Addition +

Stage 1

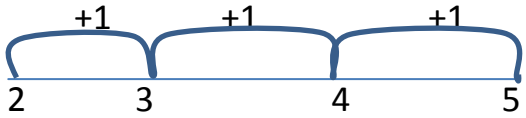
Children understand the concept of addition as the combining of two or more groups. Children use + and = symbols accurately. Calculations should be written on either side of the equal sign so that = is not just interpreted as the answer.

6 + 2 = 8 **8 = 6 + 2**

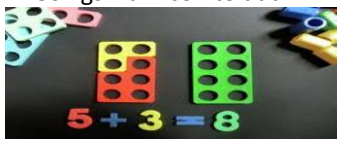
Children use Numicon and other visual representations to add 2 or more amounts.

2 + 3 = 5

Extend to counting up in ones on a number line



Usings Numicon to add.

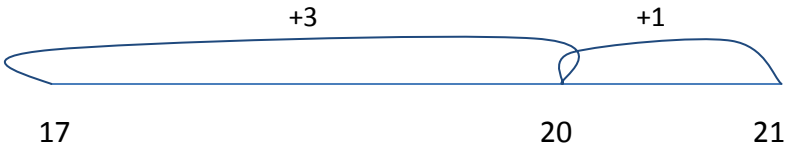


A range of models and images to be used.

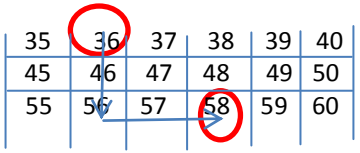
Stage 2

1. Adding 2 digit numbers with single units, bridging through multiples of 10, using a number line.

17 + 4 = 21



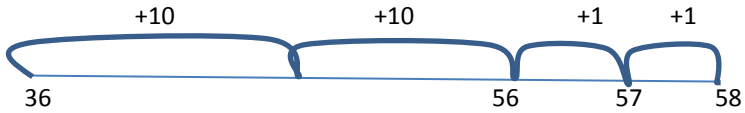
A number line should be a representation of a child's thought process and lead to quick mental strategies.



* The hundred square will act as a support tool for the number line .

36 + 22 = 58

2.



The number line is extended to partitioning and adding tens then ones when faced with larger numbers.

Years 1 and 2

Stage 3

Adding 2 digit numbers with 2 digit numbers using column methods.
Use expanded method first and no crossing tens boundary at this stage (no exchange). Show methods alongside each other to discuss what is similar about both methods and what is different, 'same and different'.

36 + 12 =

	Expanded method	Formal column method
Partition	30 + 6	3 6
and	+ 10 + 2	+ 1 2
Recombine	40 + 8	4 8
	=48	

Recommended by the end of year 2

Stage 4

Column addition up to 3- digit numbers using expanded methods and formal methods. Teach expanded and formal methods alongside each other to deepen children's understanding. Discuss similarities and differences of both methods 'same and different'. Pupils must have a secure understanding of place value to be successful with these methods.

36 + 19 (crossing tens boundary)

Expanded	Formal
30 + 6	3 6
+10 + 9	+ 1 9
40 +15	5 5
= 55	1

643 + 275=

Expanded	Formal
600 + 40 + 3	6 4 3
+200 + 70 + 5	+ 2 7 5
800 +110 +8	9 1 8
=918	1

Recommended by the end of year 3

Stage 5 - Formal written methods

Formal written methods using ‘carrying’ The ‘carrying’ digit should be placed underneath the equals box

Addition of 4 digit numbers

```
   7 8 9 3
+  5 3 8 5
  13 2 7 8
   1 1
```

Recommended by the end of year 4

Stage 6

Children should begin working with more complex numbers including decimal numbers.

Addition of decimal numbers

```
  3 1 . 7 6
+ 1 8 . 0 7
  4 9 . 8 3
      1
```

Recommended by the end of year 5

In years 5 and 6 pupils continue practising formal written methods with increasing large numbers so they become fluent and precise.