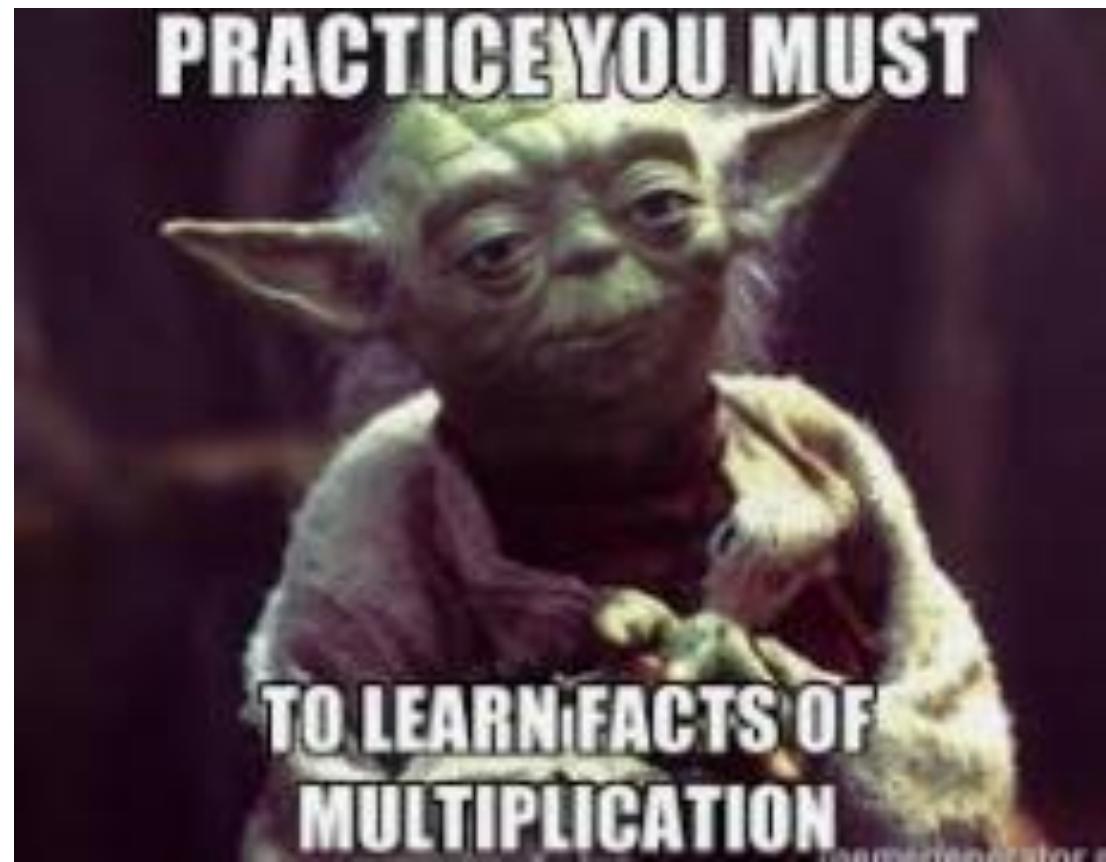
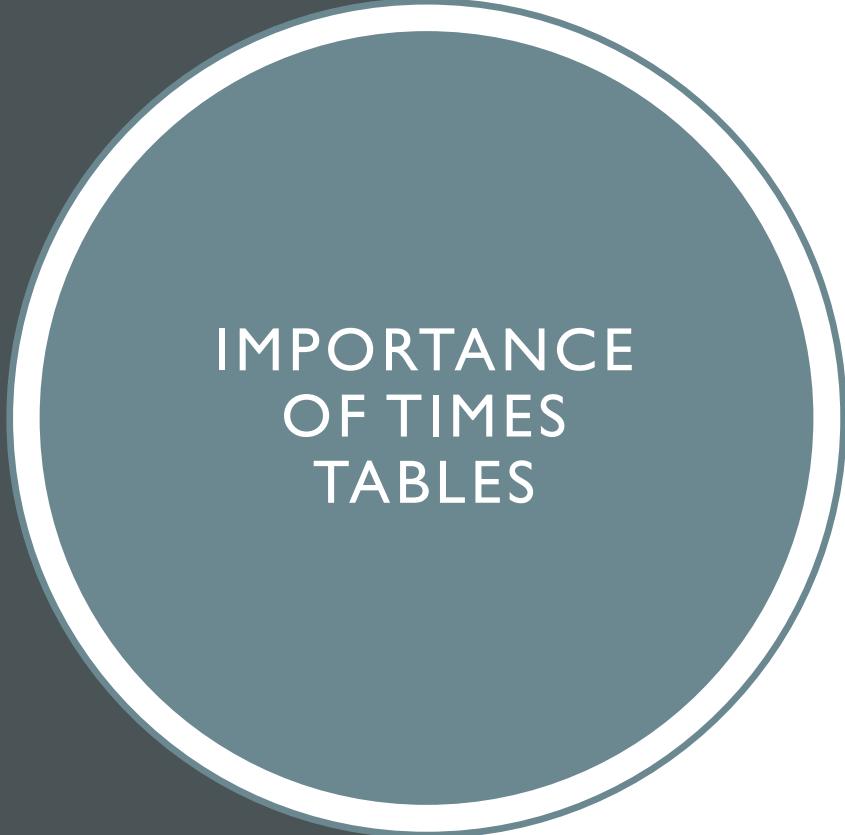


## **TIMES TABLES AND MTC**

Tips for Year 4 parents





## IMPORTANCE OF TIMES TABLES

- Fundamental to many maths topics – fractions, short multiplication and division
- Free up working memory – if times table facts are stored to long term memory, working memory can be freed up for reasoning.
- Multiplication and division feature very highly in KS2 SATS reasoning papers.



MTC

## Multiplication Tables Check

“..determines whether Year 4 can fluently recall their multiplication tables.”

a **key stage 2 assessment** to be taken by pupils at the end of Year 4 (in June).

online test

25 questions on times tables 2 to 12.

6 seconds to answer

3 second rest

taken on computers in Hub

Answers will be entered using a keyboard, by pressing digits using a mouse or using an on-screen number pad

MTC

- The Department For Education opens a ‘try it out area’ in March to familiarise schools and pupils with the system
- There will be a 3 week in June 2023 for schools to administer the check.



MTC

Some children will be eligible for specific arrangements:

- Colour contrast;
- Font size adjustment;
- ‘Next’ button (alternative to 3-second pause);
- Removing on-screen number pad;
- An adult to input answers;
- Audio version;
- Audible time alert.

MTC

6, 7, 8, 9 and 12 times tables are more likely to be asked than the 2, 3, 4, 5, 10 or 11 multiplication tables.

There will always be questions from the 3, 4, 5, 6, 7, 8, 9, 11 and 12 multiplication tables in each test.

No questions from the 1 times table (i.e  $1 \times 8$  or  $8 \times 1$ )

Maximum of 7 questions from the 2, 5 and 10 times tables.

MTC

The child (or teacher) will not be shown the total score on screen.

Guidance is clear that there is no expected pass rate or threshold

Unlike the KS1 Phonics Screening check, children will not be expected to re-sit the check if they do not meet a set threshold

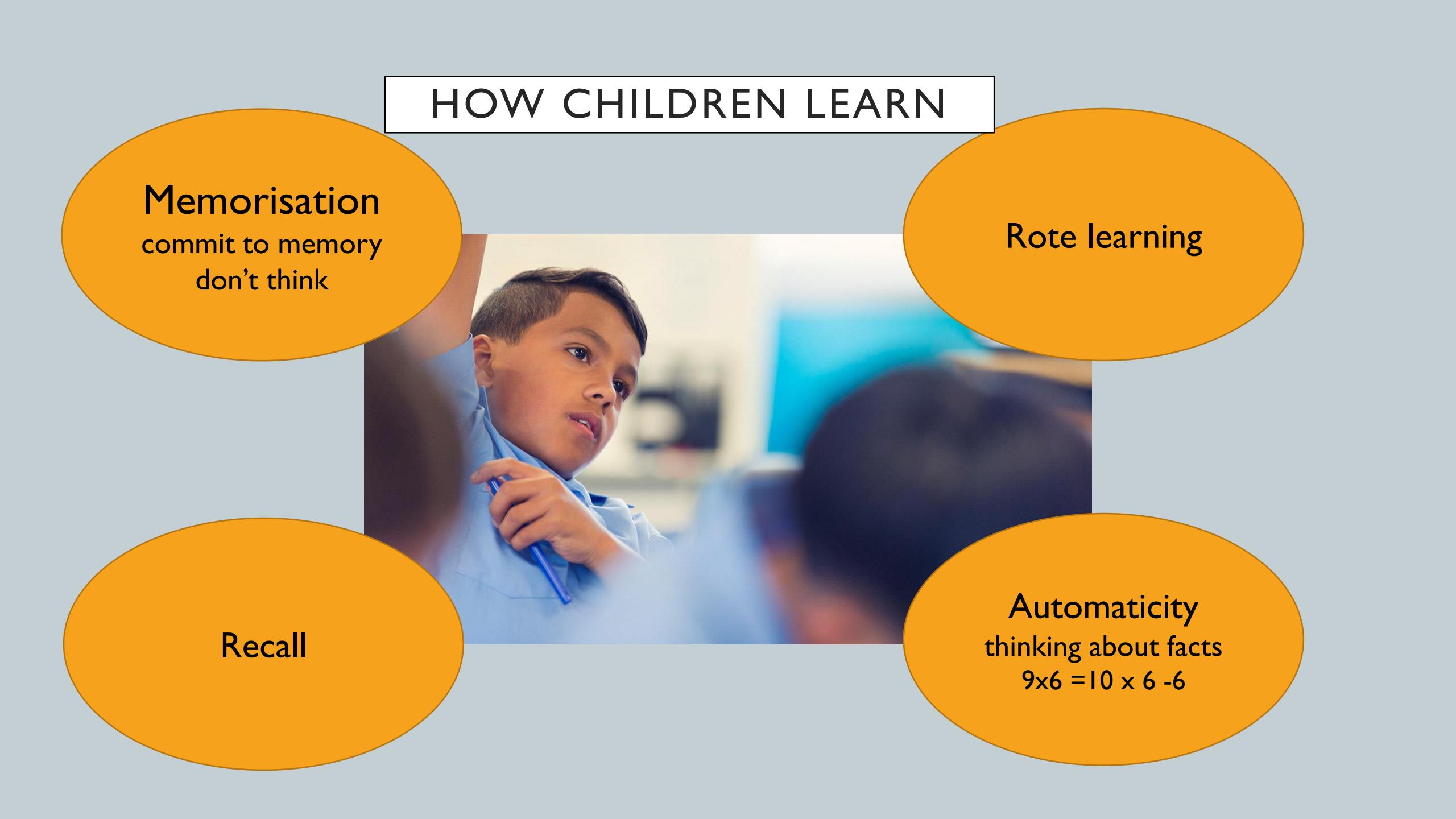
MTC: Multiplication Tables Check  
Year 4, Key Stage 2

*Practice Times Tables Test for Y4, KS2*

MTC

12)  $10 \times 12$

# HOW CHILDREN LEARN



**Memorisation**  
commit to memory  
don't think

**Rote learning**

**Recall**

**Automaticity**  
thinking about facts  
 $9 \times 6 = 10 \times 6 - 6$

## TEACHING METHODS

concrete



the real thing

pictorial



a picture  
representation

abstract

**2**

the written  
number



## EXPLORING PATTERNS

- Being able to link the 3 and the 6 times table facts, knowing that an even table will never contain odd numbers
- Reduce the potential for mistakes and will deepen understanding of how facts can link together.

## REPEATED ADDITION

### CONCRETE



Children might begin by handling real objects...



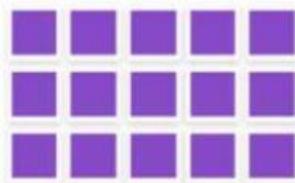
...then using physical representations of them.

- $4 \times 5$  is the same as  $5 + 5 + 5 + 5$ .
- Children need experience of using concrete maths manipulatives such as counters or multilink cubes and pictorial representations of objects, forming arrays.
-



## Divide by 5

$15 \div 5$  is the same as: How many 5s in 15? OR 15 shared into 5 groups



We know  $\square \times 5 = 15$

So, there are  $\square$  lots of 5s in 15 OR  $15 \div 5 = \square$

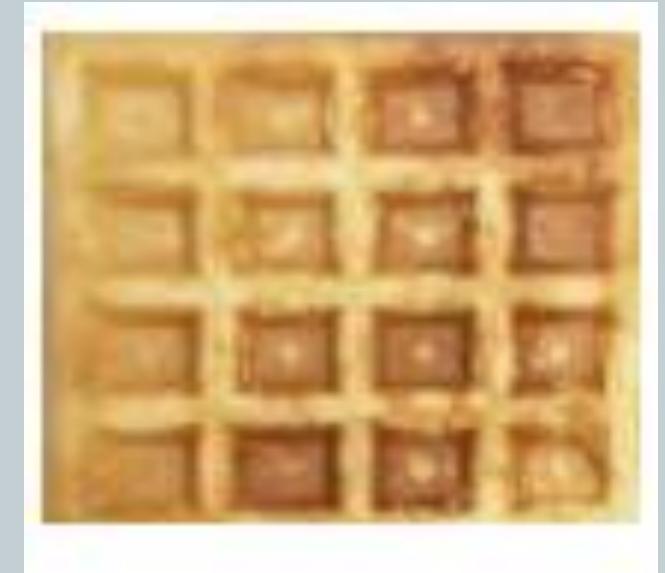
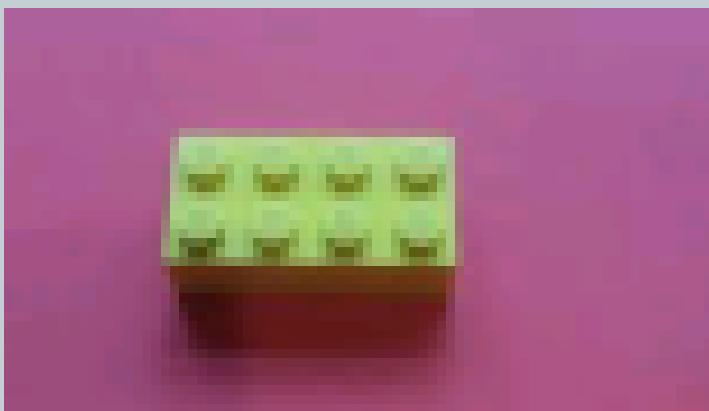
And, share 15 into 5 groups, there are  $\square$  in each group

So  $15 \div 5 = \square$

# MULTIPLICATION AND INVERSE

- $20 \div 5 = 4$  can be worked out because  $5 \times 4 = 20$ .
- Use of arrays is key.
- Experience of pulling arrays apart into groups or sharing.
- Children should start to 'see' an array structure as 5 groups of 4 equal 20 and 20 can be split into 5 groups of 4.

# MAKING ARRAYS REAL



## NUMBER FAMILIES

$$4 \times 5 = 20$$

$$5 \times 4 = 20$$

$$20 \div 5 = 4$$

$$20 \div 4 = 5$$

- Commutative understanding helps see whole number families.

# COUNTING

- Starts to develop before understanding and reasoning
- Continues long after, until all times tables can be counted through sequentially at speed.
- Start by counting concrete items in 2s such as shoes, socks, hands
- Move on to using counters or other manipulatives.

Three friends have six sweets each,  
how many sweets do they have  
altogether?



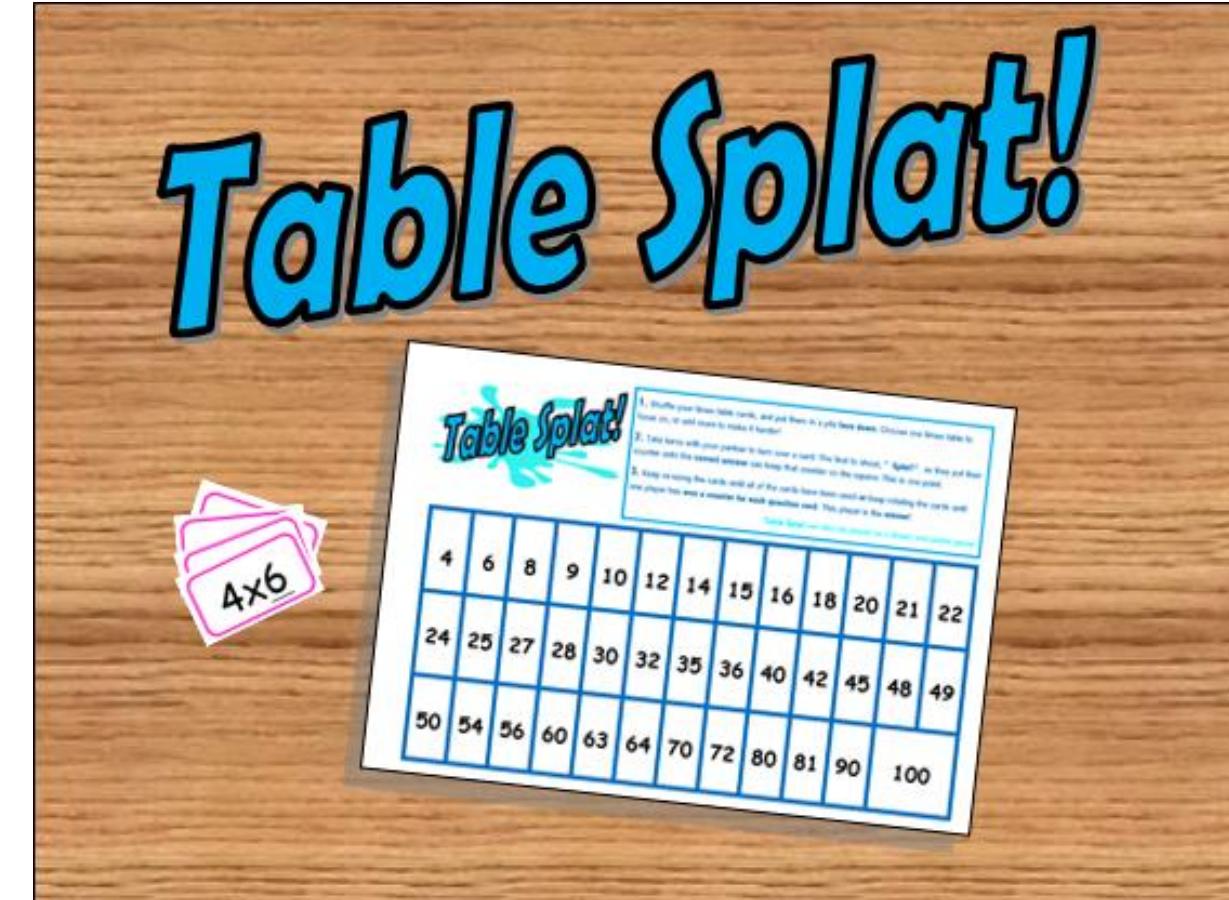
# DRILLING!

- Don't be afraid of this!
- Some drilling is inevitable when developing counting, initially alongside concrete and pictorial manipulatives but quickly moving to chanting '3 times 7 is 21, 4 times 7 is 28' etc.



## FIZZ BUZZ

- 3 times table
- 1, 2, FIZZ, 4, 5, FIZZ,  
7, 8, FIZZ, 10, 11,  
FIZZ, BUZZ



## USEFUL WEBSITES

[www.topmarks.co.uk](http://www.topmarks.co.uk)

[www.ictgames.com](http://www.ictgames.com)

[www.mathsgames.org](http://www.mathsgames.org)

[www.mathschase.com](http://www.mathschase.com)

[www.talkingtimestables.co.uk](http://www.talkingtimestables.co.uk)

[www.timestables.co.uk](http://www.timestables.co.uk)

<https://mathshub.thirdspacelearning.com>