



Ann Edwards C of E Primary School


Learning Together in a Caring Community

Year 3 and 4 Maths Workshop

KEY AIMS OF THE NEW MATHS CURRICULUM

- ▶ Fluent recall of mental maths facts e.g. times tables (In Year 4, children are expected to know times tables up to 12×12 (used to be 10×10 by the end of primary school).
- ▶ To reason mathematically – children need to be able to explain the mathematical concepts with number sense; they must explain how they got the answer and why they are correct.
- ▶ Problem solving – applying their skills to real-life contexts.
- ▶ Deepen knowledge through *Mastery* problems.

ASSESSMENT

- ✓ Half termly tests to assess children's progress in line with the key objectives for their year group
 - ✓ Use to inform future lesson planning
 - ✓ Show where they are up to in relation to year group objectives
 - ✓ Gaps used to set children's targets
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Ann Edwards Calculation Policy

The policy outlines both the **mental** and **written** methods that should be taught from Year 1 to Year 6. It has been written according to the National Curriculum 2014.

The document builds on the interconnectedness of mathematics and outlines the progression for addition, subtraction, multiplication and division. It is our intention that addition and subtraction should be taught at the same time to ensure children are able to see the clear links between the operations and the inverse nature of them along with multiplication and division.

ADDITION – Y3

Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.

Expanded Method - Year 3

$$353 + 268 = 621$$
$$300 + 50 + 3$$
$$200 + 60 + 8$$

$$600 + 20 + 1 = 621$$

100 10

Column addition - Year 3

$$\begin{array}{r} 427 \\ + 363 \\ \hline 790 \\ \quad 1 \end{array}$$

ADDITION – Y4

Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.

$$\begin{array}{r} + 4936 \\ 7485 \\ \hline 12421 \end{array}$$

SUBTRACTION – Y3

Expanded Method - Year 3

$$\begin{array}{r} 200 + 30 + 7 \\ - 100 + 20 + 5 \\ \hline 100 + 10 + 2 = \\ 112 \end{array}$$

$$\begin{array}{r} 534 - 265 = 269 \\ \begin{array}{r} 400 \quad 120 \quad 20 \quad 14 \\ \cancel{500} + \cancel{30} + \cancel{4} - \\ 200 + 60 + 5 \\ \hline 200 + 60 + 9 = 269 \end{array} \end{array}$$

COLUMN SUBTRACTION – Y3

H	T	U	
2	3	6	
0	7	4	
<hr/>			
1	6	2	
<hr/>			

$$\begin{array}{r} 8 \\ \cancel{9} \overset{!}{4} 8 \\ - 263 \\ \hline 685 \end{array}$$

COLUMN SUBTRACTION – Y4

	Th	H	T	U	
	7	0	0	0	
	⁶	⁹	⁹	¹	
-	4	8	2	6	
	<hr/>				
	2	1	7	4	
	<hr/>				

COLUMN ADDITION AND SUBTRACTION - Y4 (MONEY)

$$\text{£ } 32.50 + \text{£ } 21.75 = \text{£ } 54.25$$

$$\begin{array}{r} \text{£ } 32.50 \\ + \text{£ } 21.75 \\ \hline \text{£ } 54.25 \\ \hline \end{array}$$

$$\text{£ } 42.50 - \text{£ } 13.35 = \text{£ } 29.15$$

$$\begin{array}{r} \text{£ } \overset{3}{4} \overset{1}{2} . \overset{4}{5} \overset{1}{0} \\ - \text{£ } 13.35 \\ \hline \text{£ } 29.15 \\ \hline \end{array}$$

MULTIPLICATION – Y3

Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Grid method

x	10	5
5	50	25

Short multiplication

24 × 6 becomes

$$\begin{array}{r} 24 \\ \times 6 \\ \hline 144 \\ \hline 2 \\ \hline \end{array}$$

Answer: 144

MULTIPLICATION – Y4

Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

Short multiplication

24 × 6 becomes

$$\begin{array}{r} 24 \\ \times 6 \\ \hline 144 \\ \hline 2 \end{array}$$

Answer: 144

342 × 7 becomes

$$\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \\ \hline 21 \end{array}$$

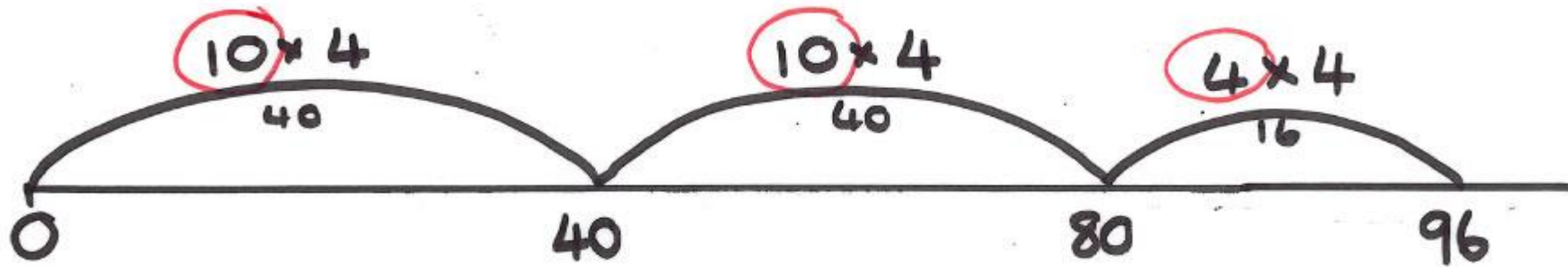
Answer: 2394

DIVISION – Y3

division by chunking on
a number line

$$96 \div 4 = 24$$

make sure that
the number you
have multiplied
by go in the
same position
each time



How many lots of 4 altogether?

$$10 + 10 + 4 = 24$$

DIVISION – Y4

Short division (Bus stop)

$$186 \div 6 =$$

6	0	3	1
6	1	¹ 8	6

no groups of 6
can be made

$3 \times 6 = 18$

$1 \times 6 = 6$

MASTERY MATHS

The Department for Education (DfE) has added weight and focus to a child's ability to apply their learning – this is called Mastery. The essential idea behind mastery is that all children need a deep understanding of the mathematics they are learning.

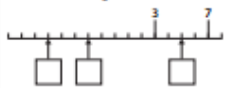
This section lists a selection of key National Curriculum programme of study statements. The development and assessment of these is supported through the questions, tasks and activities set out in the two columns below.

This section lists a selection of key ideas relevant to the selected programme of study statements.

This section reminds teachers to check pupils' understanding by asking questions such as 'Why', 'What happens if ...', and checking that pupils can use the procedures or skills to solve a variety of problems.

This section contains examples of assessment questions, tasks and teaching activities that might support a teacher in assessing and evidencing progress of those pupils who have developed a sufficient grasp and depth of understanding so that learning is likely to be sustained over time.

This section contains examples of assessment questions, tasks and teaching activities that might support a teacher in assessing and evidencing progress of those pupils who have developed a stronger grasp and greater depth of understanding than that outlined in the first column.

Number and Place Value	
Selected National Curriculum Programme of Study Statements Pupils should be taught to: <ul style="list-style-type: none">count in multiples of 6, 7, 9, 25 and 1000order and compare numbers beyond 1000count backwards through 0 to include negative numbersround any number to the nearest 10, 100 or 1000	
The Big Ideas Imagining the position of numbers on a horizontal number line helps us to order them: the number to the right on a number line is the larger number. So 5 is greater than 4, as 5 is to the right of 4. But -4 is greater than -5 as -4 is to the right of -5 . Rounding numbers in context may mean rounding up or down. Buying packets of ten cakes, we might round up to the nearest ten to make sure everyone gets a cake. Estimating the number of chairs in a room for a large number of people we might round down the number of chairs to make sure there are enough. We can think of place value in additive terms: 456 is $400 + 50 + 6$, or in multiplicative terms: one hundred is ten times as large as ten.	
Mastery Check Please note that the following columns provide indicative examples of the sorts of tasks and questions that provide evidence for mastery and mastery with greater depth of the selected programme of study statements. Pupils may be able to carry out certain procedures and answer questions like the ones outlined, but the teacher will need to check that pupils really understand the idea by asking questions such as 'Why?', 'What happens if ...?', and checking that pupils can use the procedures or skills to solve a variety of problems.	
Mastery	Mastery with Greater Depth
Write the missing numbers in the boxes. 	The sea level is usually taken as zero. Look at the picture of the lighthouse. If the red fish is at -5 m (5 metres below sea level): Where is the yellow fish? Where is the green fish?

HOW YOU CAN HELP

- Telling the time.
 - The ability to estimate.
 - To use maths in a real life context.
 - Cooking.
 - Shopping
 - Practise times tables
 - Support with homework using methods we've shown you.
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