

## St Mark's Times Tables System



**Updated May 2023**

At St Mark's, our aim is for children to become fluent in their multiplication and division facts. Being 'fluent' means that children are able to rapidly recall their times tables. If children can recall their tables at speed, it eases cognitive load for pupils and allows them to assess other areas of the Mathematics curriculum more readily.

### The National Curriculum

The National Curriculum provides statutory guidance for schools which has guided us in developing our times tables system. The aim of the National Curriculum is for pupils to recall all their times tables by the end of year 4. This is broken down as follows:

<b>Year 2 Expectation</b>	Recall multiplication and division facts for the 2, 5 and 10 tables
<b>Year 3 Expectation</b>	Recall multiplication and division facts for the 3, 4 and 8 tables
<b>Year 4 Expectation</b>	Recall multiplication and division facts up to 12 x 12

### Times Tables Teaching Sequence and Progression

From 2023, a new Times Tables teaching programme was implemented for years 1 – 6. This programme is designed for children to be moving at broadly the same pace, learning the same Times Tables together as a class. Our long-term plan, and order of teaching is detailed below:

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Skip Count in 1s, 2s, 5s and 10s					
Year 2	Skip Count in 2s, 5s and 10s	2 x÷ 1 x÷ 0 x÷	10 x÷	5 x÷	Revision	Revision Skip Count in 3s
Year 3	Revision	3 x÷	4 x÷	8 x÷	11 x÷	Revision
Year 4	6 x÷	9 x÷	7 x÷	12 x÷	Revision	<b>Year 4 Multiplication Tables Check</b>
Year 5	Revision				Revision and squares	Revision and cubes
Year 6	Revision and derived facts					

Retrieval practice is integral within the way we learn at St Mark's. Once a times tables is taught, children will continue revising these facts in the months and years that follow, with the aim that learning is never forgotten, and that the recall of these facts become more efficient over time.

### Facts taught by the end of Year 2:

	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0x0 0÷0	0x1 0÷1	0x2 0÷2	0x3 0÷3	0x4 0÷4	0x5 0÷5	0x6 0÷6	0x7 0÷7	0x8 0÷8	0x9 0÷9	0x10 0÷10	0x11 0÷11	0x12 0÷12
1	1x0 0÷0	1x1 1÷1	1x2 2÷2	1x3 3÷3	1x4 4÷4	1x5 5÷5	1x6 6÷6	1x7 7÷7	1x8 8÷8	1x9 9÷9	1x10 10÷10	1x11 11÷11	1x12 12÷12
2	2x0 0÷0	2x1 2÷1	2x2 4÷2	2x3 6÷3	2x4 8÷4	2x5 10÷5	2x6 12÷6	2x7 14÷7	2x8 16÷8	2x9 18÷9	2x10 20÷10	2x11 22÷11	2x12 24÷12
3	3x0 0÷0	3x1 3÷1	3x2 6÷2	3x3 9÷3	3x4 12÷4	3x5 15÷5	3x6 18÷6	3x7 21÷7	3x8 24÷8	3x9 27÷9	3x10 30÷10	3x11 33÷11	3x12 36÷12
4	4x0 0÷0	4x1 4÷1	4x2 8÷2	4x3 12÷3	4x4 16÷4	4x5 20÷5	4x6 24÷6	4x7 28÷7	4x8 32÷8	4x9 36÷9	4x10 40÷10	4x11 44÷11	4x12 48÷12
5	5x0 0÷0	5x1 5÷1	5x2 10÷2	5x3 15÷3	5x4 20÷4	5x5 25÷5	5x6 30÷6	5x7 35÷7	5x8 40÷8	5x9 45÷9	5x10 50÷10	5x11 55÷11	5x12 60÷12
6	6x0 0÷0	6x1 6÷1	6x2 12÷2	6x3 18÷3	6x4 24÷4	6x5 30÷5	6x6 36÷6	6x7 42÷7	6x8 48÷8	6x9 54÷9	6x10 60÷10	6x11 66÷11	6x12 72÷12
7	7x0 0÷0	7x1 7÷1	7x2 14÷2	7x3 21÷3	7x4 28÷4	7x5 35÷5	7x6 42÷6	7x7 49÷7	7x8 56÷8	7x9 63÷9	7x10 70÷10	7x11 77÷11	7x12 84÷12
8	8x0 0÷0	8x1 8÷1	8x2 16÷2	8x3 24÷3	8x4 32÷4	8x5 40÷5	8x6 48÷6	8x7 56÷7	8x8 64÷8	8x9 72÷9	8x10 80÷10	8x11 88÷11	8x12 96÷12
9	9x0 0÷0	9x1 9÷1	9x2 18÷2	9x3 27÷3	9x4 36÷4	9x5 45÷5	9x6 54÷6	9x7 63÷7	9x8 72÷8	9x9 81÷9	9x10 90÷10	9x11 99÷11	9x12 108÷12
10	10x0 0÷0	10x1 10÷1	10x2 20÷2	10x3 30÷3	10x4 40÷4	10x5 50÷5	10x6 60÷6	10x7 70÷7	10x8 80÷8	10x9 90÷9	10x10 100÷10	10x11 110÷11	10x12 120÷12
11	11x0 0÷0	11x1 11÷1	11x2 22÷2	11x3 33÷3	11x4 44÷4	11x5 55÷5	11x6 66÷6	11x7 77÷7	11x8 88÷8	11x9 99÷9	11x10 110÷10	11x11 121÷11	11x12 132÷12
12	12x0 0÷0	12x1 12÷1	12x2 24÷2	12x3 36÷3	12x4 48÷4	12x5 60÷5	12x6 72÷6	12x7 84÷7	12x8 96÷8	12x9 108÷9	12x10 120÷10	12x11 132÷11	12x12 144÷12

Year 2 Facts

### Facts taught by the end of Year 3:

	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0x0 0÷0	0x1 0÷1	0x2 0÷2	0x3 0÷3	0x4 0÷4	0x5 0÷5	0x6 0÷6	0x7 0÷7	0x8 0÷8	0x9 0÷9	0x10 0÷10	0x11 0÷11	0x12 0÷12
1	1x0 0÷0	1x1 1÷1	1x2 2÷2	1x3 3÷3	1x4 4÷4	1x5 5÷5	1x6 6÷6	1x7 7÷7	1x8 8÷8	1x9 9÷9	1x10 10÷10	1x11 11÷11	1x12 12÷12
2	2x0 0÷0	2x1 2÷1	2x2 4÷2	2x3 6÷3	2x4 8÷4	2x5 10÷5	2x6 12÷6	2x7 14÷7	2x8 16÷8	2x9 18÷9	2x10 20÷10	2x11 22÷11	2x12 24÷12
3	3x0 0÷0	3x1 3÷1	3x2 6÷2	3x3 9÷3	3x4 12÷4	3x5 15÷5	3x6 18÷6	3x7 21÷7	3x8 24÷8	3x9 27÷9	3x10 30÷10	3x11 33÷11	3x12 36÷12
4	4x0 0÷0	4x1 4÷1	4x2 8÷2	4x3 12÷3	4x4 16÷4	4x5 20÷5	4x6 24÷6	4x7 28÷7	4x8 32÷8	4x9 36÷9	4x10 40÷10	4x11 44÷11	4x12 48÷12
5	5x0 0÷0	5x1 5÷1	5x2 10÷2	5x3 15÷3	5x4 20÷4	5x5 25÷5	5x6 30÷6	5x7 35÷7	5x8 40÷8	5x9 45÷9	5x10 50÷10	5x11 55÷11	5x12 60÷12
6	6x0 0÷0	6x1 6÷1	6x2 12÷2	6x3 18÷3	6x4 24÷4	6x5 30÷5	6x6 36÷6	6x7 42÷7	6x8 48÷8	6x9 54÷9	6x10 60÷10	6x11 66÷11	6x12 72÷12
7	7x0 0÷0	7x1 7÷1	7x2 14÷2	7x3 21÷3	7x4 28÷4	7x5 35÷5	7x6 42÷6	7x7 49÷7	7x8 56÷8	7x9 63÷9	7x10 70÷10	7x11 77÷11	7x12 84÷12
8	8x0 0÷0	8x1 8÷1	8x2 16÷2	8x3 24÷3	8x4 32÷4	8x5 40÷5	8x6 48÷6	8x7 56÷7	8x8 64÷8	8x9 72÷9	8x10 80÷10	8x11 88÷11	8x12 96÷12
9	9x0 0÷0	9x1 9÷1	9x2 18÷2	9x3 27÷3	9x4 36÷4	9x5 45÷5	9x6 54÷6	9x7 63÷7	9x8 72÷8	9x9 81÷9	9x10 90÷10	9x11 99÷11	9x12 108÷12
10	10x0 0÷0	10x1 10÷1	10x2 20÷2	10x3 30÷3	10x4 40÷4	10x5 50÷5	10x6 60÷6	10x7 70÷7	10x8 80÷8	10x9 90÷9	10x10 100÷10	10x11 110÷11	10x12 120÷12
11	11x0 0÷0	11x1 11÷1	11x2 22÷2	11x3 33÷3	11x4 44÷4	11x5 55÷5	11x6 66÷6	11x7 77÷7	11x8 88÷8	11x9 99÷9	11x10 110÷10	11x11 121÷11	11x12 132÷12
12	12x0 0÷0	12x1 12÷1	12x2 24÷2	12x3 36÷3	12x4 48÷4	12x5 60÷5	12x6 72÷6	12x7 84÷7	12x8 96÷8	12x9 108÷9	12x10 120÷10	12x11 132÷11	12x12 144÷12

Year 2 Facts

Year 3 Facts

## Facts taught by the end of Year 4:

	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0 x 0 0 ÷ 0	0 x 1 0 ÷ 1	0 x 2 0 ÷ 2	0 x 3 0 ÷ 3	0 x 4 0 ÷ 4	0 x 5 0 ÷ 5	0 x 6 0 ÷ 6	0 x 7 0 ÷ 7	0 x 8 0 ÷ 8	0 x 9 0 ÷ 9	0 x 10 0 ÷ 10	0 x 11 0 ÷ 11	0 x 12 0 ÷ 12
1	1 x 0 0 ÷ 1	1 x 1 1 ÷ 1	1 x 2 2 ÷ 2	1 x 3 3 ÷ 3	1 x 4 4 ÷ 4	1 x 5 5 ÷ 5	1 x 6 6 ÷ 6	1 x 7 7 ÷ 7	1 x 8 8 ÷ 8	1 x 9 9 ÷ 9	1 x 10 10 ÷ 10	1 x 11 11 ÷ 11	1 x 12 12 ÷ 12
2	2 x 0 0 ÷ 2	2 x 1 2 ÷ 1	2 x 2 4 ÷ 2	2 x 3 6 ÷ 3	2 x 4 8 ÷ 4	2 x 5 10 ÷ 5	2 x 6 12 ÷ 6	2 x 7 14 ÷ 7	2 x 8 16 ÷ 8	2 x 9 18 ÷ 9	2 x 10 20 ÷ 10	2 x 11 22 ÷ 11	2 x 12 24 ÷ 12
3	3 x 0 0 ÷ 3	3 x 1 3 ÷ 1	3 x 2 6 ÷ 2	3 x 3 9 ÷ 3	3 x 4 12 ÷ 4	3 x 5 15 ÷ 5	3 x 6 18 ÷ 6	3 x 7 21 ÷ 7	3 x 8 24 ÷ 8	3 x 9 27 ÷ 9	3 x 10 30 ÷ 10	3 x 11 33 ÷ 11	3 x 12 36 ÷ 12
4	4 x 0 0 ÷ 4	4 x 1 4 ÷ 1	4 x 2 8 ÷ 2	4 x 3 12 ÷ 3	4 x 4 16 ÷ 4	4 x 5 20 ÷ 5	4 x 6 24 ÷ 6	4 x 7 28 ÷ 7	4 x 8 32 ÷ 8	4 x 9 36 ÷ 9	4 x 10 40 ÷ 10	4 x 11 44 ÷ 11	4 x 12 48 ÷ 12
5	5 x 0 0 ÷ 5	5 x 1 5 ÷ 1	5 x 2 10 ÷ 2	5 x 3 15 ÷ 3	5 x 4 20 ÷ 4	5 x 5 25 ÷ 5	5 x 6 30 ÷ 6	5 x 7 35 ÷ 7	5 x 8 40 ÷ 8	5 x 9 45 ÷ 9	5 x 10 50 ÷ 10	5 x 11 55 ÷ 11	5 x 12 60 ÷ 12
6	6 x 0 0 ÷ 6	6 x 1 6 ÷ 1	6 x 2 12 ÷ 2	6 x 3 18 ÷ 3	6 x 4 24 ÷ 4	6 x 5 30 ÷ 5	6 x 6 36 ÷ 6	6 x 7 42 ÷ 7	6 x 8 48 ÷ 8	6 x 9 54 ÷ 9	6 x 10 60 ÷ 10	6 x 11 66 ÷ 11	6 x 12 72 ÷ 12
7	7 x 0 0 ÷ 7	7 x 1 7 ÷ 1	7 x 2 14 ÷ 2	7 x 3 21 ÷ 3	7 x 4 28 ÷ 4	7 x 5 35 ÷ 5	7 x 6 42 ÷ 6	7 x 7 49 ÷ 7	7 x 8 56 ÷ 8	7 x 9 63 ÷ 9	7 x 10 70 ÷ 10	7 x 11 77 ÷ 11	7 x 12 84 ÷ 12
8	8 x 0 0 ÷ 8	8 x 1 8 ÷ 1	8 x 2 16 ÷ 2	8 x 3 24 ÷ 3	8 x 4 32 ÷ 4	8 x 5 40 ÷ 5	8 x 6 48 ÷ 6	8 x 7 56 ÷ 7	8 x 8 64 ÷ 8	8 x 9 72 ÷ 9	8 x 10 80 ÷ 10	8 x 11 88 ÷ 11	8 x 12 96 ÷ 12
9	9 x 0 0 ÷ 9	9 x 1 9 ÷ 1	9 x 2 18 ÷ 2	9 x 3 27 ÷ 3	9 x 4 36 ÷ 4	9 x 5 45 ÷ 5	9 x 6 54 ÷ 6	9 x 7 63 ÷ 7	9 x 8 72 ÷ 8	9 x 9 81 ÷ 9	9 x 10 90 ÷ 10	9 x 11 99 ÷ 11	9 x 12 108 ÷ 12
10	10 x 0 0 ÷ 10	10 x 1 10 ÷ 1	10 x 2 20 ÷ 2	10 x 3 30 ÷ 3	10 x 4 40 ÷ 4	10 x 5 50 ÷ 5	10 x 6 60 ÷ 6	10 x 7 70 ÷ 7	10 x 8 80 ÷ 8	10 x 9 90 ÷ 9	10 x 10 100 ÷ 10	10 x 11 110 ÷ 11	10 x 12 120 ÷ 12
11	11 x 0 0 ÷ 11	11 x 1 11 ÷ 1	11 x 2 22 ÷ 2	11 x 3 33 ÷ 3	11 x 4 44 ÷ 4	11 x 5 55 ÷ 5	11 x 6 66 ÷ 6	11 x 7 77 ÷ 7	11 x 8 88 ÷ 8	11 x 9 99 ÷ 9	11 x 10 110 ÷ 10	11 x 11 121 ÷ 11	11 x 12 132 ÷ 12
12	12 x 0 0 ÷ 12	12 x 1 12 ÷ 1	12 x 2 24 ÷ 2	12 x 3 36 ÷ 3	12 x 4 48 ÷ 4	12 x 5 60 ÷ 5	12 x 6 72 ÷ 6	12 x 7 84 ÷ 7	12 x 8 96 ÷ 8	12 x 9 108 ÷ 9	12 x 10 120 ÷ 10	12 x 11 132 ÷ 11	12 x 12 144 ÷ 12

Year 2 Facts	
Year 3 Facts	
Year 4 Facts	

## Teaching Times Tables

Children will learn the premise of multiplication and division within their core Maths lessons. This understanding will be built on within their Times Tables lessons.

At St Mark's, we follow a 'Teaching for Mastery' approach across all our Mathematics. This approach has the premise that all children can achieve and feel successful in their Maths, and ultimately 'master' their curriculum. We follow set principles which underpin this approach such as using visuals, making learning coherent, engaging mathematical thinking and variation.

A whole half term is allocated to learning each new set of Times Tables facts. This longer period of time helps children to gain a deeper understanding, and develop a more secure recall of their multiplication and division facts.

Discrete Times Tables lessons are taught multiple times a week across the school. These lessons follow a sequence of teaching points with the aim that children develop strong conceptual understanding of the facts they are learning as well as rich teaching experiences enabling children to be able to make connections and links within their Mathematics.

As a school, we believe that the emphasis should be on high-quality teaching and learning of Times Tables as opposed to testing however, we do need opportunities to assess the children's learning from time to time. Once a term, children will undertake a 'Times Tables Quiz' which will be comprised of 25 multiplication and division questions which they have previously learned. Results will help teachers to identify areas of strength, but also where support is needed.

An exemplar teaching sequence of the Five Times Tables is detailed below:

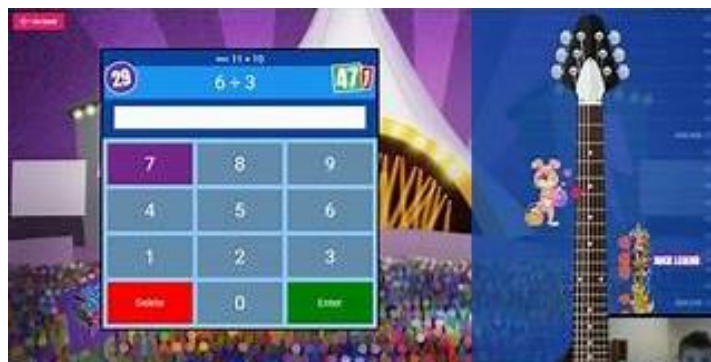
Teaching point 1	Show the expressions for the new times table – which expressions have we already learned through other times tables (communitive law) and which are new? How many facts do we already know? How many new facts have we got to learn?
Teaching point 2	Introduce the new times table by asking – what comes in 5s? Gather ideas from the real world e.g. weekdays, digits on a hand, five pence. Consider links with different aspects of maths/measure e.g time, capacity, mass. Create a class display of their ideas.
Teaching point 3	Focus on the conceptual understanding using both arrays and unitising. Children to orally say expressions for each e.g. zero sevens are zero, one seven is seven etc, Focus on the expression rather than the equation ('answer') Vary the language used so children can make connections and develop a full sense of understanding. E.g. one five, one times five, one group of five etc
Teaching point 4	Ask questions so children make links such as 'what do you notice about 2 groups of 5 and 4 groups of 5?' (relate to doubles). 'What is the connection with 10 groups of 5 and 9 groups of 5?' (adjustment that is it one five less) These connections will aid them in recalling unknown multiples using known facts.
Teaching point 5	Use a counting stick and visual representation of the tens frame to support the recall of the multiples in this times table. Continue to ask questions to help children make the link between different times tables e.g. look at the tens frame, what do you notice about $4 \times 5$ and $8 \times 5$ ? ( $8 \times 5$ is double $4 \times 5$ ) What do you notice about $5 \times 5$ and $10 \times 5$ ? ( $5 \times 5$ is half of $10 \times 5$ ) Use these connections to recall all the multiples, in a logical order.
Teaching point 6	Oral rehearsal. Skip count multiples using different language e.g. "Zero, five, ten, fifteen.... " "Zero times five is zero, one times five is five, two times five is ten... " "Zero fives are zero, one five is five, two fives are ten... " "Zero groups of five is equal to zero, one group of five is equal to five... "
Teaching point 7	Explore generalisations and spot patterns in the multiples. Guide children by asking lines of enquiry e.g. what do you notice about the sum of the digits? Use stem sentences to support making generalisations e.g. 'Multiples of 5 are always/sometimes/never even' or 'The ones digit is always a _ or _ in multiples of 5.'
Teaching point 8	Investigate sorting numbers into multiples of 5, and non-multiples of 5. Children can draw on their knowledge of generalisations to support their thinking.
Teaching point 9	Make links between specific times tables such as the link between the 10 and 5 making it explicit how one fact supports another. Show this link using tables, visuals, equations side by side etc.
Teaching point 10	Explore the difference between consecutive multiples of 5, and learn how this can be used as a strategy e.g. if we know $8 \times 5 = 40$ , we can add or subtract the difference of 5 to find both $7 \times 5$ and also $9 \times 5$ .
Teaching point 11	Counting stick and number track recall with missing numbers. Children will now have explored and acquired some strategies to recall the multiples both in and out of order.
Teaching point 12	Explore the distributive law through arrays alongside a part-part whole model e.g knowing that $12 \times 3 = 10 \times 3 + 2 \times 3$ or that $9 \times 3 = 10 \times 3 - 1 \times 3$ . This gives children yet another strategy to derive their times tables, as well as reinforcing conceptual understanding. Children may use standard partitioning e.g. partitioning 12 into 10 and 2, or non-standard partitioning e.g. 12 into 6 and 6.
Teaching point 13	Practise recall of multiplication facts out of order. The children will have all the taught strategies now. Give them opportunities/activities where they will need to recall them out of order. This could be whole class, paired, individual. This could be online such as hit the button, on the IWB, worksheet based.
Teaching point 14	Apply the known multiplication facts to real life problems. Vary the complexity of the questions from simple one-step problems, to sophisticated multi-step. Encourage children to write equations to match the problem for example 'How many wheels on 5 tricycles?' The equation is $5 \times 3 = 15$ (or $3 \times 5 = 15$ )
Teaching point 15	Relate existing knowing to the inverse (division) through patterning and fact families. In this step, be aware of the misconception that children may think division is commutative, however $3 \div 12 = 4$ is incorrect, for example.
Teaching point 16	Recall division facts out of order supported by reasoning of the related multiplication fact e.g. I know $15 \div 5 = 3$ because $3 \times 5 = 15$ . When we ask – how do you know?
Teaching point 17	Apply the known division facts to real life problems. Encourage children to write equations to match the problem for example 'Hassan has collected some 5p in a jar. He has 45p altogether. How many 5p does he have?' The equation is $45 \div 5 = 9$
Teaching point 18	Practise recall of multiplication and division facts out of order. The children will have all the taught strategies now. Give them opportunities/activities where they will need to recall them out of order as a whole class, paired, and individual as well as orally and written recall.

## DfE Year 4 Multiplication Check

In 2022, the Department for Education introduced a statutory Multiplication Check for Year 4 pupils which takes place in June of the Summer Term. The purpose of the check is to determine whether children can fluently recall their Times Tables up to 12 x 12, which is essential for future success in Mathematics. This test will also help our school to identify pupils who may need additional support within Year 5 and 6. The Multiplication Check will be in school time, and will consist of 25 mixed multiplication questions. Pupils will have 6 seconds to answer each question. If you have a pupil in Year 4, you will receive a copy of the children's results in their end of year report.

## Times Tables RockStars

TT RockStars is an educational learning platform which is specifically designed to support children in learning and becoming more fluent in their Times Tables. There are many different games and modes within this platform for children to practice in different ways.



There are also competitive elements where children can play against fellow pupils, the computer or other players from all around the World (within a safe avatar name). This is a useful tool for teachers as we are able to review children's effort and performance, whilst also analysing data to identify any Times Tables which children are finding difficult.

## Supporting Times Tables at Home

Whilst we do have a heavy emphasis on learning times tables at school, this is best supported when children also have opportunities to practise and embed their learning at home too. Times Tables practice is part of our weekly homework expectations, and we would encourage pupils to dedicate some time to practising their recall each week. This practice can be verbal, using home resources, or of course using platforms like TTRockStars or Hit the Button. Please ask your class teacher if you would like any help in knowing how to best support your child at home.