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| **Progression of Skills in: Number –Addition and Subtraction** |

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|  | **NUMBER BONDS** |
| **Skill** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Number Bonds** | Knowing which pairs of numbers make a given number within 10Automatically recall bonds up to 5 (addition and subtraction) and some number bonds 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  |  |  |  |  |
|  | **MENTAL CALCULATION** |
| **Mental calculation** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Recognise one more and one less than any given number to 20 drawing upon the relationship between sequential numbers  | 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: * a two-digit number and ones
* a two-digit number and tens
* two two-digit numbers
* adding three one-digit numbers
 | add and subtract numbers mentally, including: * a three-digit number and ones
* a three-digit number and tens
* a three-digit number and hundreds
 |  | add and subtract numbers mentally with increasingly large numbers  | perform mental calculations, including with mixed operations and large numbers |
| Subitise numbers to 5 and some common arrangements of numbers to 10 e.g. numicon, tens frames etc.  | 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  |  |  |  | use their knowledge of the order of operations to carry out calculations involving the four operations  |
|  | **WRITTEN METHODS** |
| **Written Methods** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Record simple addition and subtraction using own representations (following First, Then, Now model) Use a tens frame and part whole model to combine 2 groups  | 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  | 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** |
| **Inverse operations, estimating and checking answers** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| partition a number of things into two groups, and recognize that those groups can be recombined to make the same total | partition a number of things into two groups, and recognize that those groups can be recombined to make the same total | 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. |
|  | **PROBLEM SOLVING** |
| **Problem Solving**  | **Reception**  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Ideas???Using a range of manipulatives to find missing parts in part whole models.  | solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = 🗆 - 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
 | 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 |