

Math Curriculum – Key Skills
Number: Addition and Subtraction

| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|---|--|--|---|--|---|
| Number Bonds | | | | | |
| represent and use number bonds and related subtraction facts within 20 <i>Develop fluency in addition and subtraction facts within 10.</i> | recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 <i>Secure fluency in addition and subtraction facts within 10, through continued practice.</i> | | | | |
| <i>Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</i> | <i>Add and subtract across 10.</i> | <i>Calculate complements to 100.</i> | | | <i>Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</i> |
| Mental Calculation | | | | | |
| 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 |
| 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 <i>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two digit numbers.</i> | | | | use their knowledge of the order of operations to carry out calculations involving the four operations <i>Solve problems with 2 unknowns.</i> |
| Written Methods | | | | | |
| read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation) <i>Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.</i> | | add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction <i>Add and subtract up to three-digit numbers using columnar methods.</i> | 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) | <i>Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.</i> |
| Inverse Operations, Estimating and Checking Answers | | | | | |
| | 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 <i>Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two digit number.</i> | estimate and use inverse operations to check answers to a calculation <i>Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.</i> | 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. <i>Solve problems involving ratio relationships.</i> |
| Problem Solving | | | | | |
| 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 |