## Number: Addition and Subtraction

| NUMBER BONDS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| 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 (multiples of 10) | Consolidate derive and use related facts up to 100 (multiples of 5 and 10) | Consolidate derive and use related facts up to 100 (for any pairs of numbers) | Derive and use addition and subtraction facts to 1 and 10. $\begin{aligned} & (0.1+0.9=1,1.1+8.9= \\ & 10) \end{aligned}$ |  |
| MENTAL CALCULATION |  |  |  |  |  |
| add and subtract onedigit and two-digit numbers to 20 , including zero | add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <br> * a two-digit number and ones <br> * a two-digit number and tens <br> * two two-digit numbers <br> * adding three one-digit numbers | add and subtract <br> numbers mentally, including: <br> * a three-digit number and ones <br> * a three-digit number and tens <br> * a three-digit number and hundreds | add and subtract numbers mentally with increasingly large numbers | add and subtract numbers mentally with increasingly large numbers and decimals | perform mental calculations, including with mixed operations and large numbers and decimals |
| 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 |  |  | Understand use of brackets in a calculation | use their knowledge of the order of operations to carry out calculations involving the four operations (BODMAS) |

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| WRITTEN METHODS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| 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 methods of addition and subtraction in line with calculation policy/tracking grid; using appropriate stages | add and subtract numbers with up to 4 digits using the formal written methods of expanded columnar addition and subtraction where appropriate in line with the calculation policy/tracking grid | add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)in line with the calculation policy /tracking grid |  |
| INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS |  |  |  |  |  |
| Contextually and through practical exploration, understand addition and subtraction as each other's inverse. | 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 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 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: <br> * using concrete objects and pictorial representations, including those involving numbers, quantities and measures <br> * 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 |

