

WREN PARK MATHS OVERVIEW – ADDITION AND SUBTRACTION

NUMBER BONDS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
automatically recall number bonds for numbers 0-5 and some to 10.	represent and use number bonds and related subtraction facts within 20	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100				
MENTAL CALCULATION						
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	add and subtract one-digit and two-digit numbers to 20, including zero	add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers	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 mentally with increasingly large numbers	perform mental calculations, including with mixed operations and large numbers
	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				use their knowledge of the order of operations to carry out calculations

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	(appears also in Written Methods)						involving the four operations
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WRITTEN METHODS						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs		add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS						
		recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.

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PROBLEM SOLVING						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = * - 9$	solve problems with addition and subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
		solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)				solve problems involving addition, subtraction, multiplication and division

### **By the end of KS1**

By the end of Year 2, we aim for children at Wren Park to be fluent in recalling addition and subtraction facts up to 20 fluently and use related facts to 100. Children should be able to add two, two-digit numbers as well as add three one-digit numbers. By this stage, we aim for children to recognise and use the inverse relationship between addition and subtraction and solve problems using concrete and pictorial representations as well as apply their knowledge of addition and subtraction to apply their mental and written methods.

### **By the end of LKS2**

By the end of Year 4, we aim for children at Wren Park to develop efficient written and mental methods to perform addition and subtraction calculations accurately with increasingly larger whole numbers. At this stage, children will use their developing knowledge of addition and subtraction to solve problems and develop their mathematical reasoning.

### **By the end of UKS2**

By the end of Year 6, we aim for children at Wren Park to be fluent in written methods for addition and subtraction and use this knowledge to be able to solve complex, multi-step problems in context, deciding which operations and methods to use. The children will be able to use their extensive knowledge of addition and subtraction to perform mental calculations and to estimate their answers.