**Addition**

The expectation for year three and four is children will use the column method as a formal method of calculation. We also use partitioning and number lines as a mental method of calculation. Children will add 2 digit numbers and 3 digit numbers up to 1000.

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| --- | --- |
| **Calculation Method** | **National Curriculum Expectations** |
| Year 3Place value column methodH T U 60 7 50 4 10 1 - U100 10 0 - T100 20 1Condensed Column method   | Pupils should be taught to:* add numbers mentally, including:
* a three-digit number and ones
* a three-digit number and tens
* a three-digit number and hundreds
* add numbers with up to three digits, using formal written methods of columnar addition.
* estimate the answer to a calculation and use inverse operations to check answers
* solve problems, including missing number problems, using number facts, place value, and more complex addition.
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| Year 4Condensed Column method (bigger numbers)   | Pupils should be taught to:* add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate
* estimate and use inverse operations to check answers to a calculation
* solve addition two-step problems in contexts, deciding which operations and methods to use and why.
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**Partitioning**

Children separate the numbers into hundreds, tens and units. They then add each hundred, ten and then final the units, for example to solve the problem 321 + 518 =

 H T U H T U

 3 2 1 + 5 1 8 =

 300 20 1 500 10 8

 800 + 30 + 9 = 839

 (300 + 500) (20 + 10) (1+8)

**Expanded Column Method**

The children then use their knowledge of partitioning and place value to add using a written method of calculation. Again, to solve the problem 321 + 518 =

 H T U

 300 20 1 800 + 30 + 9 = 839

 500 10 8

800 30 9

 If the units go above ten we write the whole number

 Eg. H T U

 300 90 3 800 + 110 + 11 = 921

 500 20 8

800 110 11

**Column Method**

This is the final formal stage of addition calculations.

HTU

3 2 1

5 1 8

8 3 9

If the units or tens go over 10 or 100 we carry them underneath the answer

eg.

 H T U

 3 9 3

 5 2 8

 8 1 1

 1 1

 **9 2 1**