

**Number: Addition and Subtraction**

Maths Progression: Addition and Subtraction

Nursery	Reception	Year 1	Year 2	Year 3
<b>NUMBER BONDS</b>				
<b>Composition</b> <ul style="list-style-type: none"> <li>Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers</li> </ul>	<b>Composition</b> <ul style="list-style-type: none"> <li>Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects</li> </ul>	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	
<b>MENTAL CALCULATIONS</b>				
<ul style="list-style-type: none"> <li>Beginning to use understanding of number to solve practical problems in play and meaningful activities</li> </ul>	<ul style="list-style-type: none"> <li>Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three</li> </ul>	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: <ul style="list-style-type: none"> <li>* a two-digit number and ones</li> <li>* a two-digit number and tens</li> <li>* two two-digit numbers</li> <li>* adding three one-digit numbers</li> </ul>	add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li>* a three-digit number and ones</li> <li>* a three-digit number and tens</li> <li>* a three-digit number and hundreds</li> </ul>
<ul style="list-style-type: none"> <li>Beginning to recognise that each counting number is one more than the one before</li> </ul>	<ul style="list-style-type: none"> <li>In practical activities, adds one and subtracts one with numbers to 10</li> </ul>	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods)	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	

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<b>WRITTEN METHODS</b>				
	<ul style="list-style-type: none"> <li>Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and “+” or “-“</li> </ul>	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
<b>INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS</b>				
			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
<b>PROBLEM SOLVING</b>				
Composition Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same	Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and “+” or “-“	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	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

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			* 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</i> (copied from Measurement)	