



# Times Tables

## Booklet for Parents

# Contents

|                                    |       |
|------------------------------------|-------|
| Why are times tables so important? | 1     |
| Expectations                       | 2     |
| What do children need to know?     | 3 - 4 |
| Useful tips                        | 5     |
| How you can help?                  | 6-7   |
| Star times tables challenge        | 8     |

# Why are times tables so important?

An essential part of becoming a confident mathematician is being able to recall multiplication and division facts for times tables up to  $12 \times 12$ . Research shows that, having a secure grasp of times tables helps children be more confident in their mathematical work. This subsequently helps to develop greater enjoyment of the subject.

If a child does know their times tables, they are more likely to be fluent in other mathematical areas.

Whilst initially learning times tables appears to be memorising many number facts, when applied, they help children to understand maths at a deeper level. For example, commutativity is a key concept in maths, which enables the learner to understand that  $2 \times 10$  is the same as  $10 \times 2$ . This flexibility in thinking when using times tables can help develop speed, fluency but also greater conceptual understanding.

Times tables need to be embedded through regular practise, with understanding and awareness developed firmly alongside the simple recall of facts.

# Expectations

The National Curriculum states that by the end of Year 4, children should be able to recall multiplication and division facts for all the multiplication tables up to  $12 \times 12$ .

The progression in the National Curriculum is as follows:

Year 2:  $\times 2$   $\times 5$   $\times 10$

Year 3:  $\times 3$   $\times 4$   $\times 8$

Year 4: all times tables up to  $12 \times 12$

There are a lot to learn, however, through understanding commutativity, a child will soon realise that if they know  $2 \times 8$ , when they come to learn their 8 times tables, they already know  $8 \times 2$ .

**As of the 2019/2020 academic year all children in Year 4 will be sitting a standardised times tables test.** With this in mind, parental support in learning times tables will be crucial in ensuring your child is fully prepared for these tests. The repetition and practise can only be achieved through a combined learning approach between school and home.



# What do children need to know?

## 1. Multiplication means 'groups of'

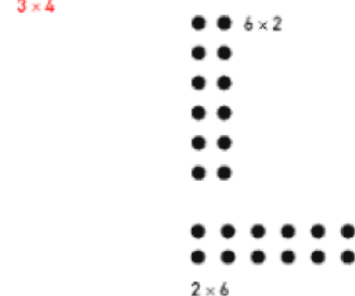
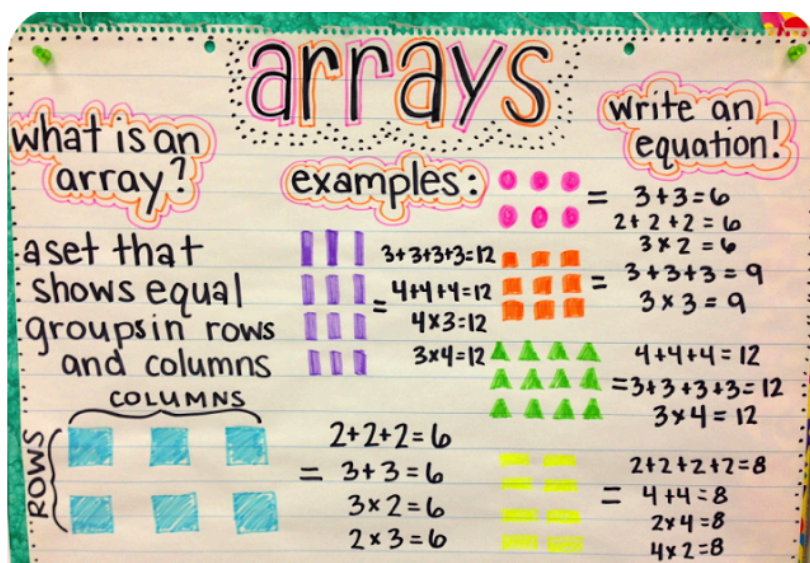
From the beginning children need to make the link between times tables, 'groups of' and multiplication.

Using real life examples can help to provide a mental image.



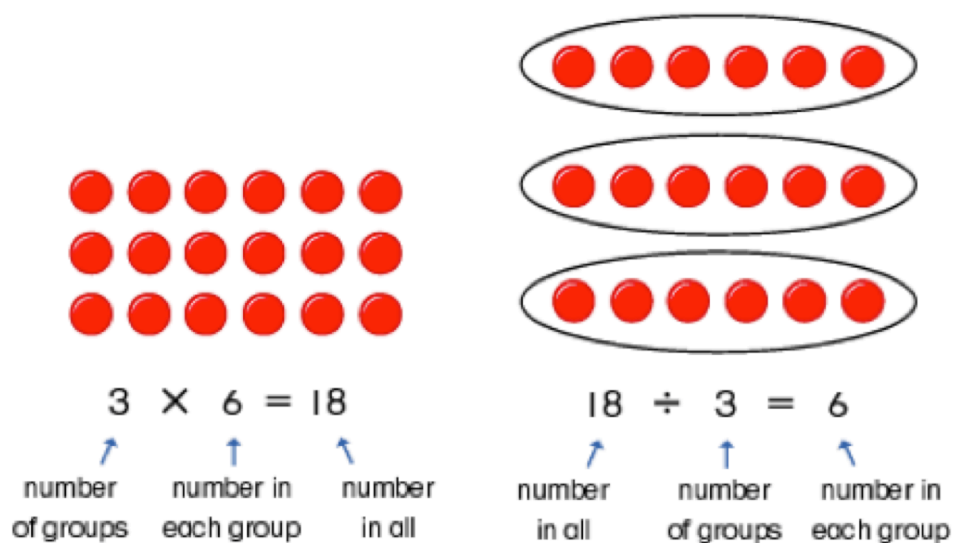
## 2. Arrays

Next, children need to be able to visualise multiplication as arrays. This helps to develop an understanding of the commutative function of multiplication.



### 3. Multiplication and division are 'inverse' operations

Children also need to begin to understand that multiplication and division are the inverse of each other, they are reversible.



# Useful tips

## Learning key facts

Learning key facts can help give children a strategy from which to find other facts. For example, if you know  $1 \times 4$ ,  $5 \times 4$  and  $10 \times 4$ , you can use these and count forwards and backwards in steps to work out other table facts.

A child might be asked “What is  $6 \times 4$ ?” If they are unsure but know that  $5 \times 4 = 20$ , they can then count on 4 to find the answer 24.

Having the flexibility and understanding to use what you already know, to help you solve what you don't know is an important skill to help you find other facts.

## Understanding the relationships between the times tables.

It helps to develop an awareness that the 5 times table is half of the 10 times table. Similarly, if your child knows their 2 times table, they can just double this to calculate their 4 times table. The 8 times table can then be learnt by doubling the 4 times table.



# How you can help

Helping your child to learn their times tables will make a huge difference to them. Supporting your child and regularly putting aside time to help them practise will enable them to quickly lay the strong foundations needed for a secure mathematical knowledge.

## Reciting multiples

It is important that children are able to count both forwards and backwards in multiples up to  $12 \times 12$ .

“0, 2, 4, 6, 8, 10, 12, 14, 18, 20, 22, 24”

“24, 22, 20, 18, 16, 14, 12, 10, 8, 6, 4, 2, 0”

Then try this starting from different multiples

“14, 12, 10, 8...”

This could be done whilst throwing a ball to make it active, or at different speeds to make it challenging.

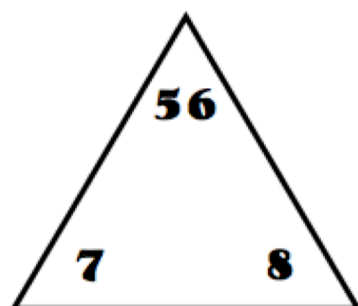
## Songs

Songs can be a really fun way of learning times tables. There are websites to support the learning of times tables through music.



# Triangles

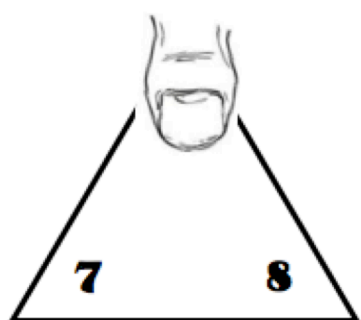
Triangles can help children to develop an understanding of the inverse.



In the example on the left, the tables fact is  $7 \times 8 = 56$ .

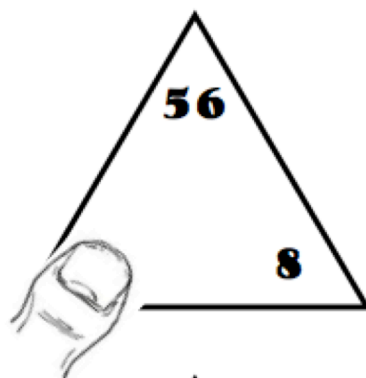
Every tables fact up to  $10 \times 10$  can be written on a triangle in this way.

Writing the fact on a triangle and then covering numbers up means we can practise all the ways of knowing that fact. For example:



Covering up the **product** (56) means we can ask:

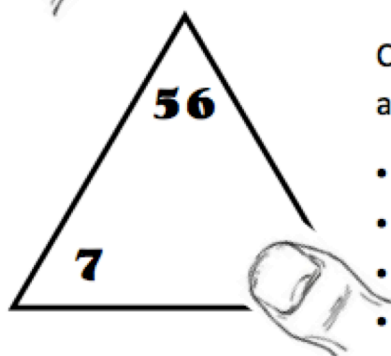
- What is 7 times 8?
- What is 8 times 7?
- What is the **product** of 8 and 7?
- What are 7 lots of 8 or 8 lots of 7?
- What is 7 multiplied by 8? (and the other way round)



Covering up one of the **factors** (7) means we can ask:

- What is 56 **divided by** 8?
- How many 8s in 56?
- What is an **eighth** of 56?
- What is 56 **shared between** 8 people?
- How many **groups of** 8 in 56?

...and so on.



Covering up the other of the **factors** (8) means we can ask:

- What is 56 **divided by** 7?
- How many 7s in 56?
- What is a **seventh** of 56?
- What is 56 **shared between** 7 people?
- How many **groups of** 7 in 56?

...and so on.

# Star times tables challenge

At St Mary's Bentworth Primary School, your child will be tested weekly on their times tables, using our 'star times tables challenge'.

For each test they will have 3 minutes to complete 45 questions. They are required to achieve full marks in order to move up onto the next level.

| Level | Times tables |
|-------|--------------|
| 1*    | 2's 5's 10's |
| 2*    | 3's 4's 8's  |
| 3*    | 6's 7's 9's  |
| 4*    | 11's 12's    |
| 5*    | all          |
| 6*    | decimals     |
| 7*    | mixed maths  |



I hope this booklet is helpful in supporting  
your child master their times tables!

Miss Woods  
2017



