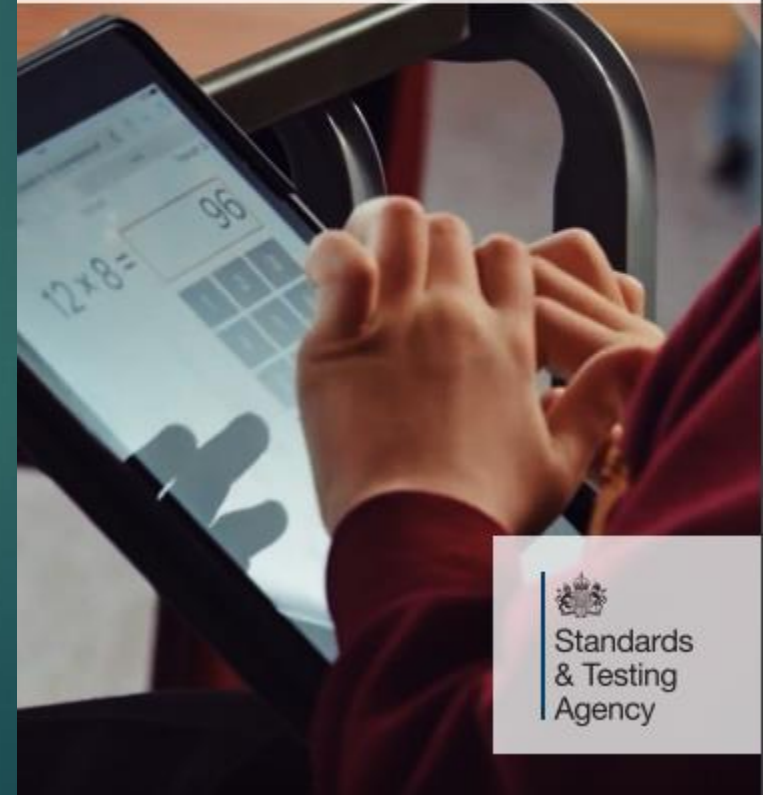


# Times Table Check Information

**Information for parents:**  
multiplication tables check



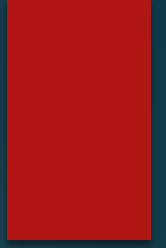
# Aims of this presentation.....

- Curriculum expectations
- Why times tables are important
- The Multiplication Tables Check
- How you can help your child

# National Curriculum Expectations

Year Group	Expectation
Year 1	Count in multiples of <b>2, 5 and 10</b> . Recall and use all <b>doubles to 10</b> and corresponding halves.
Year 2	Recall and use multiplication and division facts for the <b>2, 5 and 10</b> times tables including recognising <b>odd and even numbers</b> .
Year 3	Recall and use multiplication and division facts for the <b>3, 4 and 8</b> times tables.
Year 4	Recall and use multiplication and division facts for tables up to <b>12 x 12</b>
Year 5	Revision of all times tables and division facts up to <b>12 x 12</b>
Year 6	Revision of all times tables and division facts up to <b>12 x 12</b>

# How does knowing tables facts help your child?



- For children to be successful in maths it is essential that they are fluent recalling times tables facts.
- Children who can't recall their times tables struggle in all areas of mathematics, due to cognitive overload.

## A typical Y4 maths problem with 2 steps:

Lulu has 155 beads.

Holly has 4 times as many beads as Lulu has.

How many beads do Lulu and Holly have altogether?

$$\begin{array}{r} 155 \\ \times 4 \\ \hline 620 \end{array}$$

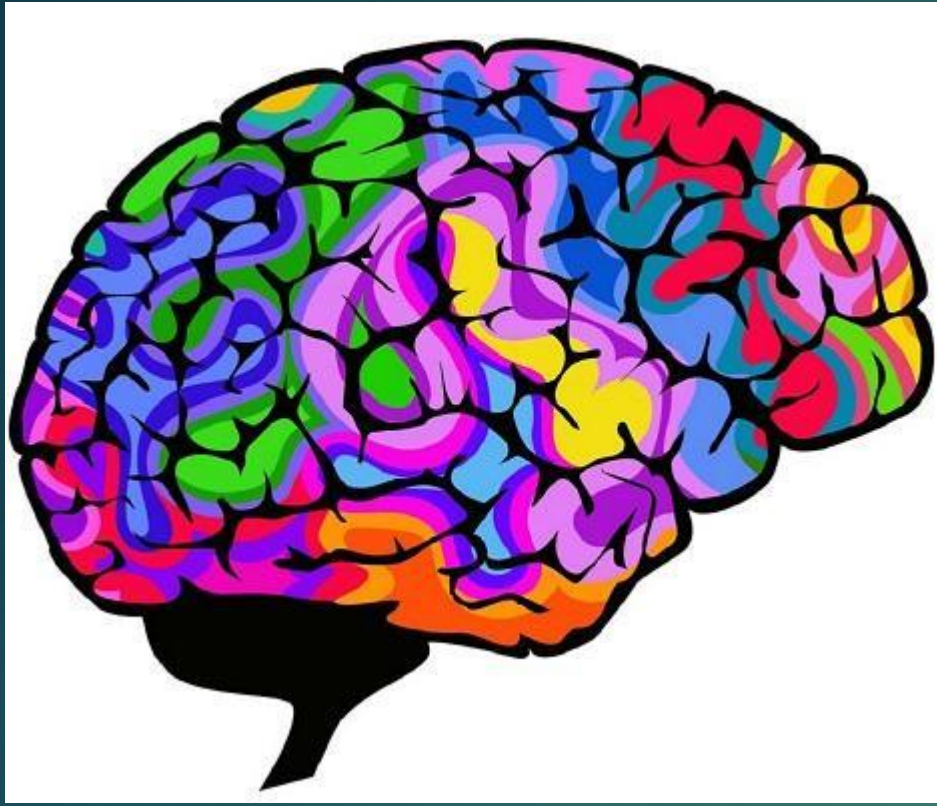
$$\begin{array}{r} 620 \\ + 155 \\ \hline 775 \end{array}$$



# How many facts need to be learnt?

X	0	1	2	3	4	5	6	7	8	9	10	11	12
0													
1													
2			2 x 2										
3			3 x 2	3 x 3									
4			4 x 2	4 x 3	4 x 4								
5			5 x 2	5 x 3	5 x 4	5 x 5							
6			6 x 2	6 x 3	6 x 4	6 x 5	6 x 6						
7			7 x 2	7 x 3	7 x 4	7 x 5	7 x 6	7 x 7					
8			8 x 2	8 x 3	8 x 4	8 x 5	8 x 6	8 x 7	8 x 8				
9			9 x 2	9 x 3	9 x 4	9 x 5	9 x 6	9 x 7	9 x 8	9 x 9			
10													
11			11 x 2	11 x 3	11 x 4	11 x 5	11 x 6	11 x 7	11 x 8	11 x 9		11 x 11	
12			12 x 2	12 x 3	12 x 4	12 x 5	12 x 6	12 x 7	12 x 8	12 x 9		12 x 11	12 x 12

**55 facts**



# Automaticity

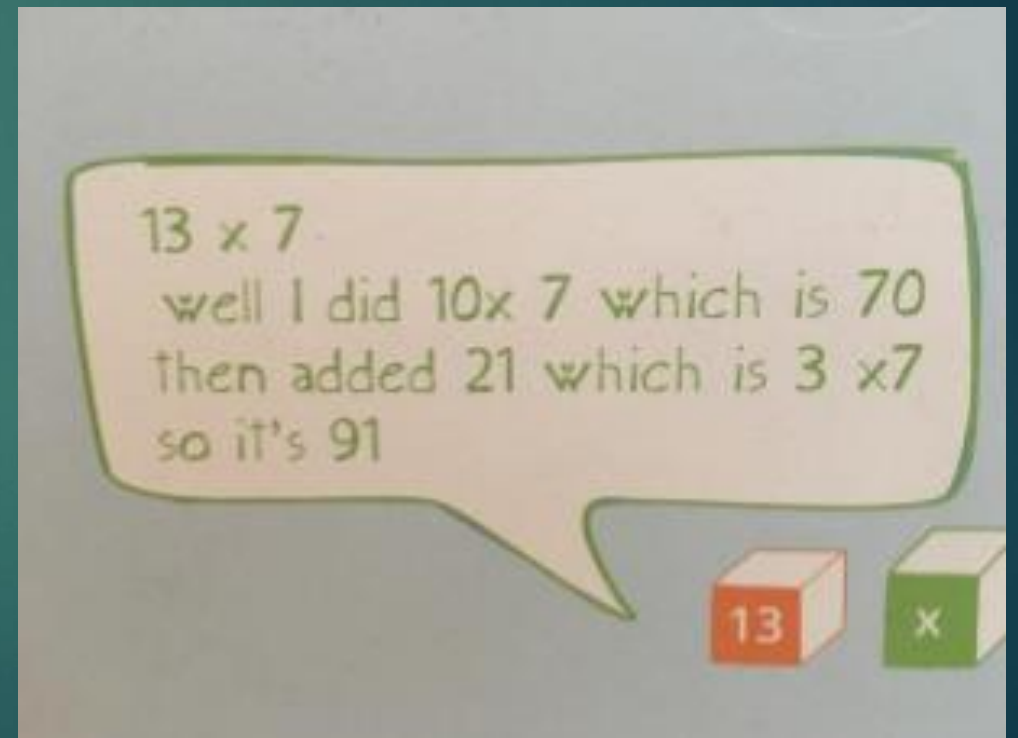
Automaticity is the ability to do things without occupying the brain with the low-level details required, allowing it to become an automatic response pattern or habit. It is usually the result of learning, repetition, and practice. A bit like changing gear when driving.....



Automaticity with table facts is essential so the mind is free to think about mathematical concepts.

Inefficient counting strategies (or skip counting) costs children time and accuracy when solving multi-step problems and they need to move away from these as quickly as possible.

Knowing times table facts is about more than simple recall for the sake of it. It allows children to think deeper about maths and solve more complex problems



# What are times tables used for?

- ▶ **Simple multiplication and division questions:**  $4 \times 6$  or  $12 \div 3$
- ▶ **Long multiplication questions:**  $465 \times 24$
- ▶ **Long division question:**  $689 \div 21$
- ▶ **Related multiplication and division questions:**  $12 \times 600$  or  $4200 \div 70$
- ▶ **Decimal multiplication and division questions:**  $12 \times 0.8$
- ▶ **Fraction questions:**  $\frac{1}{4} \times 480$  or  $\frac{5}{6}$  of 360
- ▶ **Area/volume questions:** what is the area of a square with side lengths of 46cm?
- ▶ **Percentages:** 25% of 480

# Examples of Y4 problems using times tables

Here are three incorrect multiplications.

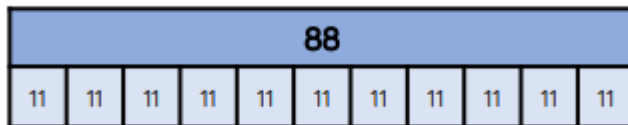
	T	O
	6	1
×		5
<hr/>		
	3	5

	T	O
	7	4
×		7
<hr/>		
4	9	8

	T	O
	2	6
×		4
<hr/>		
8	2	4

Correct the multiplications.

Rosie uses a bar model to represent 88 divided by 11



Explain Rosie's mistake.

Can you draw a bar model to represent 88 divided by 11 correctly?

Here is one batch of muffins.



Teddy bakes 11 batches of muffins. How many muffins does he have altogether?

In each batch there are 3 strawberry, 3 vanilla, 4 chocolate and 2 toffee muffins. How many of each type of muffin does Teddy have in 11 batches?

Teddy sells 5 batches of muffins. How many muffins does he have left?

## Always, sometimes, never

- When multiplying a two-digit number by a one-digit number, the product has 3 digits.
- When multiplying a two-digit number by 8 the product is odd.
- When multiplying a two-digit number by 7 you need to exchange.

Prove it.

Teddy and his mum were having a reading competition.  
In one month, Teddy read 814 pages.

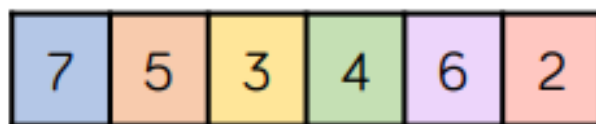


His mum read 4 times as many pages as Teddy.

How many pages did they read altogether?

How many fewer pages did Teddy read?  
Use the bar model to help.

Make the target number of 84 using three of the digits below.



$$\square \times \square \times \square = 84$$

Multiply the remaining three digits together, what is the product of the three numbers?

Is the product smaller or larger than 84?

Can you complete this problem in more than one way?

## Spot the mistake

Alex and Dexter have both completed the same multiplication.



Alex

	H	T	O
	2	3	4
×			6
1	2	0	4

2 2



Dexter

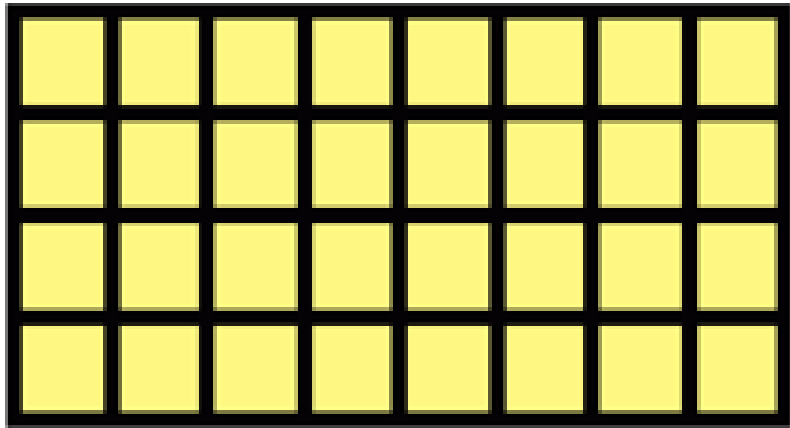
	H	T	O
	2	3	4
×			6
1	4	0	4

2 2

Who has the correct answer?

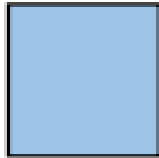
What mistake has been made by one of the children?

4 cm



8 cm

Here is a square. Each of the sides is a whole number of metres.



Which of these lengths could be the perimeter of the shape?

24 m, 34 m, 44 m, 54 m, 64 m, 74 m

Here are three number cards.



Dora, Annie and Eva choose one of the number cards each.

They multiply their number by 5

Dora says,



I did  $40 \times 5$  and then subtracted 2 lots of five.

Annie says,

I multiplied my number by 10 and then divided 210 by 2



Eva says,



I halved my 2-digit number and doubled 5 so I calculated  $21 \times 10$

Which number card did each child have?  
Would you have used a different method to multiply the numbers by 5?

$$\frac{1}{7} \text{ of } 56 = 56 \div \square$$


$$\frac{2}{7} \text{ of } 56$$

$$\frac{3}{7} \text{ of } 56$$

So what is...

# The Multiplication Tables Check (MTC)





“The MTC is an online assessment, designed to determine whether pupils are able to fluently recall their multiplication tables up to 12, through a set of 25 timed questions. It will identify pupils who have not yet mastered this mathematical skill so schools can give them additional support.”

Standards and Testing Agency



- The Check will take place between the 1<sup>st</sup> -12<sup>th</sup> June.  
At Naunton Park, we aim to complete testing in the first week.
- The test is statutory – all children must take part unless the Head Teacher decides that it is inappropriate for a pupil.
- Children will be tested using a school ipad, 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.
- Parents will be told their child's score at the end of the year.

# The test....

The soundcheck mode on Times Table Rock Stars is a good simulation of the real test and children can have a few practises on this to get used to the test however, we wouldn't want this to replace normal practice on TTRS.

For some children, repeated testing may cause additional stress for them!!!

There are ways you can reduce the stress in the settings for them:


- Removing the timer
- Removing the number pad
- Removing the score

However, if your child still finds this stressful, it may be better to simply focus on normal times tables with them



## Administering the test at NPPS

- We will use school ipads in a quiet room
- Children will be tested in small groups of around 6
- Children have 6 seconds to read each question and enter their answer. The school will provide practise for all children in school to make them comfortable.
- Children do not have to press enter after typing in their answer, but if they do, the next question will come up more quickly
- 6 seconds has been found to be the amount of time needed to recall the answer rather than calculate the answer
- Mistakes need to be quickly rectified due to the time restriction

- 
- We can adapt the test for children who have a recognised need – for example we can change the font colour, font size, have a member of staff enter answers on the keyboard. This will only be necessary for a handful of children and is at the school's discretion.

*(These adaptations can also be made to times table rock star by going into the settings)*

- It would be very helpful for us to know of any planned absences for your child from the 1<sup>st</sup> June.

# How can you help at home?

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

## Useful Tips

- Stick to one table at a time to minimise confusion.
- Start with chanting and writing them out slowly in order.
- Then move on to completing the answers quickly in order – on paper or verbally with your child.
  - Finally, move on to completing the answers in any order.
- Keep reminding your child that  $3 \times 4$  is the same as  $4 \times 3$  – this is effectively halves the number of tables facts.
- Each table has a square number  $3 \times 3$ ,  $7 \times 7$  etc. These are special numbers that can act as a memory hook – emphasise them!
- Talk about the numbers as you are encountering them “ $5 \times 7 = 35$  that’s our house number” – this makes more memory hooks.

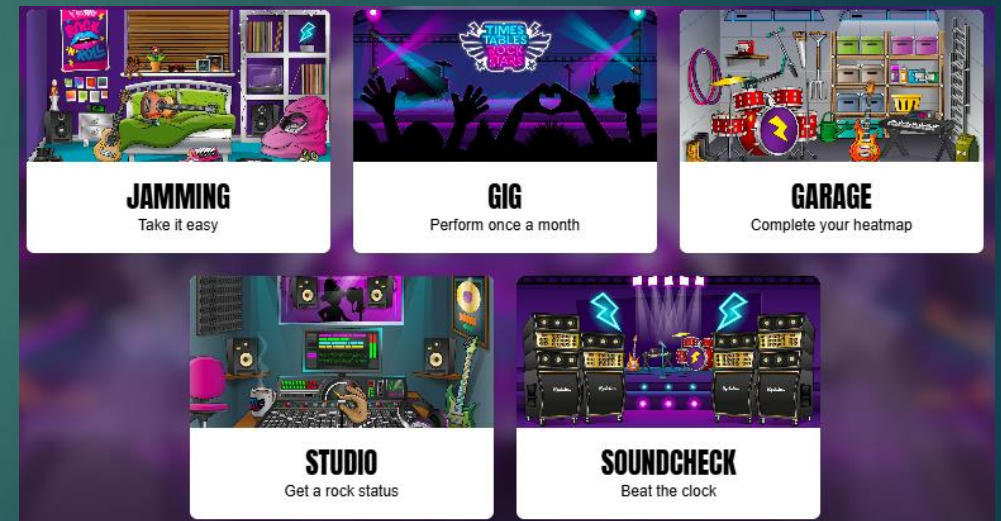
# Time Table Rock Star...

This is still our “Go To” for rehearsal of Times Table facts

We advocate for 3 times a week for 5 minutes a day. This regular interaction is proven to help children master their times table facts ready for year 5 and year 6.

## GAME MODES

- **Jamming:** Confidence builder allowing children to practice individual times tables
- **Garage:** The most important practice for year 4 as this personalizes question to focus on areas where children aren't sure and also builds up a “heat map” so we can support children
- **Studio:** Tests all tables up to 12 x 12 in order to develop fluency. Children should be looking at this when they are becoming proficient in all times tables
- **Gig:** A timed 5-minute challenge with up to 100 questions to test fluency across all tables in a set order.



# How else can you help at home?

- Chanting out loud together
- Ask focus questions in the car/on a journey
- Pin a times table square somewhere visible at home
- Using the BBC 'Supermovers' dance routines
  - <https://www.bbc.co.uk/teach/supermovers/ks2-maths-the-6-times-table-with-fred-the-red/zrq3xyc>
- Finding songs on Youtube
  - <https://www.youtube.com/watch?v=e7rYbk9PNuM>
- Practise test when you feel your child is ready
  - <https://mathsframe.co.uk/en/resources/resource/477/Multiplication-Tables-Check>

## 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!



## 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.



## **Multiplication Snap!**

You will need a deck of cards for this game.

- 1.** Flip over the cards as though you are playing snap.
- 2.** The first to say the fact based on the cards turned over (2 and 3 say 6) gets the card.
- 3.** The person to get all of the cards wins.

## Looking for Patterns

Being able to spot the patterns in numbers is an important skill and can also help with learning times tables. Children can investigate these multiplication rules;

- Odd number x odd number = odd number ( $3 \times 5 = 15$ )
- Even number x even number = even number ( $4 \times 6 = 24$ )
- Odd number x even number = even number ( $3 \times 6 = 18$ )

## Tricky Sixes

Six times tables can be tricky to learn. One helpful trick is that in the 6 times tables, when you multiply an even number by 6, they both end in the same digit.

$$\underline{2} \times 6 = 1\underline{2}$$

$$\underline{4} \times 6 = 2\underline{4}$$

$$\underline{6} \times 6 = 3\underline{6}$$

$$\underline{8} \times 6 = 4\underline{8}$$

## Double, Double!

A quick trick for learning the fours is just to double, double. Double the number and then double it again.

For example;

$3 \times 4$  double 3 is 6, double 6 is 12

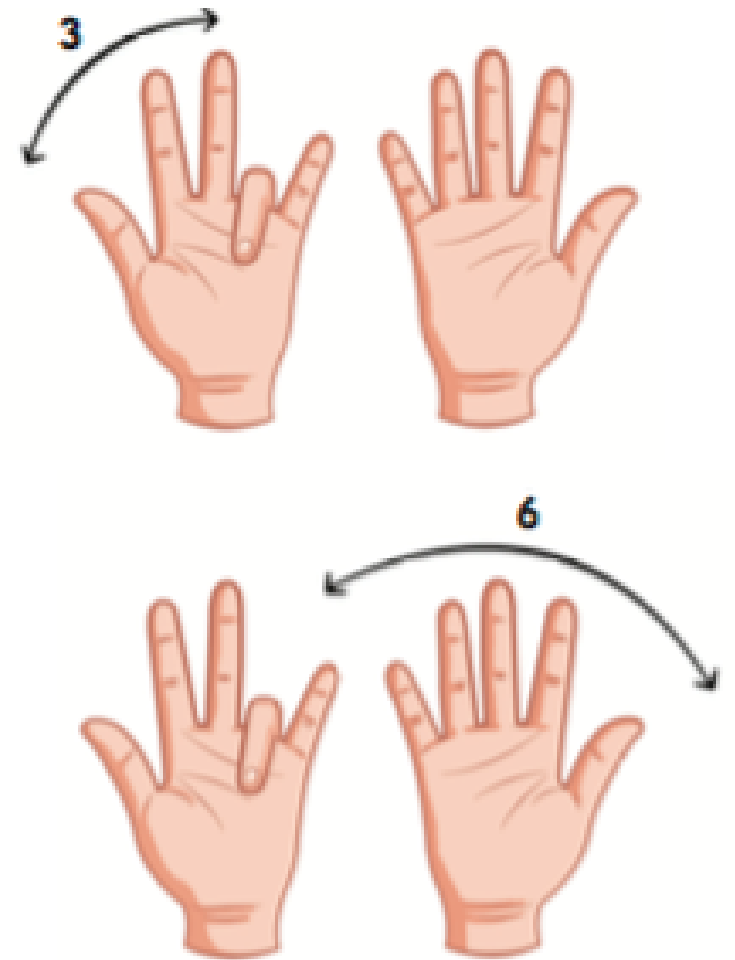
$5 \times 4$  double 5 is 10, double 10 is 20

$6 \times 4$  double 6 is 12, double 12 is 24

$9 \times 4$  double 9 is 18, double 18 is 36

## 9 Times Tables on your Fingers!

1. Hold your hands in front of you with your fingers spread out.
2. For  $9 \times 4$  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.



## **Speed Tables!**

Time challenges can be a really good way of helping times tables become automatic. Some ideas we use in school are;

- measuring the time it takes to write the tables, then trying to beat the time.
- seeing how many times you can write that table in 1 minute.
- race/challenge against other people

# Times table afternoons



- ▶ If you are unsure about how to use times tables games or how to use any resources to support your child, we have two afternoons where parents can come in and play times table games with their children.
- ▶ Thursday 26<sup>th</sup> February at 2 o'clock
- ▶ Thursday 30<sup>th</sup> April at 9 o'clock

Just a little thought to end with.....

“At the end of the day, the most overwhelming key to a child's success is the positive involvement of parents.”

- Jane D. Hull