

Year 3 and 4

Coffee and Calculations



Our Curriculum Intent at Nevill Road Junior School



Together Everyone Achieves More



We **Aim High** by challenging ourselves in all aspects of school life.

We are **Successful** learners by using our growth mind set to achieve.

We **Persevere** by being resilient and trying our best in everything we do.

We use our **Imagination** to produce creative work that we can be proud of.

We show **Respect** by including everyone and making sure we all matter.

We show **Enthusiasm** by approaching all learning with a positive attitude.



Our One Voice Conversation at Nevill Road Junior School



Priority 1 – To improve the quality of education for all children in reading through:

- Reviewing reciprocal reading strategies and the role of the child within this.
- Reviewing the teaching of the reading cycle, particularly in Year 3 and 4.
- Introducing the 100 Books Challenge to encourage the love of reading and exposure to challenging vocabulary.
- Using 'Books for Hooks' to make links with writing.
- Quality first teaching that meets the needs of SEND and higher attainers.

Priority 2 – To improve the quality of education for all children in writing through

- Using 'Books for Hooks' to make links with reading and quality texts that expose children to challenging vocabulary.
- Developing DEAL strategies across the school to immerse and engage children in their writing.
- To ensure that Year Group 'Bear Necessities' are picked up and addressed by staff and children with a focus on SPAG and presentation.
- Implementing the new SPAG framework across school.
- To develop the use of editing and improving to show progress in writing.
- Quality first teaching that meets the needs of SEND and higher attainers.

Priority 3- To support all staff to become leaders through:

- Opportunities to improve their pedagogy and subject knowledge through CPD opportunities.
- Developing the articulation of the intent, implementation and impact of their subject area.
- Ensuring each subject area is planned using a clear sequence of progression across KS2.
- Working with the Infant school to understand what has come before.
- Developing a knowledge rich curriculum for each subject area.
- Quality first teaching that meets the needs of SEND and higher attainers.

Priority 4 - To improve the quality of education for all children in maths through:

- Embedding the maths mastery lesson structure so that it is consistent across school.
- Developing teachers subject knowledge and pedagogy through staff participating in Teacher Research Groups
- Developing the use of practical resources in maths lessons.
- Developing teachers questioning throughout lessons.
- Securing mental calculation strategies for all children in Years 3 and 4.
- Review how times tables are taught across school in line with the new check.
- Quality first teaching that meets the needs of SEND and higher attainers

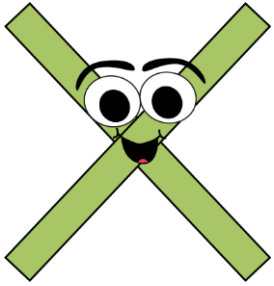
Together Everyone Achieves More

Aims of the National Curriculum

Fluent recall of mental maths facts e.g. times tables, number bonds. Etc.

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.

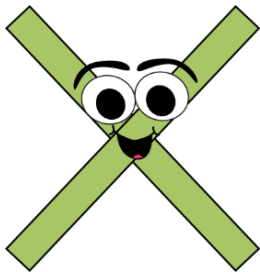
Problem solving - applying their skills to real-life contexts.



YEAR 3 MULTIPLICATION AND DIVISION

National Curriculum Objectives:

- recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- 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
- solve problems, including missing number problems, involving multiplication and division



Year 4 Multiplication and Division

National Curriculum Objectives:

- Recall multiplication and division facts for multiplication tables up to 12×12
- Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- Recognise and use factor pairs and commutativity in mental calculations
- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

How many different ways?

$$18 \times 5 =$$

Counting Stick Multiplication



Times Table Rockstars



Games and Activities

<https://mathsframe.co.uk/en/resources/resource/477/Multiplication-Tables-Check>

<https://www.timestables.co.uk/>

The screenshot shows the homepage of Timestables.co.uk. At the top, there is a navigation bar with 'Teacher login', 'Login', and 'Create free account' options. Below this is a banner for 'Timestables.co.uk' with the tagline 'Learn the times tables here!' and a language selector for 'English (UK)'. A central navigation area features colorful buttons for years 1 through 12. The main content area is titled 'Learn your times tables' and includes a 'Menu' sidebar with links to Home, Times tables games, Speed Test, Times Tables diploma, Multiplication Tables Check, Times tables grid, worksheets, Trophy Cabinet, and Contact. The main content area also features a grid of buttons for selecting times tables (1 to 12) and a 'Practise the Multiplication tables check' section with a visual representation of a multiplication problem.

The screenshot shows the header of the Mathsframe.co.uk website. It features the 'MATHSFRAME.CO.UK' logo in large blue letters. To the right, there are links for 'REGISTER / LOGIN' and a search bar. Below the logo, there is a navigation menu with links for 'Home', 'About', 'Resources', 'iPad Apps', 'Android Apps', 'Worksheets', and 'Contact'. At the bottom of the header, a small text line reads 'Spellingframe.co.uk - a free interactive website to practise and test spellings from the KS2 spelling curriculum'.

Multiplication Tables Check

This activity exactly mirrors the 'Multiplication Tables Check' that will be given to children at the end of Year 4. They are tested on their multiplication tables up to 12 x 12. There are twenty-five questions and children have six seconds to answer each question and three seconds between questions. The questions are generated randomly using the same rules as the 'Multiplication Tables Check' (see below).

Results can be downloaded and printed at the end of the test.

A similar activity which tests recall of number bonds can be found [here](#).

For more multiplication games click [here](#).

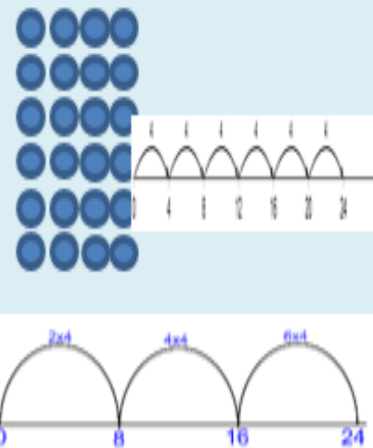



Multiplication Table	Minimum number of items in each form	Maximum number of items in each form
1	Not applicable	Not applicable
2	0	2
3	1	3
4	1	3
5	1	3
6	2	4
7	2	4
8	2	4
9	2	4
10	0	2
11	1	3
12	2	4

The screenshot shows the interface of the 'Multiplication Tables Check' game. At the top, it says 'Multiplication Tables Check' and 'Time left: 2'. Below this is a large input box containing the equation '3 x 8 = 24'. To the right of the input box is a numeric keypad with buttons for digits 1-9, 0, and ENTER. A 'Play game' button is located below the keypad. At the bottom left, there is a small box indicating 'Time allowed: 6 seconds' and 'Tables selected: All'. The bottom right corner shows 'Question 1 of 25' and the Mathsframe logo.

POPULAR MATHS GAMES

The screenshot shows a row of colorful buttons for various maths games. The buttons are labeled: 'Multiplication Tables', 'Maths Quiz', 'Maths Memory', 'Maths Spelling', 'Maths Trivia', 'Maths Crossword', 'Maths Sudoku', 'Maths Word Search', 'Maths Maze', 'Maths Board Game', 'Maths Connect Four', 'Maths Hangman', 'Maths Jeopardy', 'Maths Ludo', 'Maths Snakes and Ladders', 'Maths Uno', 'Maths War', 'Maths Yahtzee', 'Maths Zop', 'Maths Zop 2', 'Maths Zop 3', 'Maths Zop 4', 'Maths Zop 5', 'Maths Zop 6', 'Maths Zop 7', 'Maths Zop 8', 'Maths Zop 9', 'Maths Zop 10', 'Maths Zop 11', 'Maths Zop 12', 'Maths Zop 13', 'Maths Zop 14', 'Maths Zop 15', 'Maths Zop 16', 'Maths Zop 17', 'Maths Zop 18', 'Maths Zop 19', 'Maths Zop 20', 'Maths Zop 21', 'Maths Zop 22', 'Maths Zop 23', 'Maths Zop 24', 'Maths Zop 25'.

MULTIPLICATION

<p>Year 3</p> <p>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</p>	<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>Multiply single digits by 20,30,40,50 and 80</p>	 <p>$4 \times 6 = 24$</p> <p>Use arrays and number lines to count in multiples</p>	<p>Using partitioning to multiply</p> <p>$57 \times 2 = 114$ $50 \times 2 = 100$ $7 \times 2 = 14$ $100 + 14 = 114$</p> 	<p>Scaling</p> <p>Making a 5cm line 4 times longer</p> <p>$5\text{cm} \times 4 = 20\text{cm}$</p> 	<p>$48 \times 3 = 144$ (Partitioning)</p> <table border="1" data-bbox="1681 499 1987 742"> <tr> <td>x</td> <td>40</td> <td>8</td> </tr> <tr> <td>3</td> <td>120</td> <td>24</td> </tr> </table>  <p>$120 + 24 = 144$</p>	x	40	8	3	120	24
x	40	8									
3	120	24									

Multiplication

67×9			
\times	60	7	$540 + 63 = 603$
9	540	63	
437×6			
\times	400	30	7
6	2400	180	42
$2400 + 180 + 42 = 2622$			

Partitioning grid multiplication leading to formal compact methods

$$67 \times 9 =$$
$$\begin{array}{r} 67 \\ 9 \\ \hline 603 \end{array}$$

Multiplication Rally Coaching



Roll Dice and Rally Coaching

Reasoning with Multiplication

Here are three multiplications.

	6	1			7	4			2	6
x		5		x		7		x		4
	3	5		4	9	8		8	2	4

Correct the multiplications.

Tom baked muffins in a tray like this.

Tom wasn't sure how many he baked, but he used 27, 28 or 29 tins!



When he counted them there were 174 muffins. How many tins did he use?