

Good morning.
Welcome to the addition and subtraction workshop.

Aims of the workshop:



1. To inform you on the KS1 calculation policy for addition and subtraction.
2. To support you with ideas for home learning.
3. To support you with resources to help your child.



What is our Sulivan Maths Vision?

1. to have a positive attitude towards maths
2. to see maths as a process of enquiry, reasoning and problem solving
3. to know how maths is used in everyday life
4. to use a range of learning strategies - both independent and group work.
5. to be confident to express ideas fluently using appropriate mathematical vocabulary

The Foundation Stage

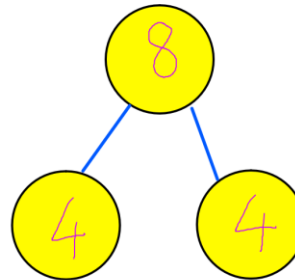
- To count, read, order and write numbers to 10 and beyond
- Which number comes before and after? - using numberlines, number rhymes
- Less than and more than - Finding one less than for subtraction - using number line, number tiles, giant spinner, play your cards right (verbal reasoning), physical moving, register
- Take away with groups of objects - introduce verbal addition - story problems (using real objects and their hands) Combining two groups of objects.
- More able pupils - up to 20 (dice, clock), investigation and through stories and recording

Addition in KS1

- Development of knowledge of our number system
- Getting numbers in the right order
- Starting to appreciate the size of numbers and where they fit into the system relative to each other
- Number facts - for mental calculation strategies
- Informal as opposed to the formal, standard written methods

Year 1 Expectations

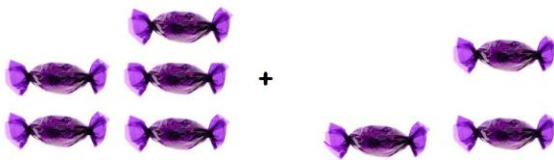
To add and subtract 1 digit and 2 digit numbers to 20 including 0.



part - part - whole models

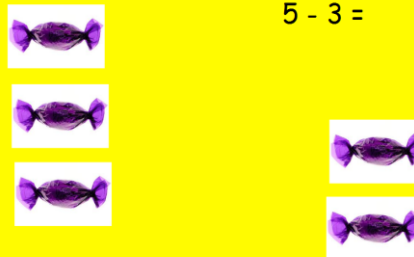
Using objects to add

$$5 + 3 =$$



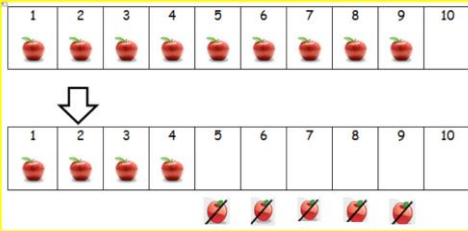
Using objects to subtract

$$5 - 3 =$$



Children use number tracks to support calculation

9-5



Children use number lines to support calculation

Sarah had 10 apples and gave 4 apples to her friends. How many does she have now?



(End of Year 1, beginning of Year 2)

Children use a 100 square for bigger numbers

22+13 =
22 - 13 =

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



Year 2 Expectations

To add and subtract numbers using concrete objects, pictorial representations and mentally for:

- *two digit and one digit
- *two digit and tens
- *2 two digit numbers
- *adding 3 one digit numbers

Year 2

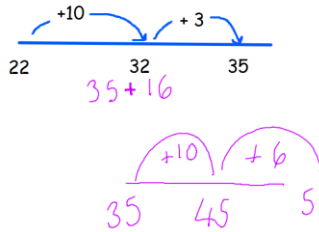
Using a 100 square

38 + 4 =
66 - 17 =
22 + 14

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

Using a blank number line

22 + 13



Using the partitioned method

22 + 13 =

$$\begin{array}{r} 20 + 2 \\ 10 + 3 \\ \hline 30 + 5 = 35 \end{array}$$

63 - 12 =

$$\begin{array}{r} 60 + 3 \\ - 10 + 2 \\ \hline 50 + 1 \end{array}$$

Partitioned method with exchanging

15 + 28 =

$$\begin{array}{r} 10 + 5 \\ 20 + 8 \\ \hline 30 + 13 = 43 \end{array}$$

54 - 27 =

$$\begin{array}{r} 40 \\ 50 + 4 \\ - 20 + 7 \\ \hline 20 + 7 \end{array}$$

What can you do to support your child at home?

- Number bonds are crucial!
- Keeping numbers in head.
- Counting backwards and forwards from a number.
- Practical partitioning
- Counting in 2s, 5s, 10s.
- Problem solving.