

Supporting your child in maths

22nd June 2018

What have we done this year?

- Staff training from Newick Teaching School to improve teachers' subject knowledge.
- Visits to see outstanding maths teaching in action.
- Fine tuning of our assessment system to make the tracking of children's progress in maths more straightforward.
- Investment in equipment to support.

What is a calculation policy and why do we need one?

- The National Curriculum 2014 states which calculation methods the pupils should be using at the end of each key stage.
- Emphasis on the use of formal calculation methods by the end of Year 6.
- Our Calculation Policy gives a clear pathway showing the route pupils will take to help them master the calculation methods.
- Adults, both at home and at school, who support children are working towards the same goals, using the same methods.

Questions from KS2 SATS

4

This table shows the heights of three mountains.

Mountain	Height in metres
Mount Everest	8,848
Mount Kilimanjaro	5,895
Ben Nevis	1,344

How much higher is Mount Everest than the combined height of the other two mountains?

Show
your
method

A grid for showing the method to solve the problem. The grid is 20 units wide and 10 units high. A box is drawn in the bottom right corner, containing the letter 'm'.

8

At the start of June, there were 1,793 toy cars in the shop.

During June,

- 8,728 more toy cars were delivered
- 9,473 toy cars were sold.

How many toy cars were left in the shop at the end of June?

Show
your
method

The grid is 15 columns wide and 10 rows high. A smaller empty box, 5 columns wide and 2 rows high, is located in the bottom right corner of the grid.

13

Ally and Jack buy some stickers.



Pack of 12 stickers
£10.49



12 stickers
99p each

Ally buys a pack of 12 stickers for £10.49

Jack buys 12 single stickers for 99p each.

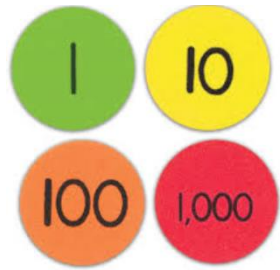
How much more does Jack pay than Ally?

Show
your
method

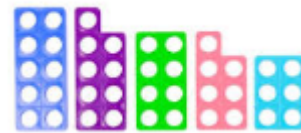
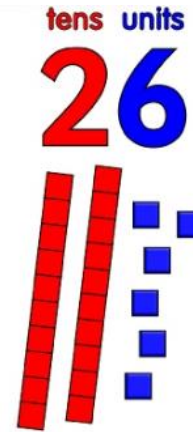
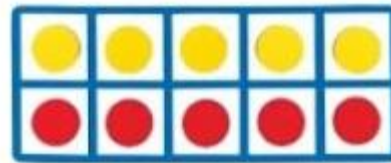
£

Use of equipment

- A focus of our policy is the use of practical resources to support the learning of, and understanding of calculations.

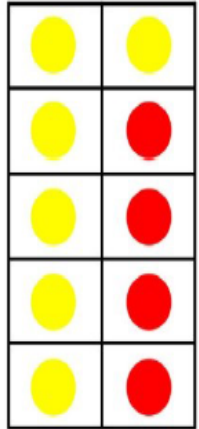


1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



- The National Curriculum 2014 states that pupils should use visual resources to support understanding. As a school, we want to encourage all learners to recognise that the use of resources is a valuable part of their learning – even for the children who are more confident in maths.
- Resources can support **all** children in developing their maths knowledge.

KS1



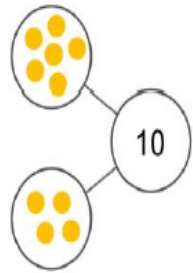
Tens Frame

$$6 + 4 = 10$$

$$4 + 6 = 10$$

$$10 - 4 = 6$$

$$10 - 6 = 4$$



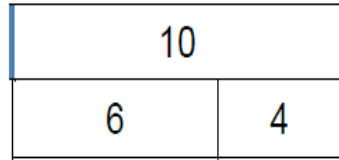
Part Whole Model

$$6 + 4 = 10$$

$$4 + 6 = 10$$

$$10 - 4 = 6$$

$$10 - 6 = 4$$



Bar Model

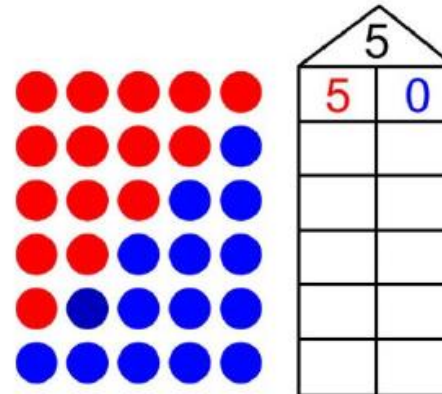
$$6 + 4 = 10$$

$$4 + 6 = 10$$

$$10 - 4 = 6$$

$$10 - 6 = 4$$

	34
	52
	29
	15



KS2 – addition and subtraction

Year 3

$$\begin{array}{r} 27 \\ + 72 \\ \hline \end{array}$$

$$\begin{array}{r} 45 \\ - 27 \\ \hline \end{array}$$

Year 4

$$\begin{array}{r} 536 \\ + 85 \\ \hline 621 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 391 \\ - 186 \\ \hline \end{array}$$

Year 5

$$\begin{array}{r} 72.8 \\ + 54.6 \\ \hline 127.4 \\ \hline 11 \end{array}$$

$$\begin{array}{r} 2767 \\ - 489 \\ \hline \end{array}$$

Year 6

$$\begin{array}{r} 12.567 \\ + 1.75 \\ \hline \end{array}$$

$$\begin{array}{r} 5121 \\ 2\cancel{6}\cancel{3}.0 \\ - 26.5 \\ \hline 236.5 \end{array}$$

KS2 – multiplication

Year 3

$$\begin{array}{r} 27 \\ 4 \times \\ \hline \\ \hline \end{array}$$

Year 4

$$\begin{array}{r} 345 \\ 6 \times \\ \hline \\ \hline \end{array}$$

Year 5

$$\begin{array}{r} 124 \\ \times 26 \\ \hline 744 \\ 1 2 \\ 2480 \\ \hline 3224 \\ \hline 11 \end{array}$$

Year 6

$$\begin{array}{r} 12.567 \\ 1.75 \times \\ \hline \\ \hline \end{array}$$

KS2 – division

Year 3

13 divided by 4



Year 4

$$5 \overline{)615}$$

Year 5

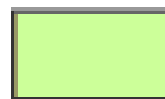
$$6 \overline{)7890}$$

Year 6

$$27 \overline{)7654}$$



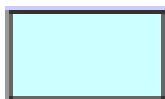
Zero in Addition



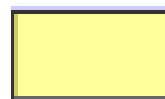
Doubles,
Doubles Plus One



Add With Ten
(10 as an Addend)



Counting On 1, 2, 3;
Order Property



Make a Ten
(adding 7, 8, 9)

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

Times tables

x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144



Children expected to know all of their times tables to 12x12 by the end of year 4.