use precise language to explain patterns, structures and methods.

They choose methods

Children select an efficient strategy, estimate and check answers, and know when a mental or written method is appropriate.

They solve problems

Children apply connected knowledge to unfamiliar situations, persevere, test ideas and justify conclusions using mathematical evidence.

What teachers check

Teachers use questioning, observation, children's books, short checks, end-of-unit assessments and independent problem solving to identify strengths and next steps.

What success looks like

Children become fluent, thoughtful and resilient mathematicians who can explain their thinking, make connections and apply learning independently.

What children learn about in each year group...

Year 3

Main blocks: Place value; addition and subtraction; multiplication and division; fractions; length and perimeter; mass and capacity; money; time; shape; statistics.

Number: Read, compare and represent three-digit numbers; secure facts that bridge 10 and use place value to derive related facts.

Calculation: Develop mental strategies and formal column addition and subtraction; build multiplication and division from arrays, grouping and known facts.

Fractions: Understand unit and non-unit fractions, compare simple fractions and connect fractions to equal parts of quantities and measures.

Measure and geometry: Work with practical measures, perimeter, money and time; recognise properties of shapes and interpret simple data.

Fluency: Learn the 3, 4 and 8 times tables and explain methods using equipment, diagrams, bar models and mathematical language.

Year 4

Main blocks: Place value; addition and subtraction; multiplication and division; area; length and perimeter; fractions; decimals; money; time; shape; statistics; position and direction.

Number: Work confidently with four-digit numbers, rounding and negative contexts; connect tenths and hundredths to fractions and place value.

Calculation: Use efficient mental and written methods, secure all multiplication and division facts to 12 x 12 and solve problems with remainders.

Fractions and decimals: Find equivalent fractions, add and subtract fractions with the same denominator and make links between fractions and decimals.

Measure and geometry: Calculate perimeter and area, use money and time, classify shapes, describe position and interpret charts and tables.

Independence: Choose a representation or method, check whether an answer is reasonable and explain relationships using precise vocabulary.

What children learn about in each year group...

Year 5

Main blocks: Place value; all four operations; fractions; decimals and percentages; perimeter and area; statistics; shape; position and direction; negative numbers; converting units; volume.

Number: Read and reason with numbers to one million, including decimals and negative numbers; use factors, multiples, primes and powers.

Calculation: Apply formal methods to larger numbers, including long multiplication and short division, while choosing efficient mental strategies where appropriate.

Fractions, decimals and percentages: Compare, order and calculate with fractions; connect common fractions to decimal and percentage equivalents.

Measure, geometry and data: Calculate area and perimeter, convert units, estimate volume, reason about angles and coordinates, and interpret data.

Independence: Solve multi-step problems, identify relevant information, compare strategies and explain conclusions clearly.

Year 6

Main blocks: Place value; four operations; fractions; converting units; ratio; algebra; decimals; fractions, decimals and percentages; area, perimeter and volume; statistics; shape; position and direction.

Number and calculation: Reason with numbers to ten million and decimals; use formal methods accurately, including short and long division, and derive related facts.

Proportion and algebra: Solve ratio and scaling problems, use simple formulae, describe sequences and find unknown values in equations.

Fractions and measure: Calculate with fractions, decimals and percentages; convert units and solve problems involving area, perimeter and volume.

Geometry and statistics: Reason about angles, circles, coordinates and transformations; interpret and construct increasingly complex data displays.

Independence: Plan efficient solutions, combine knowledge across topics, evaluate answers and communicate rigorous mathematical reasoning.

Maths across school life...

Mathematical confidence grows through regular practice, purposeful talk, consistent representations and opportunities to use Maths across lessons and everyday life.

1

Daily fluency

Short practice of number facts, arithmetic and key procedures helps children recall knowledge accurately and leaves more attention for reasoning.

2

Times tables

Year 3 develops the 3, 4 and 8 tables; Year 4 secures facts to 12 x 12; Years 5 and 6 maintain rapid recall and apply related division facts.

3

Mathematical talk

Sentence stems, partner discussion and teacher questioning help children describe patterns, compare methods and justify why an answer is correct.

4

Models and equipment

Place-value counters, base ten, arrays, bar models, number lines and diagrams make structures visible and support movement towards abstract thinking.

5

Real-life mathematics

Money, time, measure, data and scale connect Maths to science, geography, design, computing, PE and decisions children meet beyond school.

6

Projects and transition

Consolidation, themed projects and rich problems help pupils combine ideas, celebrate different approaches and prepare confidently for the next stage.

Maths progression across Years 3–6...

Stage	Main focus	Children develop	Growing independence
Year 3	Three-digit number sense	Place value, comparison, number facts and links between representations	Select equipment or drawings to show an idea
	Foundations for calculation	Column addition and subtraction; arrays, grouping and the 3, 4 and 8 tables	Explain a method and check whether an answer is sensible
Year 4	Four-digit numbers and decimals	Rounding, tenths and hundredths, fractions, measure and data	Move flexibly between diagrams, language and symbols
	Secure multiplicative facts	All multiplication and division facts to 12 x 12 and related facts	Choose efficient mental or written strategies
	Formal calculation	Four-digit addition and subtraction, multiplication and division with remainders	Use inverse operations and estimation to check
Year 5	Larger and decimal numbers	Numbers to one million, negative numbers, factors, multiples and primes	Combine place value knowledge across contexts
	Fractions and percentages	Equivalent fractions, calculation with fractions and decimal-percentage links	Compare approaches and justify generalisations
	Multi-step calculation	Long multiplication, short division, measures, geometry and statistics	Identify relevant information and plan a solution
Year 6	Proportion and algebra	Ratio, scaling, formulae, sequences and unknown values	Connect knowledge from several curriculum areas
	Precision and efficiency	Long division, fraction calculation, unit conversion and complex measures	Evaluate accuracy and choose the most efficient method
	Independent problem solver	Rich, unfamiliar and themed problems requiring sustained reasoning	Communicate, prove and refine conclusions independently

How Maths builds over time...

Area	Focus	Lower Key Stage 2	Upper Key Stage 2
Number	**Place value**	Build secure understanding of three- and four-digit whole numbers	Extend place value to millions, decimals and negative numbers
	Number facts	Secure additive facts and multiplication tables to 12 x 12	Maintain rapid recall and derive related facts flexibly
Methods	**Addition and subtraction**	Move from representations to accurate formal column methods	Calculate with larger numbers and decimals; choose methods efficiently
	Multiplication	Use arrays and partitioning before formal written multiplication	Apply long multiplication and properties of number
	Division	Understand sharing, grouping and remainders through models	Use short and long division and interpret remainders in context
Fractions & measure	**Fractions and decimals**	Develop equal-part, equivalence and tenths-hundredths understanding	Calculate with fractions and connect fractions, decimals and percentages
	Measure	Use money, time, length, mass, capacity, perimeter and area	Convert units and solve problems involving area and volume
	Geometry and data	Describe shapes, angles, position and simple charts	Reason about properties, coordinates, transformations and complex data
Thinking	**Representation**	Explain ideas with equipment, bar models, diagrams and symbols	Select or create representations that expose structure
	Mathematical thinking	Notice patterns, compare examples and justify a method	Generalise, prove and connect ideas across topics
	Problem solving	Apply learning to one- and two-step contexts with support	Plan and evaluate multi-step solutions with increasing independence

Maths at home...

Practise little and often

Five or ten calm minutes of number facts, counting or a game is more useful than an occasional long worksheet. Stop while it still feels positive.

Build number facts

Practise bonds, doubles, halves and related facts. Ask for more than speed: How do you know? What other fact does this help you find?

Learn times tables

Chant, quiz, use cards or play online games in short bursts. Include matching division facts and focus on the table currently being learned.

Use everyday Maths

Read clocks, compare prices, estimate totals, measure ingredients, plan journeys, share food equally and discuss shapes or patterns you notice.

Play and notice

Try puzzles, cards, dice and strategy games. Praise a clear explanation, a useful diagram or a new approach as well as a correct answer.

Useful questions

What do you notice? How do you know? Can you show it another way? Is there a more efficient method? Does the answer make sense?