



Multiplication Tables Workshop



7th February 2020

Multiplication Tables Check (MTC)

The **Multiplication Tables Check (MTC)** will be administered to children in Year 4, starting in the 2019-20 academic year.

The purpose of the MTC is to determine whether Year 4 pupils can recall their multiplication tables up to 12x12 fluently as outlined in the National Curriculum.

Children will be tested using a computer, where they will have to answer multiplication questions against a clock. The test will last no longer than 5 minutes; children will have 6 seconds to answer each question in a series of 25 with a 3 second break between each question.

A sound recall of times tables will form a strong foundation for all maths learning that follows especially in the lead up to Year 6 SATS.

I'm sure we all remember standing up, chanting tables at school. Learning by rote is one strategy, but there are also other activities we can do with children to help them learn their tables.

The aim of this booklet is to show you some of the strategies we use in school and that you could try at home to help your child with their tables.

We hope you find it useful!



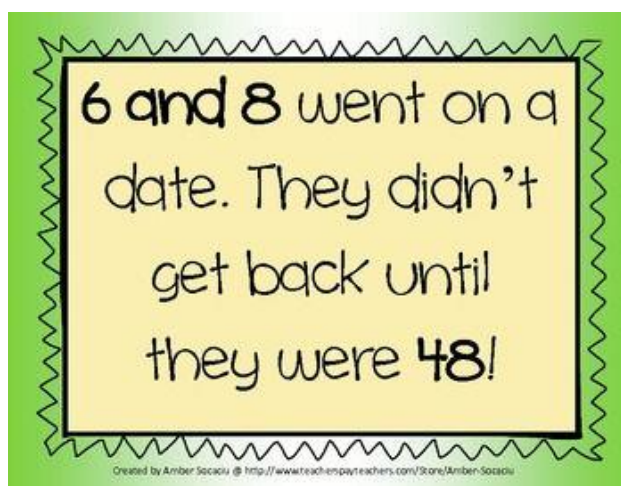
Rhyme Time!

Silly rhymes and songs can help children to remember these patterns, e.g. '0 2 4 6 8, my mum thinks I'm great' – the sillier the better really!

$3 \times 3 = 9$	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.
$8 \times 8 = 64$	He ate and ate and was sick on the floor, eight times eight is 64.

You can:

- See if, together, you can think of a silly rhyme to go with the first few numbers in each table: '**5, 10, 15, 20 ...**'



One Less Equals Nine!

This is a strategy for learning the 9 x tables. The key to it is that for any answer in the nine times table, both digits add up to 9. Try it and see!

1. Subtract 1 from the number you are multiplying by. E.g. 7×9 , one less than 7 is 6.
2. This number becomes the first number in the answer. $7 \times 9 = 6_$
3. The two numbers in the answer add up to 9 so the second number must be 3. $7 \times 9 = 63$



You can:

- Investigate this theory with your child by exploring this rule and finding more patterns. This will familiarise your child with the 9 times tables.

Bingo!

This game will need 2 players!

Make a grid of six squares on a piece of paper and ask your child to write a number in each square from the target tables. Give them a question and if they have the answer, they mark them off. First one to mark off all their numbers is the winner!



You can:

- Turn this into a family game and include a reasonable reward/incentive to entice your child.

Number Squares

When numbers are placed in a number square, highlighted times tables make a visual pattern. Some children find these very visual patterns help them to remember the table.

Here is a number square with the 3 times table highlighted.

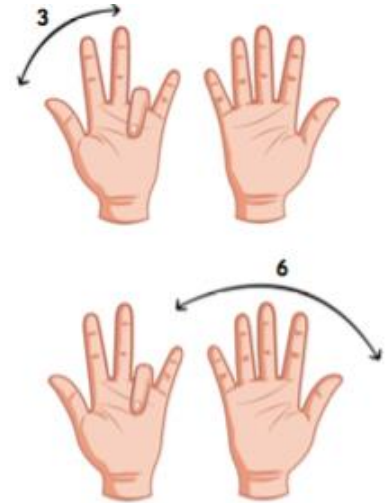
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

You can:

- Print the 3 times table number square and stick it somewhere in your house, where your child will find it easy to read for a few minutes a day. Encourage them to read to 12×3 a few times and then close their eyes and see how much they can recall.
- Print off a plain number square to explore. With your child, choose a times table for them to highlight with a coloured pencil or highlighter pen. See if they can see a pattern appearing. Now practise the times table as above.

9 Times Tables on your Fingers!

1. Hold your hands in front of you with your fingers spread out.
2. For 9×4 bend your 4th finger down (like the picture).
3. You have 3 fingers in front of the bent finger and 6 after the bent finger. Thus the answer must be 36!
4. The technique works for the 9 times table up to 10.



You can:

- Explore with your child which method helps them most with the 9 times table – the more physical hand trick, or the more visual exploration of number patterns.

Super Fingers!

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.



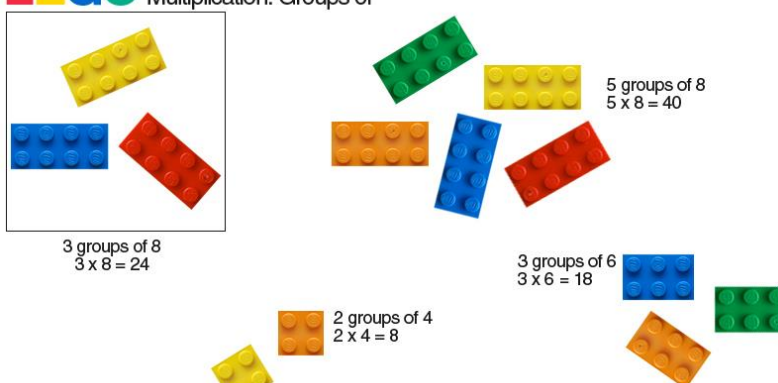
You can:

- Adapt other games to focus on multiplication tables, or create some totally new tables games with your child.
- Start the game by giving children a copy of the times table to refer to if they need it. Then, when they're ready for the challenge, they can try the game without.

Concrete Pictorial & Abstract Approach (CPA)

Manipulation of physical resources and construction of pictorial representations before conquering the abstract understanding of times tables is extremely valuable. Multiplication has a strong presence in our day-to-day life. Look for opportunities to use them when problem-solving when shopping or using recipes. In order for maths experiences to be effective children need to be able to work with and manipulate practical materials.

LEGO Multiplication: Groups of



3 groups of 8
 $3 \times 8 = 24$

5 groups of 8
 $5 \times 8 = 40$

2 groups of 4
 $2 \times 4 = 8$

3 groups of 6
 $3 \times 6 = 18$

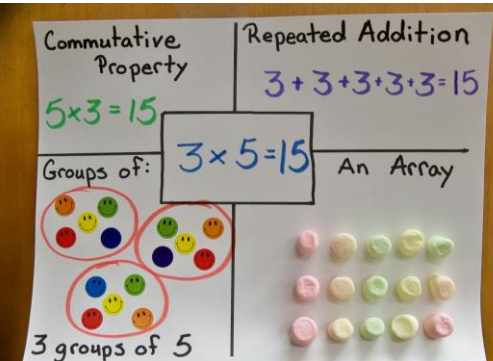
The image shows various LEGO bricks arranged to represent multiplication. A 1x8 yellow brick is shown above a 3x8 array of blue and red bricks. A 1x8 yellow brick is shown above a 5x8 array of orange, blue, and red bricks. A 1x4 orange brick is shown above a 2x4 array of orange bricks. A 1x6 blue brick is shown above a 3x6 array of blue and green bricks.

Commutative Property
 $5 \times 3 = 15$

Repeated Addition
 $3 + 3 + 3 + 3 + 3 = 15$

Groups of: $3 \times 5 = 15$ An Array

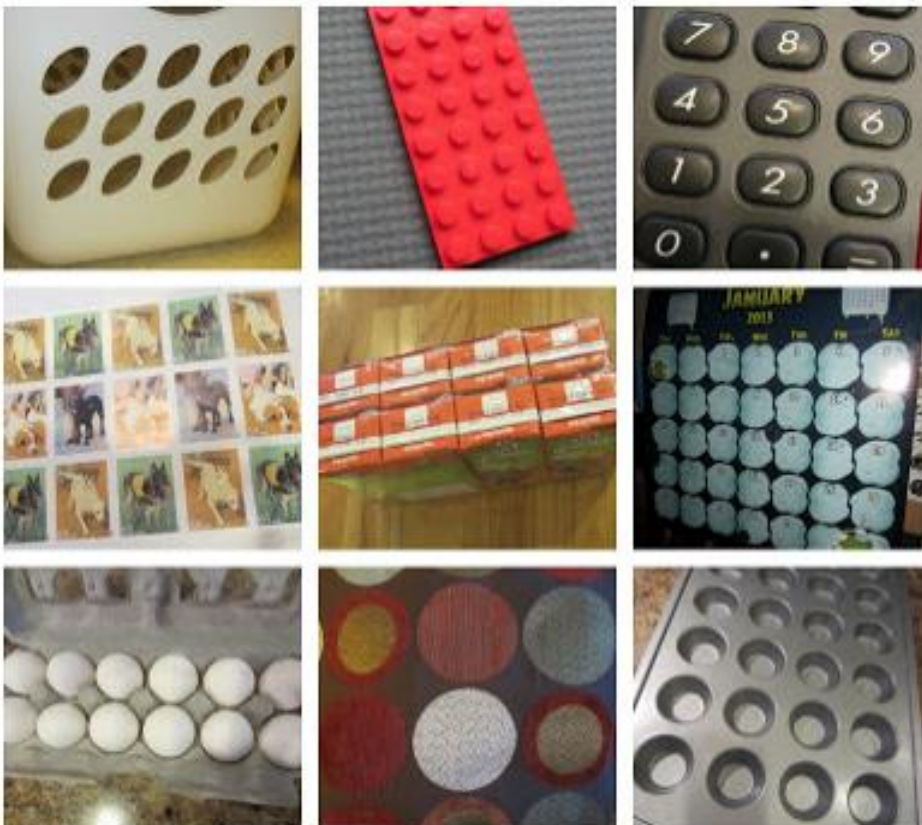
3 groups of 5



The image shows a handwritten page with mathematical concepts. It includes the commutative property $5 \times 3 = 15$, repeated addition $3 + 3 + 3 + 3 + 3 = 15$, and a multiplication array $3 \times 5 = 15$ with three groups of five smiley faces. There are also three groups of five small colored buttons arranged in a grid.

You can:

- Organise a multiplication array hunt. Exploration of arrays will increase your child's understanding of multiplication.



Useful Websites



1. Maths Frame Multiplication Tables Check

<https://mathsframe.co.uk/en/resources/resource/477/Multiplication-Tables-Check>
Timed tests that mirror the multiplication tables check.

2. Timestables.co.uk

<https://www.timestables.co.uk>
A range of tests for specific or all the times tables.

3. Topmarks.co.uk

<https://www.topmarks.co.uk/maths-games/7-11-years/times-tables>
Various games that can be adjusted to specific multiplication tables.

4. Tablestest.com

<https://tablestest.com/>
Multiplication grid test that records the time taken for each question.

5. Transum.org

<https://www.transum.org/Tables/Square.asp>
Multiplication square practice, similar to what has been used in class (Y4).

6. Timestables.me.uk

Online tests. Generate your own tests. Select which tables you need to practise.

7. urbrainy.com

Similar to the online test

8. myminimaths.co.uk/tt38-times-tables-skill-builder/

A 10 day programme to help learn tables

9. mathframe.co.uk/en/resources/resource/477/Multiplication-Tables-

Similar to the online check

Engaging Apps

1. Times Table Game

David Van Bergen
Various questions that can be targeted for each times table.

2. 10 Minutes a Day Times Tables

Dorling Kindersley
Game that records time taken and scores each time you enter a times table race.

3. Math for Kids

Angelico

Multiplication squares and a range of questions.

4. Quick Maths

Shiny Things (99p in app purchase)

Fast paced tests that record the times taken over a period of time.

5. Learn Multiplication to Kids

Mohamed Elwan

Covers all the times tables and gives instant feedback.



We hope that you enjoyed the Multiplication
Tables Workshop today.

If you have any further questions on how to
support your child at home,
please contact your child's class teacher

Thank you!