# Times Table Workshop

Monday 11th March 2019

Miss Kay

*" It is really important that children have the tools of arithmetic at their finger tips. Without that it is like sending a plumber out to do a job without knowing how to use a spanner."*

*Jean Humphreys, Ofsted's education director*

*"It's a fundamental part of everything that follows in maths – it's the same as knowing your letters if you are going to read."*

*Carol Vorderman*

# Aims of the workshop

The aims of this workshop are:

- To explain how multiplication is taught across the different year groups.
- To emphasise how times tables are used in the maths curriculum.
- To show the progression of times tables across key stages.
- To demonstrate and explain methods for learning and reciting times tables.
- To show you a variety of ways you can help your child learn their times tables at home.

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# Why are times tables important?

"**Confidence** with times tables really is important for children in primary school. While it may seem tedious to practise times tables with your child and you might have bad memories of reciting times tables at school, **by ensuring your child is confident with times tables you will be giving them some essential tools for success in maths**."

Oxford Owl

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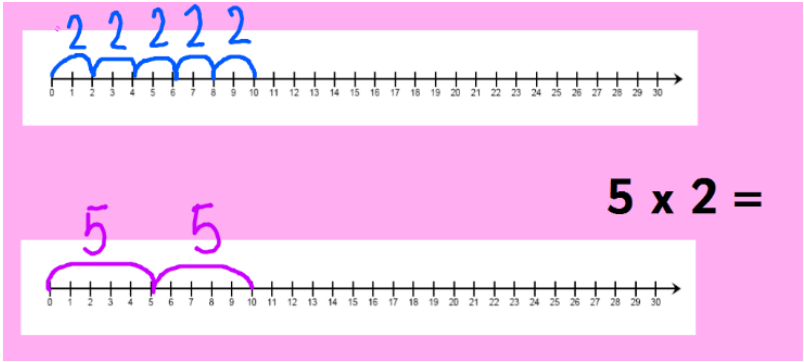
# Progression in times tables

| Age | Aim |
| --- | --- |
| **Foundation Level** | Begin to recognise numbers verbally and physically and start counting. |
| **Year 1** | Make **connections** between arrays, number patterns, and counting in 2s, 5s and10s.<br>Recall and use all doubles to 10 and corresponding halves |
| **Year 2** | Introduced to multiplication tables.<br>Recall and use multiplication and division facts for the 2, 5 & 10 and count in 3s multiplication tables |

# Key concepts in Key Stage 1

At Key Stage 1, the focus should be on **practical and visual techniques** to help the students grasp the basics of multiplication.

- Looking at pairs of objects e.g. shoes, socks, gloves (2 times table)
- Doubling and halving
- Grouping and sharing small quantities physically (counters, bricks etc.)
- Repeated steps on a number line supports children's understanding of repeated addition and groups.



# Progression in times tables

| Age | Aim |
| --- | --- |
| **Year 3** | Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. |
| **Year 4** | Begins with a focus on the 6, 7, 9, 11 and 12 times tables. By the end of the year recognise all the multiplication tables. Recognise some of the division facts. |
| **Year 5 and 6** | Practice years<br>Apply all the multiplication tables and related division facts frequently, commit them to memory and use them confidently to make larger calculations. |

# Key concepts as children progress

- **Recognise times tables as repeated addition**

  4 x 5 is the same as 5 +5+5+5

- **Understand that times tables are commutative**

  4 x 5 = 20 and 5 x 4 = 20

- **Recognise that multiplication is the inverse of division.**

  20 ÷ 5 = 4 can be worked out because 4 x 5 = 20

- **Spot the patterns in different times tables.**

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# Patterns

| Times Table | Pattern |
|---|---|
| 2 x table | Answer is always double the given number |
| 3 x table | Answer always adds up to 3, 6 or 9 |
| 4 x table | Answer is double, then double again |
| 5 x table | Always ends in 5 or 0 |
| 8 X table | Answer is double the 4 times table. |
| 9 x table | Answer always adds up to 9 |
| 10 x table | Answer always is sequence number with a 0 on the end |
| 11 x table | Answer is always repeat digits (up to 11 x 9 ) |

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# How you can help at home…

- Reciting times tables out loud
- Working backwards
- Practising times tables as a time-filler
- Encourage the use of near facts
- Visuals
- Songs
- Games
- Real Life Arrays
- Loop cards
- Tricks and Rhymes
- Fact Family
- Apps

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# Reciting Tables

**Many children find that reading and hearing themselves say a times table regularly helps them to learn it.**

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Tips:

- On a 1-to-1 basis, read the times tables out loud together. When the child is comfortable proceeding alone, ask them to tap the table. If they are unsure or get an answer incorrect, join in again. Repeat several times, on a regular basis.
- Each time your child practises, ask your child to first read the able from a sheet, and see how far they can go with their eyes closes. **Being able to recall something without looking at it is an important step to getting it lodged in our memory.**
- Add rhythm, sound, movement and humour as this can really help children remember things.
- Some children learn a table by reciting the whole thing- the calculation (e.g. 3 x 8 ) and the answer (24). Other children remember the table better if they only recite the answers and use their fingers to remember which multiple they have got to.

# Working backwards & Time fillers

**Work backwards**

Give the child the answer, can they give you the question e.g. adult says 36 what could the question have been?

Child could answer with

6 x 6

4 x 9

**Practising times tables as a time-filler**

Find a time and place for reciting that's easy to keep to.

- Brushing teeth
- On the way to and from school

It is important times tables are learnt and practiced in short bursts rather than long sessions.

# Near facts

- It is really useful to remember near facts to increase the speed of recall.

For example, if you remember 8 **x 5** = 40 you can work out 8 **x 6** = 48 more easily.

- Once children are comfortable with the times table, it is important children do not always start from 8 x 1 = 8

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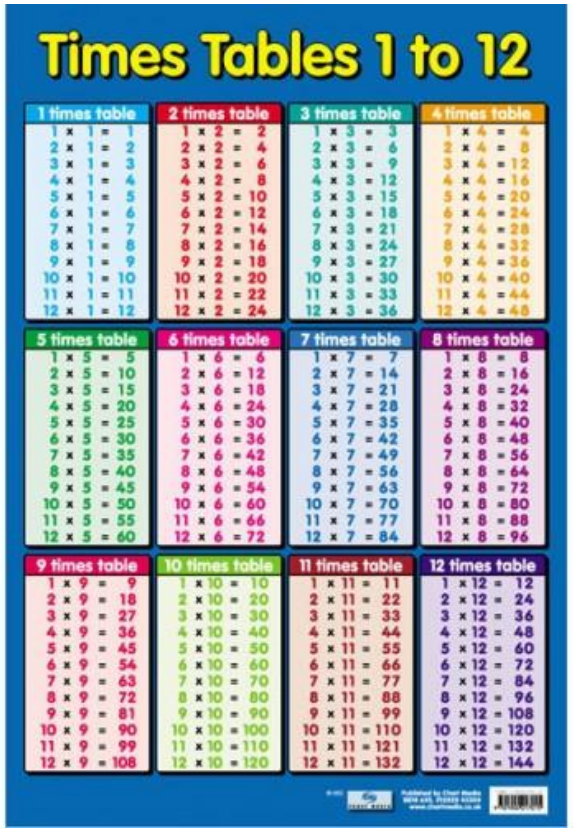
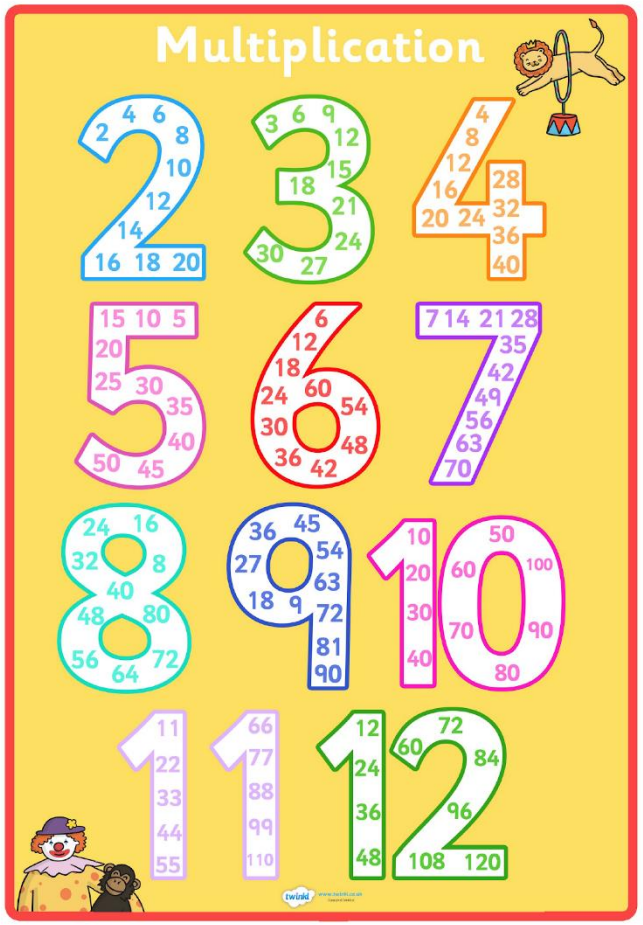
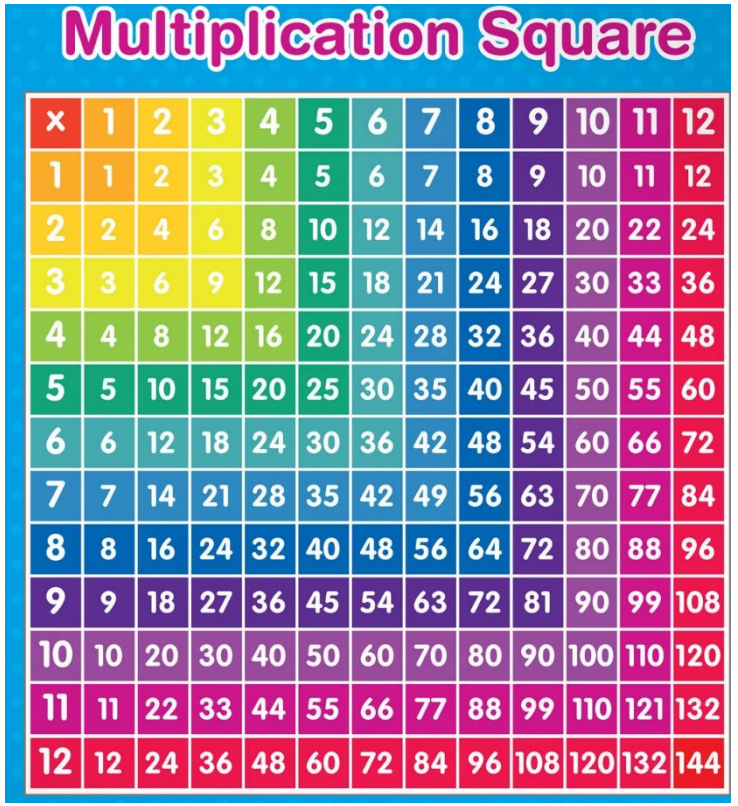
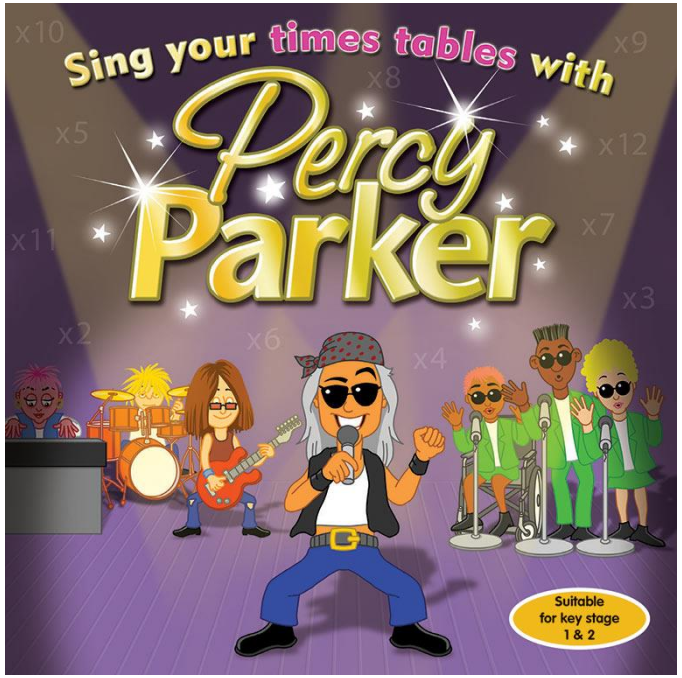
# Visual Aids


Times Tables 1 to 12
1 times table
2 times table
3 times table
4 times table
5 times table
6 times table
7 times table
8 times table
9 times table
10 times table
11 times table
12 times table

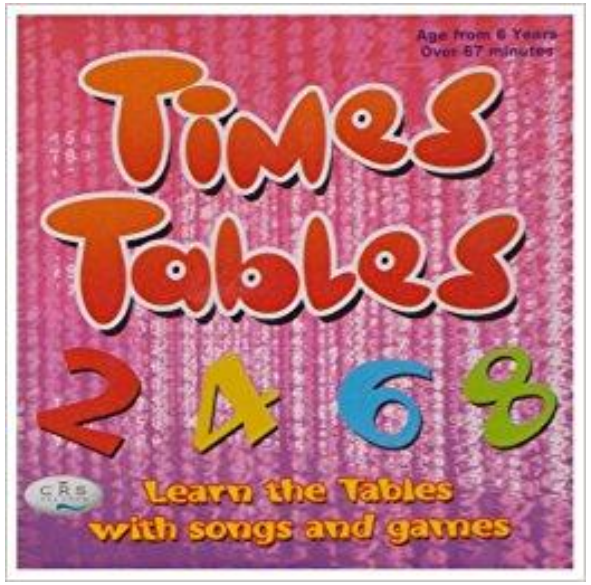

Multiplication


Multiplication Square

# Chanting Songs





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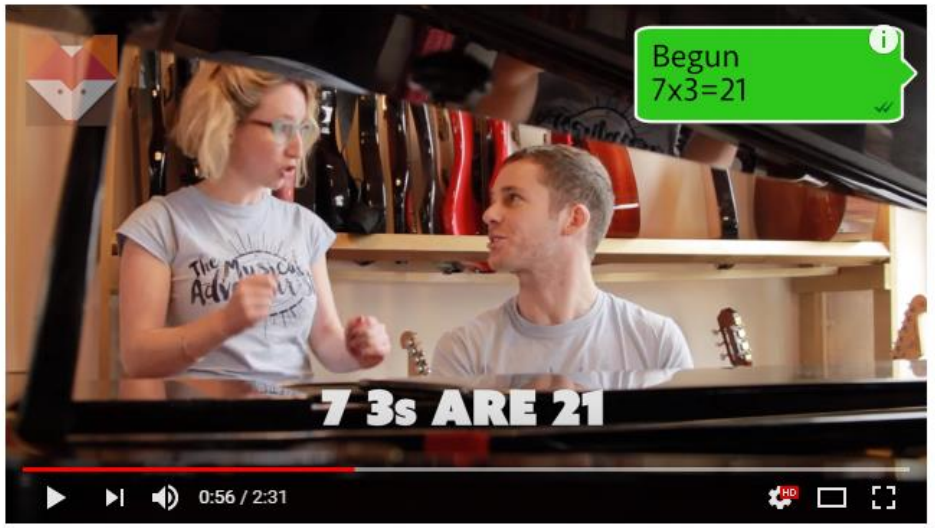
# You tube songs


Mr. DeMaio




The Musical Adventurists


Laughalongandlearn

# 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.

## 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 they off. First one to mark off all their numbers is the winner!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# Games


Pairs

Write answers to a times table on one set of cards.

On another set, write the questions, turn them face down.

Mix them and put them into a grid.

Each person gets to turn over two cards, if they find a matching pair (the question and the answer) they get to keep the pair and have another turn, if not they must put them back into the grid in the same place and the next person gets a turn.

This improves memory as well as recall.

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# Games

## What's missing?


Things you need:

- Flash cards
- Tea towel or a piece of fabric
- (two or more players)

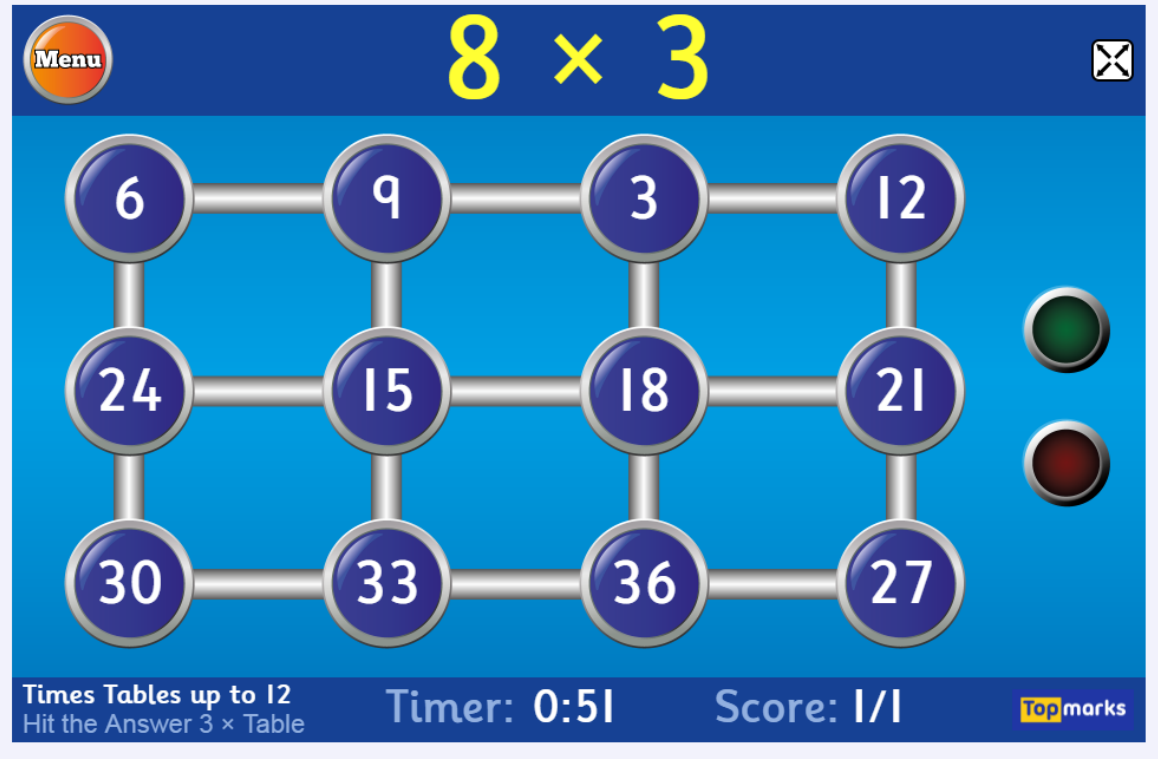
Take just the answer cards and put them on a tray. Cover them with a tea towel. Sneak one card off without looking at it and show your child the cards that are left for a few seconds. See if they can spot which answer card from that times table is missing.

The person who spots it first wins a point. Sneak away another card and see who can spot the missing one now. Continue until there is only 1 answer card left.

The winner is the person who spots the most missing answers.

You can adapt this by sneaking in a false card instead of taking a card away. See who can spot the wrong card first.

# Games




Hit the button App £2.99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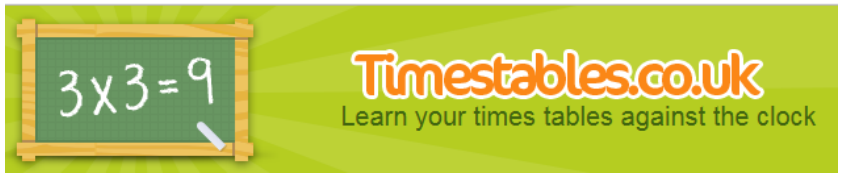
# Apps and Websites


**10 Minutes a Day Times Tables** 4+
Dorling Kindersley
#104 in Education
★★★★☆ 108 Ratings
Free

**My Times Tables** 4+
EtSoft ApS
★★★½☆ 81 Ratings
Free • Offers In-App Purchases


**Squeebles Times Tables 2** 4+
Practise your times tables!
KeyStageFun
#37 in Education
★★★★½ 12 Ratings
£3.99


**Times Tables Trainer Brain Game Universal** 4+
Andela ICT
Free

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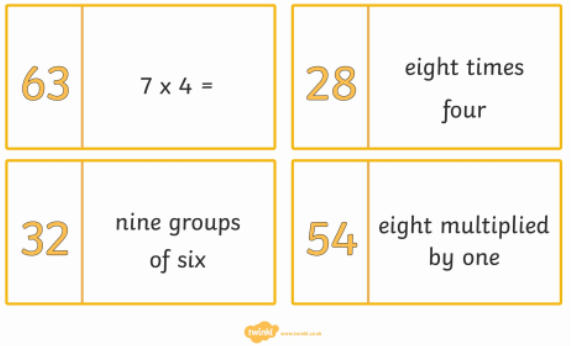
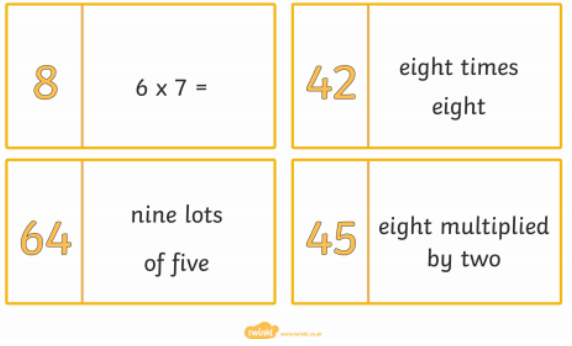
# Arrays

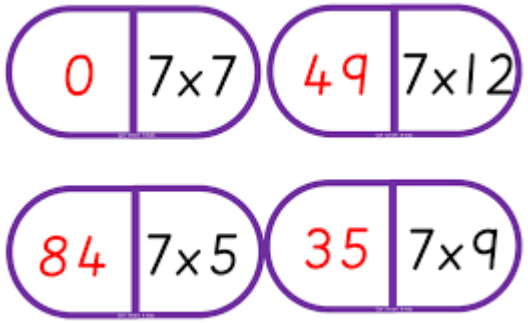

# Loop cards

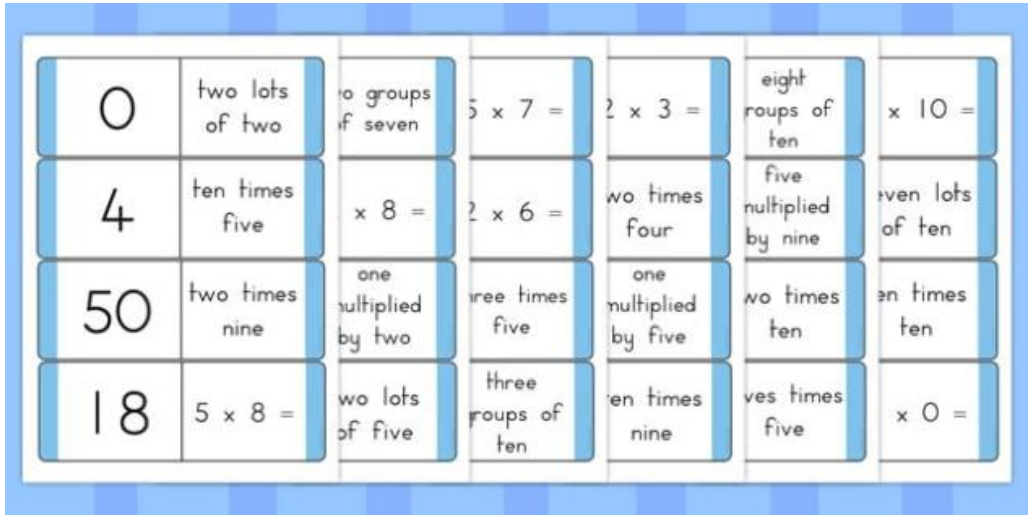
Easy to make




Times Tables Loop Cards (6, 7, 8, and 9)

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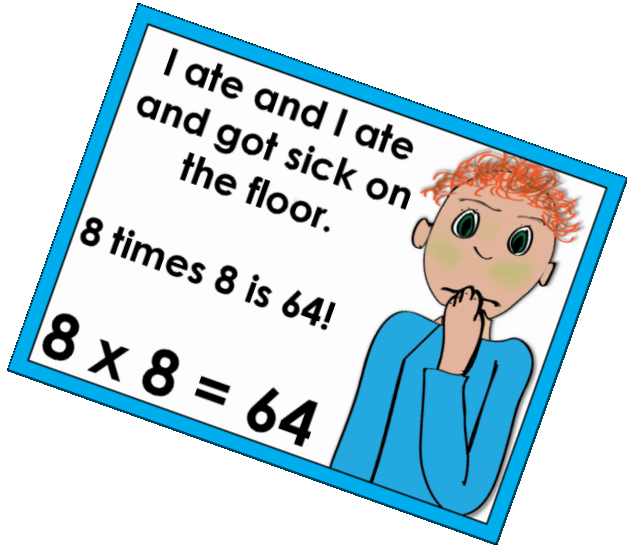
# Rhymes for certain facts

- I ate and I ate until I was sick on the floor 8 x8 is 64
- 6 times 8 is 48, so don't forget to finish your plate.
- Let's go outside and pick up sticks 6 x 6 is 36
- 6 times 7 is 42, and don't forget to tie your shoe
- I like to swim in the sea 7 x 9 is 63
- 7 x 6 isn't hard to do 7 x 6 = 42
- 8 and 4 were sad and blue 8 x 4 is 32

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# 9 x table trick

1. Put the finger down for the multiple e.g. 3 x 9 you would put the 3rd finger down.
2. The fingers to the left are the tens (2) and the fingers to the right are the ones (7)
3. So, 3 x 9 = 27

Works for up to 10 x 9


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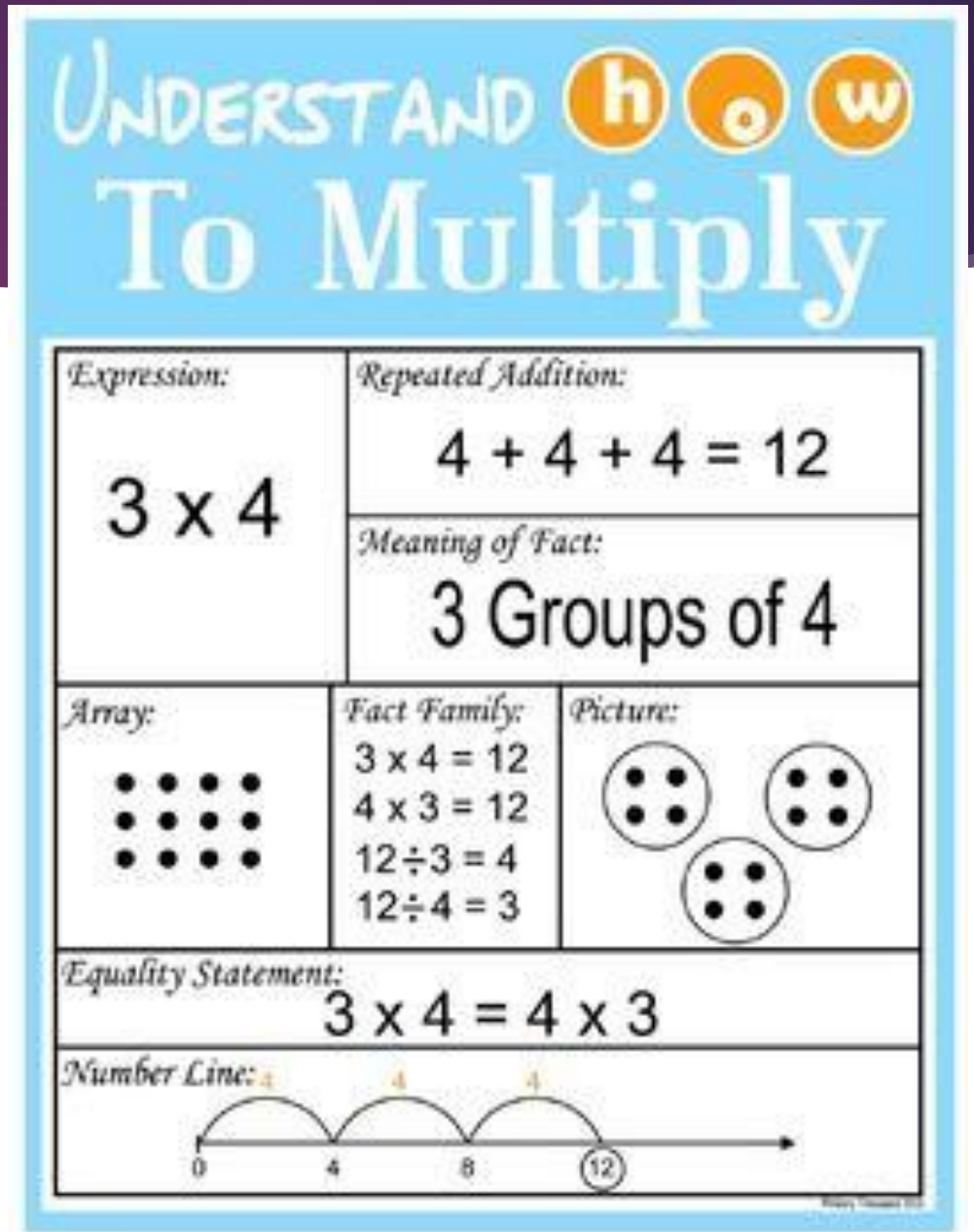
# Fact Family

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# Belmont Times Table Challenges

"Some levels seem tricky but once I practiced them more and more it gets easier."

Year 4

"I really enjoy trying to beat my time each week."

Year 3

"I have got so much better at my times tables. I can do lots more things in maths now I know them."

Year 6

"I like the challenges because I have learnt all of my times tables and find maths easier"

Year 5

Belmont Times Table Challenge Overview

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| Level | Aim | Time Guidance |
|---|---|---|
| 1 | Recognise multiples of 2 | 2 minutes |
| 2 | Recognise multiples of 5 and 10 | 2 minutes |
| 3 | Recognise multiples of 2, 5 and 10 | 2 minutes |
| 4 | Recognise multiples of 3 and 4 | 2 minutes |
| 5 | Recognise multiples of 2,3,4,5 and 10 | 2 and a half minutes |
| 6 | Recognise multiples of 6 and 7 | 2 minutes |
| 7 | Recognise multiples of 8 and 9 | 2 minutes |
| 8 | Recognise multiples of 8,9,11 and 12 | 2 minutes |
| 9 | Recognise multiples of 2,3,4,5,6,7,8,9,10,11 and 12 | 4 minutes |
| 10 | To know division facts corresponding to the 2,5 and 10 times tables | 2 minutes |
| 11 | To know division facts corresponding to the 3 and 4 times tables | 2 minutes |
| 12 | To know division facts corresponding to the 6,7, 8 and 9 times tables | 2 minutes |
| 13 | To find missing numbers in multiplication equations | 3 minutes |
| 14 | To find missing numbers in multiplication and division equations. | 3 minutes |
| 15 | Related facts to the 2,3,4,5 and 6 times tables. | 3 minutes |
| 16 | Related facts to the 6, 7, 8, 9, 10, 11 and 12 times tables. | 3 minutes |
| 17 | Related facts to the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 times tables | 4 minutes |
| 18 | Related facts to the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 times tables (including decimals) | 4 minutes |
| 19 | Related facts to the 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 times tables (including decimals and multiples of 10) | 4 minutes |
| 20 | To know division facts corresponding to the 3 and 4 times tables. (3digit numbers) | 2 minutes |
| 21 | To know division facts corresponding to the 6,7, 8 and 9 times tables (including decimals) | 2 minutes |
| 22 | To know division facts corresponding to the 6,7, 8 and 9 times tables (including decimals) | 2 minutes |

# Year 4 Multiplication Check 2020

- From **June 2020**, all pupils at the end of year 4 in England will take an online multiplication tables check (MTC).
- The check aims to support pupils to master multiplication skills, which are essential for future success in mathematics.
- It will help to identify pupils who have not yet mastered this mathematical concept, so additional support can be provided.
- Year 4 will do a mock test this year and our current year 3's will be the first year to sit the official test in 2020.

GOV.UK

https://www.gov.uk/guidance/multiplication-tables-check-development-process#introduction

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# Useful Websites

- www.oxfordowl.co.uk/for-home/advice-for-parents/times-tables-tips
- www.oxfordowl.co.uk/welcome-back/for-home/maths-owl/expert-help--2/maths-in-school/times-tables
- www.theschoolrun.com/times-tables-the-best-ways-to-learn
- www.dk.com/uk/9780241317013-help-your-kids-with-times-tables
- https://www.mymaths.co.uk/news/2018/03/07/the-importance-of-fluency-in-times-tables.html

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# THANK YOU FOR COMING

Remember: When your child has mastered a times table it is important to keep practising. Don't let them get rusty!