

Children need to have a secure understanding of number before beginning to calculate. We spend time counting (encouraging accuracy), looking out for numerals and talking about numbers.

How we Teach Addition in Reception

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We model saying and writing number sentences For example "I've got 2 biscuits, please can you give me 2 more? How many are there now? ... Well Done, you have just worked out 2 add 2 equals 4, you can write it like this $2 + 2 = 4$ "

We practise counting up and down number tracks.

-How far down the number track can you throw a beanbag?

-Playing traditional dice and counter games such as snakes and ladders helps learn this skill.



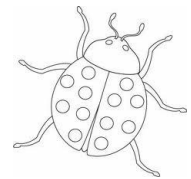
We use real objects and encourage children to 'count it altogether'

I have 3 sweets and you have 3 sweets, how many sweets altogether? Lets count them all.

We encourage children to make informal jottings or draw pictures to support their calculations.

For example...

How many different ways can they give the ladybird 10 spots?



There are 3 cars in the garage and 3 more arrive, how many are there altogether?



We teach children to use their fingers to represent numbers, practising 'show me ... fingers' helps them to use their fingers accurately to support their calculations.



How we Teach Addition in Year One

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Children begin to record their own number sentences, linked to practical examples

$$3 + 2 = \square$$

$$\square = 3 + 2$$

$$3 + \square = 5$$

$$5 = \square + 2$$

$$\square + 2 = 5$$

$$5 = 3 + \square$$

$$\square + \square = 5$$

$$5 = \square + \square$$

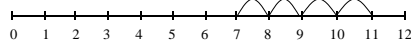
They also begin to show their understanding of place value by partitioning numbers and showing them as number sentences

$$\text{E.g. } 57 = 50 + 7$$

$$35 = 30 + 5$$

Children are taught to use a number line to count on. They start on the biggest number and then draw the jumps.

$$7 + 4 =$$



They then begin to count on mentally, keep the larger number in your head and then count on.

Children use coins to 'pay' and 'give change'



We encourage children to make informal jottings or draw pictures to support their calculations.

"Can you put something on paper to show that...?"

Children begin to use symbols or marks rather than pictures:

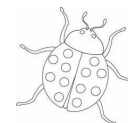
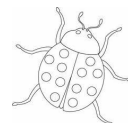
Lisa has 5 lollies and Tim has 2 lollies. How many lollies do they have altogether?

$$\text{5 lolly sticks} + \text{2 lolly sticks} = \text{7 lolly sticks} \text{ or } \text{5} + \text{2} = \text{7}$$

Children are taught to use a 100 square to add multiples of 10

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

Practical Problems: How many ways can you find to put 11 spots on 3 ladybirds?



Children continue to use pictures, marks and informal jottings to help them to calculate

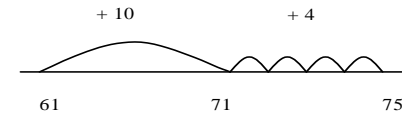
How we Teach Addition in Year Two

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Children are encouraged to always explain their methods orally. E.g. "To add 23 and 17 I added 23 and 7 to make 30 and added 10 more to total 40"

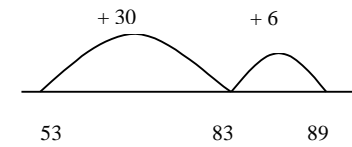
Children are taught to use empty number lines to help with their calculation. They start on the biggest number and then draw the jumps.

$$61 + 14 =$$



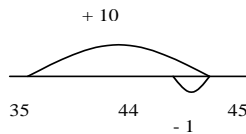
They use their knowledge of place value to add multiples of 10.

$$53 + 36 =$$



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

The children are taught to adjust numbers to make them easier to add e.g. $35 + 9 =$



Children are taught to partition into tens and ones and then recombine

$$\begin{aligned} 42 + 27 &= 42 + 20 + 7 \\ &= 62 + 7 \\ &= 69 \end{aligned}$$

Children record their own number sentences, adding 3 or more numbers.

$$\begin{aligned} 13 + 6 &= \square & \square &= 13 + 6 & 19 &= \square + 6 & \square + 6 &= 19 \\ 14 + \square + 6 &= 37 & \text{Extend to } 21 + 6 &= \square + 10 \end{aligned}$$

Children are taught to spot pairs totalling 10 or 20

$$4 + 8 + 16 + 2 = 20 + 10$$

$$= 30$$