



Walford Nursery & Primary School

Mathematics Progression

Number: Addition and Subtraction



NUMBER BONDS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Develop fluency in addition and subtraction facts within 10.	<p>Secure fluency in addition and subtraction facts within 10, through continued practice.</p> <p>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.</p>	Secure fluency in addition and subtraction facts that bridge 10, through continued practice.			

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Every Child, Every Opportunity, Every Day!*



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MENTAL CALCULATION					
<p>add and subtract one-digit and two-digit numbers to 20, including zero</p> <p>Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</p>	<p>add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers <p>Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?".</p>	<p>add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds <p>Calculate complements to 100.</p>		<p>add and subtract numbers mentally with increasingly large numbers</p>	<p>perform mental calculations, including with mixed operations and large numbers</p> <p>Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</p>
<p>Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</p>	<p>show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p>				<p>use their knowledge of the order of operations to carry out calculations involving the four operations</p>



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WRITTEN METHODS					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.		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 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property	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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		of addition, and understand the related property for subtraction.			
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PROBLEM SOLVING					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$	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 <i>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)</i>	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 problems involving addition, subtraction, multiplication and division

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