



## Mathematics Curriculum Progression Map

### Number: Addition and Subtraction

<u>EYFS</u>		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
<u>3-4 Year olds</u>	<u>Reception</u>						
<b><u>Number Bonds</u></b>							
	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				
<b><u>Mental Calculation</u></b>							
Use finger rhymes and counting songs to explore number patterns	Explore the composition of numbers to 10.  <i>(Focus on composition)</i>	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:	Add and subtract numbers mentally, including:		Add and subtract numbers mentally with increasingly large numbers	Perform mental calculations, including with mixed operations and large numbers

	<i>of 2, 3, 4 and 5 before moving onto larger numbers Model conceptual subitising: "Well, there are three here and three here, so there must be 6."</i>		<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>	<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>			
		Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ( <i>cross reference - Written Methods</i> )	Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot ( <i>cross reference - Written Methods</i> )				Use their knowledge of the order of operations to carry out calculations involving the four operations
<b>Written Methods</b>							
		Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ( <i>cross</i>	Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot	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	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar	

		<i>reference - Mental Calculation)</i>	<i>(cross reference – Mental Calculations)</i>		where appropriate	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	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.
<b>Problem Solving</b>							
	<i>Children learn number bonds through lots of “hands-on” experiences of partitioning and combining numbers in different contexts, and seeing subitising patterns</i>	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: <ul style="list-style-type: none"> <li>○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>○ applying their increasing knowledge of mental and written methods</li> </ul>	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

			<i>(Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (cross reference from Measurement))</i>				
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