A Pocket Guide to...

Addition in Year 2 using resources

Background

The intention of this booklet is to give some information about the way that addition is taught in Year 2 and the progression from using concrete resources towards other methods. The current curriculum aims for children to become fluent, to be able to reason mathematically and to be able to solve problems. Therefore, it is not enough for children to be able to simply follow a process, they need to be able to work flexibly to solve problems and apply their knowledge in different situations.

To do this, children are taught informal methods of calculation before more formal column addition and subtraction. This might involve use of concrete resources (hundred squares, number lines, cubes, counters) or more symbolic workings (using paper and pencil to draw representations and pictures).

Please encourage your child to use resources to carry out calculations if they need them. As they become more confident to carry out operations they will begin to solve simple additions mentally and learn strategies for solving calculations with larger numbers.

This booklet explains some of these methods to help you support your child at home and further information can be found on the learning platform. Please ask if you have any questions or would like any more information.

Early Addition

Using concrete resources:

Before children can add using apparatus, they need to be able to count objects carefully and accurately.

They need to be able to count objects by moving them, count by pointing at them and also understand that their value is the same whether they are:

close together **or** spread out
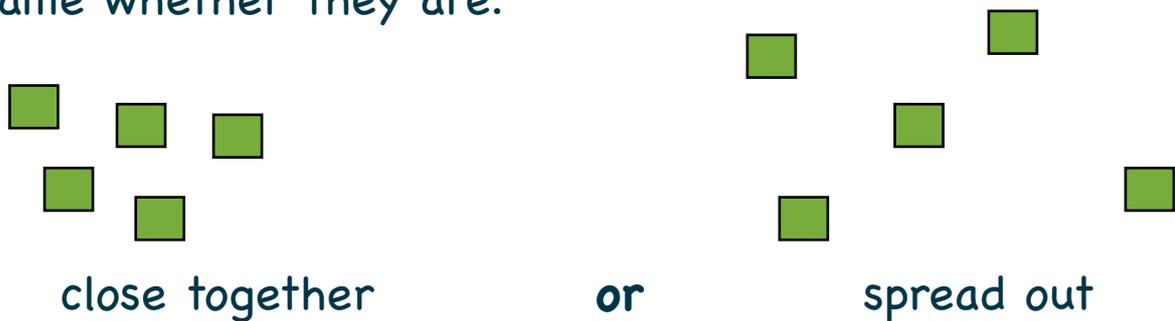
When children start to add, they tend to need to count all the objects, starting from 1.

+

Therefore they need to learn that the last number that they say is the total number of objects, so that they can start to **count on** and do not need to count all the objects every time.

That way, when they want to work out 4+2 on their fingers they can start at 4 and count 2 more rather than starting at 1 every time. **Counting on** is vital for efficient and accurate addition.
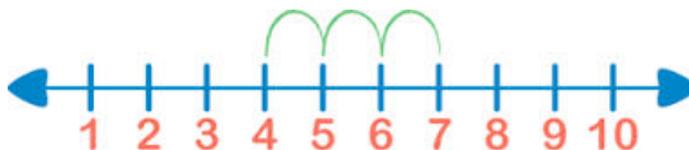
Addition using resources

Using concrete resources:

Once children can count on, they can also begin to use number lines or number squares to add.

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

$4 + 3 = 7$

Children need to learn how a 100 square works and particularly where to go next at the end of a row.

As they develop their understanding of place value (10s and 1s) they are then able to use this knowledge to use a 100 square or a number line add on the 10s first, and then the units.

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

$14 + 22 = 36$

Add on 2 tens and then 2 units.

They also can use dienes apparatus or Numicon to add amounts. As they become more secure they can draw their own representations of 10s and 1s or show workings on empty number lines.

$31 + 10 = 41$