

Year Four: Addition & Subtraction Knowledge Organiser

Key Learning	Practical resources																						
<ul style="list-style-type: none"> Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Estimate and use inverse operations to check answers to a calculation Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<p>0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10,000</p> <p>Number line</p>																						
Key Knowledge		<p>Place value grid</p> <table border="1"> <tr> <th>Hth</th><th>Tth</th><th>Th</th><th>H</th><th>T</th><th>O</th> </tr> <tr> <td>7</td><td>5</td><td>2</td><td>3</td><td>2</td><td>7</td> </tr> </table> <p>Place value counters</p> <p>Base ten</p>										Hth	Tth	Th	H	T	O	7	5	2	3	2	7
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<ul style="list-style-type: none"> Mentally add 1,10,100 & 1,000s to a number, using place value knowledge Add a pair of four digit numbers without exchanging Add a pair of four digit numbers with one exchange, progressing to two Subtract from a four digit number, with no exchanging Subtract from a four digit number with one exchange moving through to more than one Recall fact families from a given number sentence Apply place value knowledge when setting out formal methods for addition and subtraction Use rounding to support estimation of answers Identify the most efficient method of calculating an answer Use inverse as a way of checking 	<p>Pictorial representations</p> <p>Place value grid</p> <p>Part-whole model</p> <p>Bar model</p>																						
Key Vocabulary <table border="1"> <tr> <td>Mental method</td><td>Working out a calculation using a strategy in your head</td></tr> <tr> <td>Written method</td><td>Working out a calculation using a written strategy e.g. column method</td></tr> <tr> <td>Inverse</td><td>The opposite operation (e.g. inverse of addition is subtraction)</td></tr> <tr> <td>Addition</td><td>Add, plus, sum, total, altogether, more, increase</td></tr> <tr> <td>Subtraction</td><td>Subtract, take away, minus, difference, less, decrease</td></tr> <tr> <td>Exchange</td><td>Convert 10 to ten 1s, 100 to ten 10s, 1000 to ten 100s etc.</td></tr> </table>	Mental method	Working out a calculation using a strategy in your head	Written method	Working out a calculation using a written strategy e.g. column method	Inverse	The opposite operation (e.g. inverse of addition is subtraction)	Addition	Add, plus, sum, total, altogether, more, increase	Subtraction	Subtract, take away, minus, difference, less, decrease	Exchange	Convert 10 to ten 1s, 100 to ten 10s, 1000 to ten 100s etc.	<p>Column addition method</p> <p>5162</p> <p>+ 3497</p> <hr/> <p>8659</p> <hr/> <p>1</p>	<p>Column subtraction method</p> <p>Start at the ones column, add the digits together.</p> <p>If the digits add to more than 9, carry over to the hundreds column.</p> <p>Continue each column in turn and exchange as required.</p> <p>Ensure the largest number is on top.</p> <p>Start at the ones column, subtract the bottom digit from the top.</p> <p>If the bottom digit is greater, you need to exchange from the next column (tens).</p> <p>Continue each column in turn and exchange as required.</p>									
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