Ashdene Primary School – Maths Curriculum

Purpose of study	Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.
Aims	• become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately • reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language • can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.
Maths at Ashdene	At Ashdene in every maths lesson we aim to develop children's reasoning and problem solving. Furthermore, children develop their mathematical understanding through the use of concrete, pictorial and abstract resourcing which are made available to all children in every lesson. We aim to revisit and review mathematical concepts and make links between them in order to ensure children have a deeper understanding of the maths curriculum.

Year 3

	Week	Mental Maths	Maths Curriculum
HT1	1	MA6: Number Bonds	**Number: Place Value** • Read and write numbers up to 1000 in numerals and in words • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Identify, represent and estimate numbers using different representations • Compare and order numbers up to 1000. • Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. • To be very confident and consistent when dealing with all Year 3 number objectives. • Explain to my peers how I have reached an answer and justify my reasoning.
	2	MS6: Number Facts	
	3	Times table facts: x6	

	Week	Mental Maths	Maths Curriculum
	4	MA1: Partitioning 57 + 25 = 82, 70 + 12 = 82	
	5	Times table facts: x7	*Retrieval Practice looking at place value of numbers up to 1000 before starting addition and subtraction*
	6	MA3: Partitioning 123 - 28 = 95, -23 -5, 123 100 95	**Number: Addition and Subtraction** • Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds. • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
	7	Times table facts: x8	• Estimate the answer to a calculation and use inverse operations to check answers. • To return to a mathematical problem involving the four operations after a break and feel confident about coping with the problem. • Find missing digits within mathematical problems involving addition and subtraction.
	8	Retrieval practice across HT1	*Retrieval Practice* *(Place Value, Addition and Subtraction)*
HT2	Week	Mental Maths	Maths Curriculum
	1	Times table facts: x9	*Retrieval Practice looking at Place Value before starting multiplication and division*
	2	MA4a: Counting On 85 + 50 = 135, +50, 85 135	**Number: Multiplication and Division** • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • Develop efficient mental methods, for example, using commutativity and associativity (for example, 4 × 12 × 5 = 4 × 5 × 12 = 20 × 12 = 240) and multiplication and division facts (for example, using 3 × 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3) to derive related facts (for example, 30 × 2 = 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3).
	3	Times table facts: x11	• Write and calculate mathematical statements for multiplication and division, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. • Develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division.

	Week	Mental Maths	Maths Curriculum
	4	MS4a: Counting On 302 - 297 = 5	• To return to a mathematical problem involving the four operations after a break and feel confident about coping with the problem. • Find missing digits within mathematical problems involving multiplication and division.
	5	**Times table facts: x12**	**Measures** • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • Add and subtract amounts of money to give change, using both £ and p in practical contexts • Know the number of seconds in a minute and the number of days in each month, year and leap year
	6	MD3b: Halving Half of 58 25 + 4 = 29	• Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • Compare durations of events [for example to calculate the time taken by particular events or tasks]. • Confidently apply my knowledge of number to solve problem with money and measures. • Measure the perimeter of irregular shapes using the principles of measuring the perimeter of an oblong.
	7	**Retrieval practice across HT2**	==**Retrieval Practice**== *(Place Value/ Addition/ Subtraction/ Multiplication/ Division/ Measures)*
HT3	**Week**	**Mental Maths**	**Maths Curriculum**
	1	**Times table facts up to 12 x 12**	==*Retrieval Practice looking at Place Value including decimals/ Multiplication/ Division before starting Fractions*== **Number: Fractions** • Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.
	2	MM6a: Doubling Double 37 = 74 60 + 14 = 74	• Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • Recognise and show, using diagrams, equivalent fractions with small denominators.
	3	MA1: Manipulate Calculation 45 + 97 = 142 42 + 100 = 142	• Add and subtract fractions with the same denominator within one whole. • Compare and order unit fractions, and fractions with the same denominators. • Link fractional values to numbers, eg, ¾ of 120 animals were cows, how many animals were not cows?

4	MS1: Manipulate Calculation 463 - 97 = 366 +3 +3 466 - 100 = 366	
5	**Times table facts up to 12 x 12**	
6	**Retrieval practice across HT3**	*Retrieval Practice* *(Place Value/ Addition/ Subtraction/ Multiplication/ Division/ Fractions)*

Week	Mental Maths	Maths Curriculum
1	MA6: Number Bonds 43 + 9 + 7 + 21 = 80 50 30	*Retrieval Practice looking at Place Value/ Fractions before starting Shape* **Shape** • Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. • Recognise angles as a property of shape or a description of a turn. • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. • To apply my knowledge of parallel and perpendicular lines to solve mathematical problems.
2	**Times table facts up to 12 x 12**	
3	MA2: Round & Adjust 45 + 97 = 142 45 + 100 - 3 145 - 3 = 142	**Measure** • Measure the perimeter of simple 2-D shapes. • Tell and write the time using Roman numerals from I to XII on a 12 hour clock. • Confidently apply my knowledge of number to solve problem with money and measures. • Measure the perimeter of irregular shapes using the principles of measuring the perimeter of an oblong.
4	MA2: Round & Adjust 463 - 97 = 366 463 - 100 + 3 363 + 3 = 366	**Statistics** • Interpret and present data using bar charts, pictograms and tables. • Know which mathematical operation may be required when setting out statistical evidence.
5	MM10: Jump! 1000 100 10 1 x100 3400 x10 340 34	**Number: Addition and Subtraction** • Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds. • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. • To return to a mathematical problem involving the four operations after a break and feel confident about coping with the problem. • Find missing digits within mathematical problems involving addition and subtraction.

HT4

	6	Retrieval practice across HT6	***Retrieval Practice*** *(Place Value/ Addition/ Subtraction/ Multiplication/ Division/ Fractions/ Shape/ Statistics)*
HT5	**Week**	**Mental Maths**	**Maths Curriculum**
	1	Times table facts up to 12 x 12	***Retrieval Practice looking at Place Value/ Addition/ Subtraction before starting Multiplication and Division*** **Number: Multiplication and Division** • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • Develop efficient mental methods, for example, using commutativity and associativity (for example, 4 × 12 × 5 = 4 × 5 × 12 = 20 × 12 = 240) and multiplication and division facts (for example, using 3 × 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3) to derive related facts (for example, 30 × 2 = 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3). • Write and calculate mathematical statements for multiplication and division, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. • Develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division. • To return to a mathematical problem involving the four operations after a break and feel confident about coping with the problem. • Find missing digits within mathematical problems involving multiplication and division.
	2	MA5: Double & Adjust	
	3	MM10: Jump!	**Number: Fractions** • Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. • Recognise, find and write fractions of a discrete set of objects: unit fractions and nonunit fractions with small denominators. • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • Recognise and show, using diagrams, equivalent fractions with small denominators. • Add and subtract fractions with the same denominator within one whole. • Compare and order unit fractions, and fractions with the same denominators. • Link fractional values to numbers, eg, ¾ of 120 animals were cows, how many animals were not cows?
	4	MS5a: Counting Back	
	5	Retrieval practice across HT5	***Retrieval Practice*** *(Place Value/ Addition/ Subtraction/ Multiplication/ Division/ Fractions/ Shape/ Statistics)*

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passionate about learning

	Week	Mental Maths	Maths Curriculum
HT6	1	Times table facts up to 12 x 12	*Retrieval Practice looking at Place Value before starting Shape* **Shape** • Identify symmetrical and non-symmetrical polygons and polyhedra. • Describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle. • Connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. • To apply my knowledge of parallel and perpendicular lines to solve mathematical problems.
	2	MA4a: Counting On 85 + 50 = 135 +50 85 135	*Retrieval Practice/ Assessment* *(Place Value/ Addition/ Subtraction/ Multiplication/ Division/ Fractions/ Shape/ Statistics)*
	3	MM10: Jump! 1000 100 10 1 x100 3400 x10 340 34	*Revisit/ Review/ Reflect*
	4	MS4a: Counting On 302 - 297 = 5 +5 297 302	
	5	MA2: Round & Adjust 45 + 97 = 142 45 + 100 - 3 145 - 3 = 142	
	6	MA2: Round & Adjust 463 - 97 = 366 463 - 100 + 3 363 + 3 = 366	
	7	Retrieval practice across HT6	