



LEARNING THE TIMES TABLES
MRS CHARLTON
YEAR 4

NATIONAL CURRICULUM

The national curriculum states, 'By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work'. The year 4 programme of study for mathematics also states, 'Pupils should be taught to recall multiplication and division facts for multiplication tables up to 12×12 '. The MTC only assesses the instant recall of multiplication facts. Multiplication and division in a wider context will continue to be assessed through the KS1 and KS2 mathematics assessments.

Importance of committing facts to memory

- Automaticity with number facts frees up the working memory to think about other things such as how to solve a more complex problem (Willingham 2009).
- We need to know the facts so that we can focus on concepts (Willingham 2009).
- We need to know facts so that we can manipulate conceptual relationships.
- Having knowledge of number facts supports pupils to think mathematically as they can use them to reason, see structures and patterns, and make connections (Baroody).

Multiplication tables check 2023

The multiplication tables check (MTC) is statutory for all year 4 pupils registered at state-funded maintained schools, special schools or academies (including free schools) in England.

The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help schools to identify pupils who have not yet mastered their times tables, so that additional support can be provided.

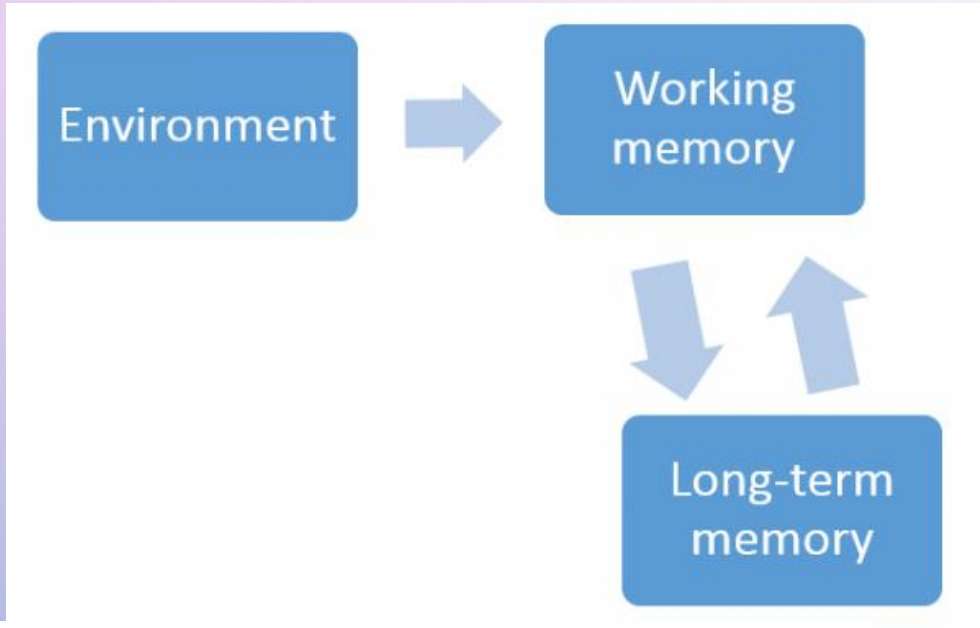
Schools must administer the MTC to all eligible year 4 pupils between Monday 5 June and Friday 16 June 2023.

Roseberry Academy Test Date : Tuesday 13th June

A time limit of **6 seconds** per item has been set for the MTC. There are **25 questions**. This allows pupils the time required to demonstrate their recall of multiplication tables, whilst limiting pupils' ability to work out answers to the questions. There is an emphasis on the **6, 7, 8, 9 and 12** multiplication tables because these have been determined to be the most difficult multiplication tables.

Therefore, we are working on the long term memory. Children must commit memorising facts. This is what a lot of children find difficult! How to we help children to do this?

Memory



1 Adapted from Daniel Willingham, *Why Don't Students Like School* (2009)

Why repeat everything at least 3 times?

Within 20 minutes we forget 40% of what we learned. After another 40 minutes, we forget half of it. One day later, we will have lost more than 70%. *Hermann Ebbinghaus Studies*

Working memory is limited and varies from child to child.

Long term memory is much larger. In order to learn children need to be able to transfer from their working memory to their long term memory.

Working memory can be impaired by:

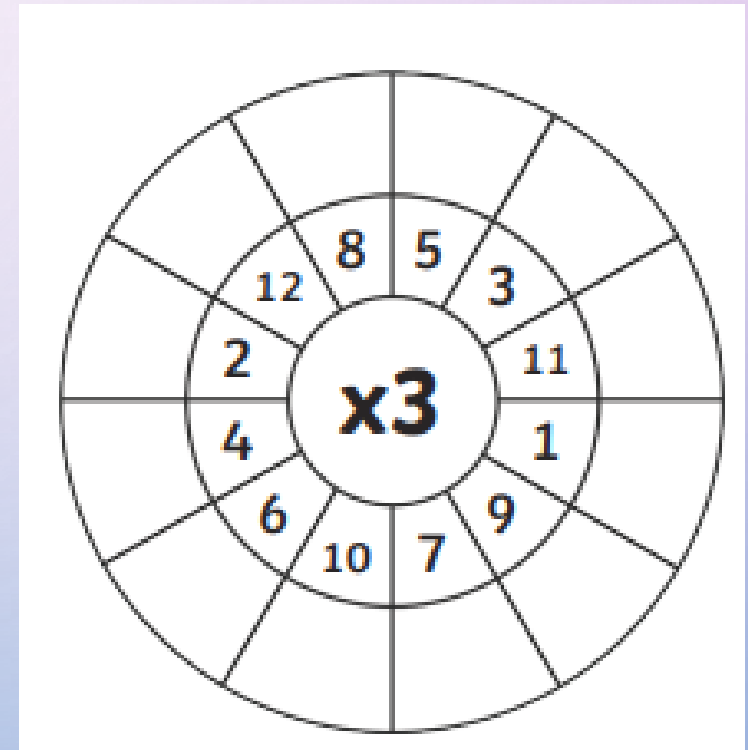
- . Distraction
- . Overload
- . Difficulty
- . Confusion

MULTIPLICATION POSTERS TO DISPLAY

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

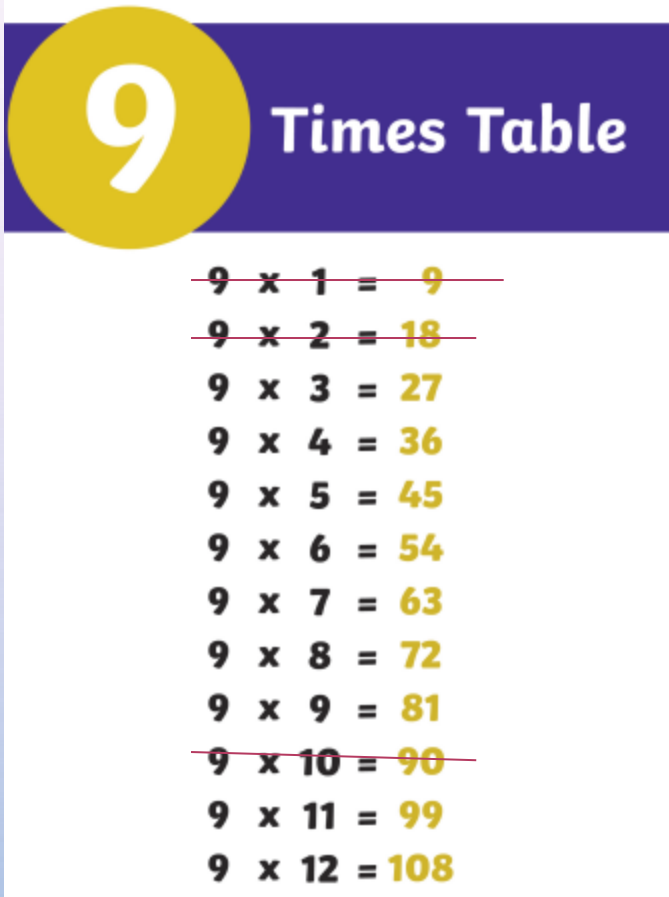
Practise Squares and Wheels

	6	4	7	3	11	8	12	2	9	5	1	10	
4													
7													
9													
5													
10													
8													
6													
2													
12													
11													
1													
3													



Focus on the facts
the children find
hard to remember.

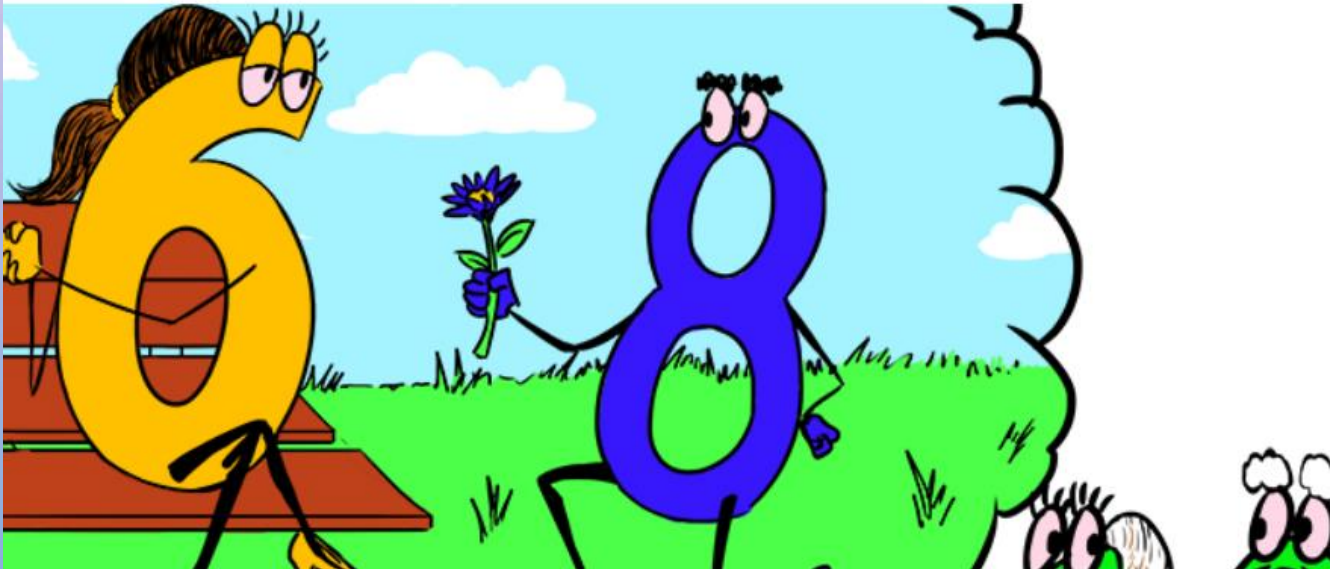
Hang up the facts
in the house. We
display these
around the school
as a splat game.



9 Times Table	
9 x 1 = 9	
9 x 2 = 18	
9 x 3 = 27	
9 x 4 = 36	
9 x 5 = 45	
9 x 6 = 54	
9 x 7 = 63	
9 x 8 = 72	
9 x 9 = 81	
9 x 10 = 90	
9 x 11 = 99	
9 x 12 = 108	

Remember multiplication facts work both ways. Make up silly rhymes for facts that are not 'sticking!'

Six and eight went on a date and didn't come back until they were 48.



$$6 \times 8 = 48$$

$$8 \times 6 = 48$$

$8 \times 8 = 64$ He ate and ate and was sick on the floor,
eight times eight is 64.

$3 \times 3 = 9$ Swing from tree to tree on a vine, three times three is nine.

$7 \times 7 = 49$ Seven times seven is like a rhyme, it all adds up to 49.

9 and 9 have some fun but 9×9 is 81
9 and 7 climb a tree, 9×7 is 63

Priority Table Facts up to 10

2×2							
3×2	3×3						
4×2	4×3	4×4					
5×2	5×3	5×4	5×5				
6×2	6×3	6×4	6×5	6×6			
7×2	7×3	7×4	7×5	7×6	7×7		
8×2	8×3	8×4	8×5	8×6	8×7	8×8	
9×2	9×3	9×4	9×5	9×6	9×7	9×8	9×9

Games

SUPERFINGERS

This is a game for two players.

The game is basically a version of rock, paper, scissors but with numbers.

Two players count to 3 and then make a number using their fingers.

Both players then have to multiply both numbers together and the quickest wins.

player 1



player 2



MULTIPLICATION SNAP

You will need a deck of cards for this game



Flip over the cards as though you are playing snap. The first person to say the correct fact based on the cards turned over (a 2 and a 3 = say 6) gets the cards. The person with the most cards at the end wins.

ANOTHER VERSION OF MULTIPLICATION SNAP

Using a deck of cards. When focussing on a particular times table then place that card face up e.g. 7. The rest of the pack is face down. Flip the top card over and multiply e.g. 3×7 . The first person to say the answer gets the card.

DOMINOES

Each player turns over a domino and multiplies the two ends together.



FORTUNE TELLERS

Make a fortune teller with the times table on it.



BINGO

This game will need 2 players and an adult to ask you the questions. Make a grid of six squares on a piece of paper and write a number in each square from your target tables. Get an adult to ask you some questions. If you have the answer mark it off on your grid. The first player to mark off all their numbers is the winner.



SONGS

3 TIMES TABLE! BY LAUGH ALONG AND LEARN



6 TIMES TABLE

COVER OF
SHAKE IT OFF BY TAYLOR SWIFT

7 TIMES TABLE! BY LAUGH ALONG AND LEARN



4 TIMES TABLE

COVER OF
I'M STILL STANDING BY TARON EGERTON

8 TIMES TABLE

COVER OF
ROLLING IN THE DEEP BY ADELE



9 Times Table Song • One Direction COVER - What makes you beautiful cover

Precision Teaching

Who is Precision Teaching for?



Anyone and everyone! But especially:

- ✓ **Someone who learns very slowly**
- ✓ Someone who benefits from repeated practice and repeated instruction
- ✓ **Someone who has difficulties acquiring basic educational skills**
- ✓ Someone who is lacking in motivation
- ✓ **Someone who has poor concentration**
- ✓ Someone who has trouble remembering

1. Establish a starting point – 5 target facts.
2. Spend five minutes teaching your child the five facts.
3. Use a grid and ask the child to recall the 5 facts Complete “Daily challenge” - one minute in length. No prompting or feedback should be given during this time.
4. Record the score and share their results.
5. Aim 30 correct responses.

Allow for 2 incorrect responses – although the goal is 0!

7. Once the aim rate has been achieved 3 days in succession move on to a new task (i.e. next set of target facts).

6X7	3X7	4X7		

TIPS AND TRICKS

X2

Can your child add? Tell them that multiplying by 2 is simply adding a number to itself.

X4

Multiplying by 4 is the same as doubling a number twice. For example, 4×3 is doubling 3 twice. $3+3=6$ then $6+6=12$.

X6

Did you know that when you multiply 6 by an even number, it ends in the **same** digit?

$6 \times 2 = 12$, $6 \times 4 = 24$, $6 \times 6 = 36$, $6 \times 8 = 48$

X8

Multiplying by 8 is doubling three times.

Example: $8 \times 4 = 32$. That's $4+4=8$, then $8+8=16$, then $16+16=32$.

7×8

You may have heard this one before. When teaching your child the 7×8 fact, tell her to remember **5, 6, 7, 8** because $7 \times 8 = 56$.



The Amazing $9 \times$ Table Trick

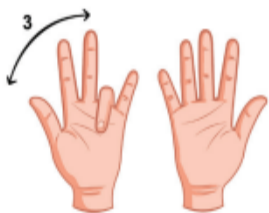
What to do



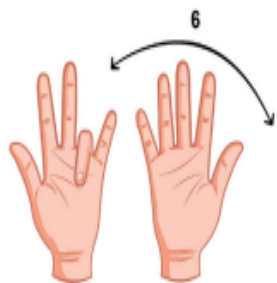
1. Hold out both hands in front of you.



2. To find 4×9 , count in 4 fingers from the left, and hold down this finger.



3. Count all the fingers before the one that's held down – **3**. This is the first number in your answer.



4. Count all the fingers after the one that's held down – **6**. This is the last number of your answer.

So the answer to 4×9 is **3 then 6... 36**

To find the answer to another $9 \times$ table question, just hold down the correct finger and count the fingers on either side. So you hold down your 5th finger for 5×9 , your 7th finger for 7×9 , and so on.

USEFUL WEBSITES

<https://www.timestables.co.uk/multiplication-tables-check/>