**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 3  Place value column method  H T U  60 7  50 4  10 1 - U  100 10 0 - T  100 20 1  Condensed 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. |
| Year 4  Condensed 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. |

**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**