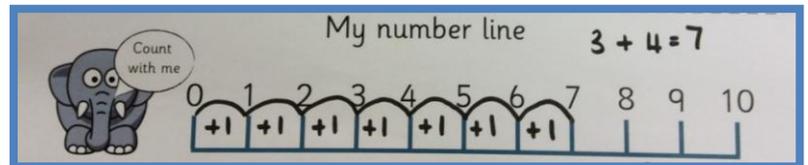# Foundation Stage
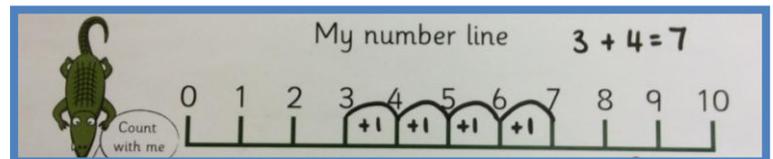
Learn number bonds to 10

Count on in ones on a numbered number line (up to 10)
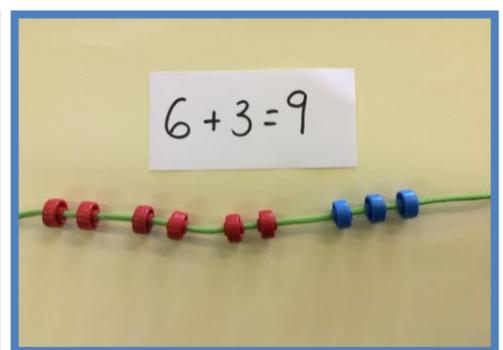
My number line    3 + 4 = 7
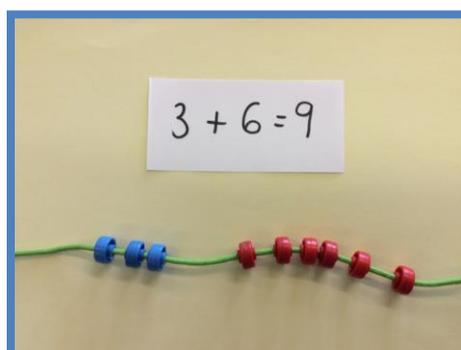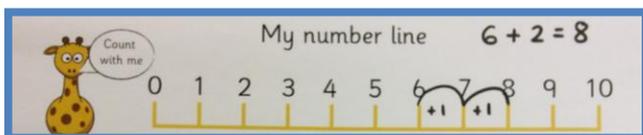
Count with me

0  1  2  3  4  5  6  7  8  9  10
  +1 +1 +1 +1 +1 +1 +1

Begin counting from 0, then move onto counting from the first number

Start with the larger number and count on in ones

My number line    3 + 4 = 7

Count with me

0  1  2  3  4  5  6  7  8  9  10
          +1 +1 +1 +1

Recognise that addition can be done in any order

My number line    6 + 2 = 8

Count with me

0  1  2  3  4  5  6  7  8  9  10
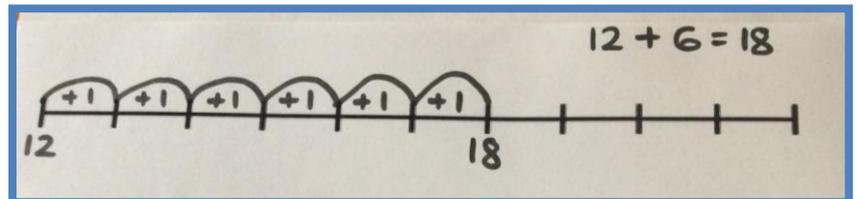                  +1 +1

3 + 6 = 9

6 + 3 = 9

# Year One

+
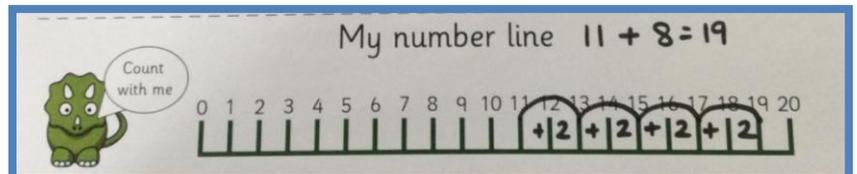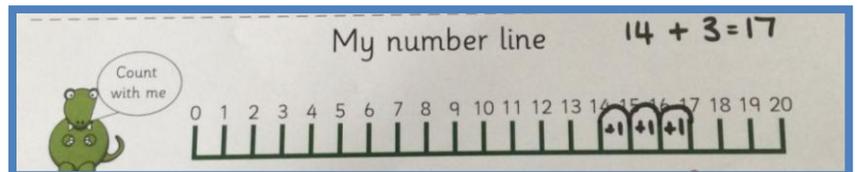
Learn number bonds to 20

2-digit + 1-digit numbers (to 20)

Count on in 1s

Count on using bigger jumps

Begin to use an empty number line

My number line    14 + 3 = 17

Count with me

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

My number line    11 + 8 = 19

Count with me

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

12 + 6 = 18

+1 +1 +1 +1 +1 +1

12                    18

Use a 100 square

11 + 4 = 15

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

Complete empty number box sentences and whole part models

Part

Part

Whole
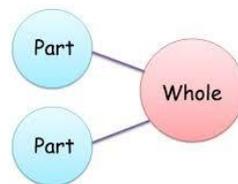
$12 + \boxed{\phantom{0}} = 15$

# Year Two +

Recall number bonds to 20 and related facts to 100

23 + 14 = 37

+10    +4

23    33    37
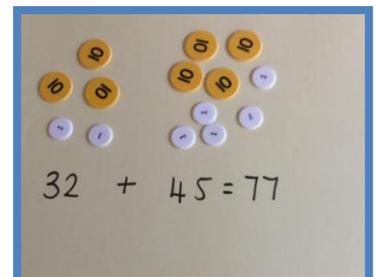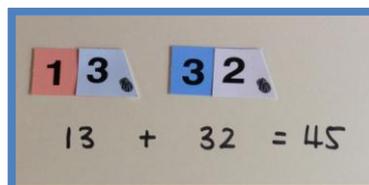
Use an empty number line
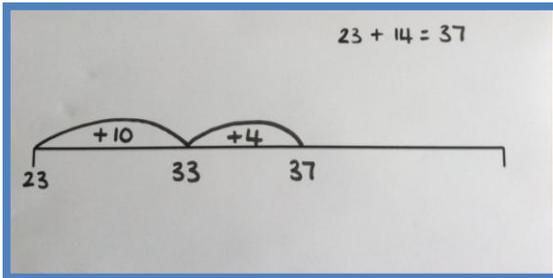
2-digit + 1-digit numbers

2-digit number + tens

2-digit number + 2-digit number
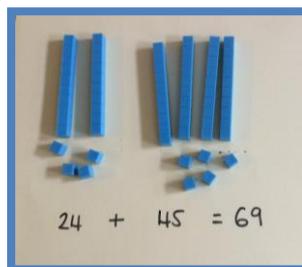
1-digit number + 1-digit number + 1-digit number

Add the tens and then the ones
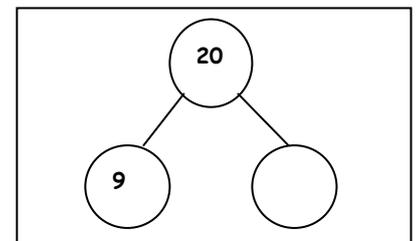
Use different equipment to consolidate understanding

1 3,   3 2,

13  +  32  = 45

32  +  45 = 77

Begin to use the expanded method

24  +  45  = 69

Always start with the least significant digit

20  3
+ 40  2
  60  5

60+5=65

Record numbers in columns

20

9
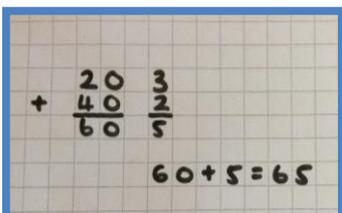
Use the bar method and whole part model to solve addition problems

?
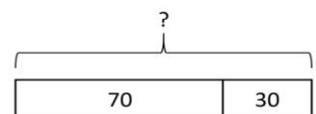
70    30

70 + 30 = 100

# Year Three

$+$

3-digit number + ones

3-digit number + tens

3-digit number + hundreds

3-digit number + 2-digit number

$$
\begin{array}{r}
100 \quad 40 \quad 3 \\
+ \quad 200 \quad 30 \quad 4 \\
\hline
300 \quad 70 \quad 7
\end{array}
$$

$300 + 70 + 7 = 377$

$$
\begin{array}{r}
143 \\
+ 234 \\
\hline
7 \\
70 \\
300 \\
\hline
377
\end{array}
$$

$3 + 4 = 7$
$30 + 40 = 70$
$100 + 200 = 300$

$300 + 70 + 7 = 377$

Use the expanded method – vertical and horizontal

Begin to move towards a formal method

$$
\begin{array}{r}
200 \quad 40 \quad 7 \\
+ \qquad 80 \quad 2 \\
\hline
300 \quad 20 \quad 9 \\
\\
100
\end{array}
$$

$$
\begin{array}{r}
247 \\
+ \quad 82 \\
\hline
329 \\
1
\end{array}
$$

Column addition when children are ready

Introduce carrying when children are ready

Use the bar method and part whole method to solve addition problems

| 600 | |
|---|---|
| 320 | 280 |

___ + ___ = 600   600 = ___ + ___
___ + ___ = 600   600 = ___ + ___

600

320    280
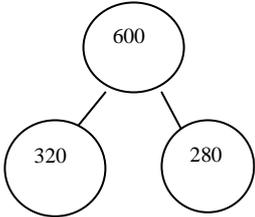
# Year Four

Continue using number lines

$$
\begin{array}{r}
2364 \\
+1632 \\
\hline
6 \\
90 \\
900 \\
3000 \\
\hline
3996
\end{array}
\qquad
\begin{array}{r}
3428 \\
+2367 \\
\hline
15 \\
80 \\
700 \\
5000 \\
\hline
5795
\end{array}
$$

$$
\begin{array}{llll}
4000 & 200 & 30 & 7 \\
+3000 & 500 & 80 & 9 \\
\hline
7000 & 800 & 20 & 6 \\
 & 100 & 10 &
\end{array}
$$

$= 7826$

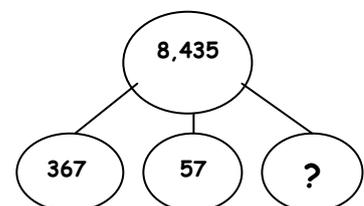Column addition with carrying

Consolidate the expanded methods – vertically and horizontally

$$
\begin{array}{r}
4237 \\
+3589 \\
\hline
7826 \\
1\ 1
\end{array}
$$

Use the bar method and part whole method to solve addition problems

| 8,435 | | |
|-------|------|---|
| 367 | 57 | ? |

A shop has 8,435 magazines.
367 are sold in the morning.
579 are sold in the afternoon.
How many magazines are left?

8,435
367   57   ?

# Year Five and Six

```
  7 3 9 2 1
+ 4 5 2 7 4
1 1 9 1 9 5
        1
```

Column addition with carrying

```
  5 3 7 6 2
+ 3 9 3 2 5
  9 3 0 8 7
    1 1
```

Add increasingly large numbers

```
  2 3·4 7
+ 6 9·8 2
  9 3·2 9
    1 1
```

Add decimals with the same amount of decimal places

Add decimals with different amounts of decimal places

```
   6 7·3
 2 7 4·6 8
 3 4 1·9 8
 1   1 1
```

```
  1 2 3·2 6
+   7 8·4
  2 0 1·6 6
    1 1
```

Use the bar method and whole part model to solve addition problems

| A | B |
|---|---|
| 631 | 255 |

A is an odd number which rounds to 100,000 to the nearest ten thousand.  It has a digit total of 30.

B is an even number which rounds to 500,000 to the nearest hundred thousand.
It has a digit total of 10.
A and B are both multiples of 5 but end in different digits.