



# Maths at Aston Lodge

Mrs Morton

# Counting

- ▶ Every day the children are exposed to counting in a variety of multiples - both forward and backwards.
- ▶ Counting numbers are very important to know so that we can understand that numbers have an order and also be able to count numbers easily. In our real life we can relate numbers to quantities.



# Arithmetic

- Learn its

**BEAT THAT!**

**LEARN ITS Challenges!**

**Steps 2, 3 & 4**

Name: \_\_\_\_\_  
Class: \_\_\_\_\_  
Date: \_\_\_\_\_

Step 2	Step 3	Step 4
$4 + 4 =$	$2 + 1 =$	$2 + 8 =$
$5 + 5 =$	$2 + 3 =$	$7 + 3 =$
$3 + 3 =$		$4 + 6 =$
		$5 + 5 =$
		$1 + 9 =$

# Arithmetic

## ► Fluent in 5

Fluent in Five - Year 5

Week 18 - Day 1

Name.....

Date..... School.....

Class..... Score.....

1  $\frac{2}{5} \times 3 =$

2  $64,227 - 12,859 =$

4

$$\begin{array}{r} 583 \\ \times 3 \\ \hline \end{array}$$

5

$6 + 7 + 6 =$

# X table practise / TTRockstars

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## MISSING NUMBER 1

Practise 3s, 4s, 8s

1.  $\underline{\quad} \times 4 = 12$

21.  $4 \times \underline{\quad} = 12$

41.  $4 \times \underline{\quad} = 16$

2.  $4 \times \underline{\quad} = 28$

22.  $8 \times \underline{\quad} = 32$

42.  $\underline{\quad} \times 4 = 4$

3.  $3 \times \underline{\quad} = 33$

23.  $4 \times \underline{\quad} = 12$

43.  $\underline{\quad} \times 10 = 40$

4.  $3 \times \underline{\quad} = 24$

24.  $4 \times \underline{\quad} = 28$

44.  $\underline{\quad} \times 3 = 21$

5.  $8 \times \underline{\quad} = 88$

25.  $4 \times \underline{\quad} = 36$

45.  $\underline{\quad} \times 3 = 9$

6.  $10 \times \underline{\quad} = 40$

26.  $3 \times \underline{\quad} = 12$

46.  $11 \times \underline{\quad} = 88$

7.  $8 \times \underline{\quad} = 16$

27.  $\underline{\quad} \times 12 = 36$

47.  $8 \times \underline{\quad} = 64$

8.  $\underline{\quad} \times 3 = 9$

28.  $11 \times \underline{\quad} = 44$

48.  $8 \times \underline{\quad} = 64$

9.  $\underline{\quad} \times 3 = 21$

29.  $3 \times \underline{\quad} = 15$

49.  $5 \times \underline{\quad} = 40$

10.  $\underline{\quad} \times 8 = 88$

30.  $8 \times \underline{\quad} = 88$

50.  $\underline{\quad} \times 8 = 72$

11.  $7 \times \underline{\quad} = 56$

31.  $\underline{\quad} \times 9 = 27$

51.  $\underline{\quad} \times 3 = 27$

12.  $\underline{\quad} \times 12 = 36$

32.  $3 \times \underline{\quad} = 9$

52.  $\underline{\quad} \times 4 = 36$

13.  $\underline{\quad} \times 3 = 24$

33.  $8 \times \underline{\quad} = 80$

53.  $10 \times \underline{\quad} = 80$

14.  $10 \times \underline{\quad} = 80$

34.  $8 \times \underline{\quad} = 88$

54.  $\underline{\quad} \times 8 = 88$

**SINGLE PLAYER**


- JAMMING**  
Take it easy
- GIG**  
Perform once a month
- GARAGE**  
Complete your heatmap
- STUDIO**  
Get a rock status
- SOUNDCHECK**  
Beat the clock

# X table practise

- ▶ Expectations:
- ▶ Year 1 **Count in multiples of 2, 5 and 10**
- ▶ Year 2 focuses on the **2, 5, and 10** times tables, and they will learn multiplication and division facts for these tables.
- ▶ In Year 3, children are expected to learn the **3, 4 and 8 times table**.
- ▶ By the end of Year 3 children should be fluent in the 2, 3, 4, 5, 8, 10 times tables
- ▶ By the end of Year 4 children should know all their times tables up to 12 i.e. the **1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 times tables**.

# Main Learning - introduce the objective

|

 <b>Star Learners: can multiply a mixed number by an integer</b>	9.3.23 <b>Objective achieved:</b>
Independently, I can multiply a mixed number by an integer in a range of reasoning and problem-solving contexts	
I can multiply a mixed number by an integer with some reasoning and problem-solving contexts	
I am beginning to multiply a mixed number by an integer	

# Main Learning - modelling

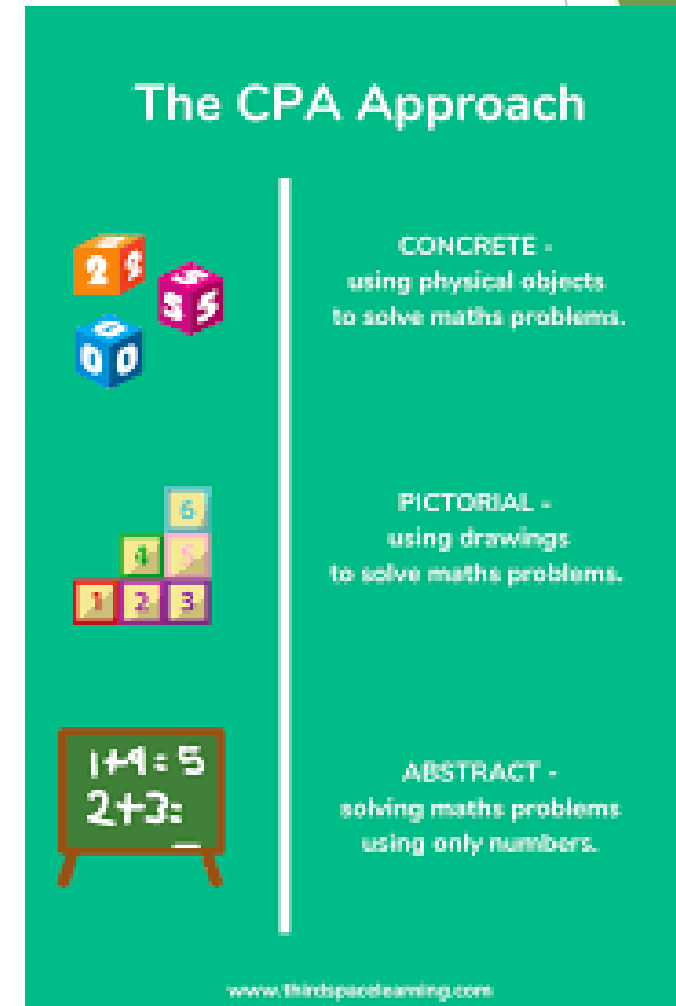
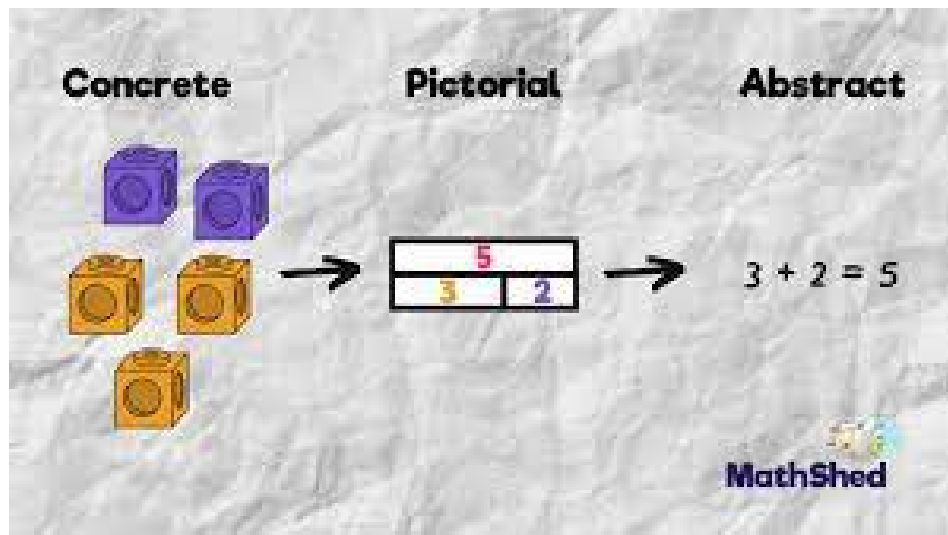


Why is mathematical Modelling important in math? Mathematical modelling is valuable in various applications; **it gives precision and strategy for problem solution and enables a systematic understanding of the system modelled.** It also allows better design, control of a system, and the efficient use of modern computing capabilities.




# Main Learning - CPA - Concrete, pictorial and abstract

- ▶ Concrete, Pictorial and Abstract (CPA) teaching in Maths. The CPA method involves using actual objects for children to add, subtract, multiply or divide. They then progress to using pictorial representations of the object, and ultimately, abstract symbols. Children often find maths difficult because it is abstract.




# Main Learning - CPA - Concrete

**CONCRETE**



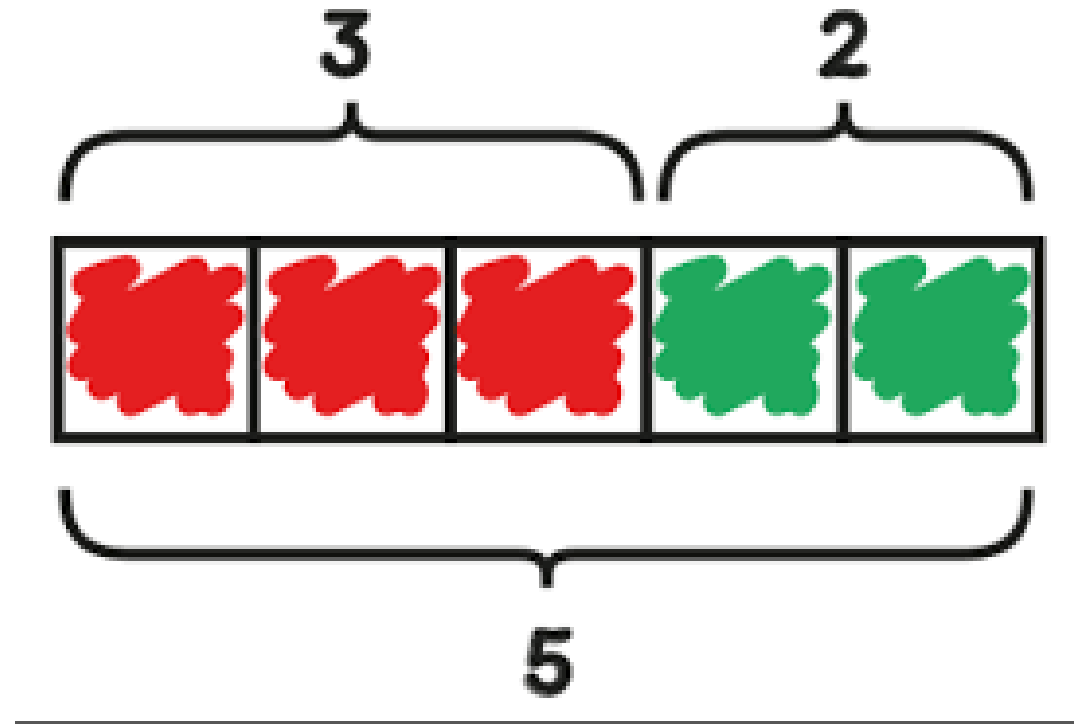
Children might begin by handling real objects...



...then using physical representations of them.

The image shows a yellow rectangular area with the word 'CONCRETE' at the top. Below it, there are two rows of illustrations. The first row shows five oranges with green leaves, arranged in a cluster. To the right of the oranges is the text 'Children might begin by handling real objects...'. The second row shows five red cubes, arranged in a 2x2 grid with one cube centered below. To the right of the cubes is the text '...then using physical representations of them.'

# Main Learning - CPA - pictorial



# Main Learning - CPA - abstract

## Long multiplication

24 × 16 becomes

$$\begin{array}{r} \phantom{0}2 \\ 24 \\ \times 16 \\ \hline 240 \\ 144 \\ \hline 384 \end{array}$$

Answer: 384

124 × 26 becomes

$$\begin{array}{r} \phantom{00}12 \\ 124 \\ \times \phantom{0}26 \\ \hline 2480 \\ 744 \\ \hline 3224 \\ 11 \end{array}$$

Answer: 3224

124 × 26 becomes

$$\begin{array}{r} \phantom{00}12 \\ 124 \\ \times \phantom{0}26 \\ \hline 744 \\ 2480 \\ \hline 3224 \\ 11 \end{array}$$

Answer: 3224

# Main Learning - Guided practice

Alex has 4 pieces of wood.

Each piece of wood is  $\frac{1}{7}$  m long.

How long is all of Alex's wood?



# Main Learning - Fluency

Calculate  $34 \times 6$

$30 \times 6 = \square$

$4 \times 6 = \square$

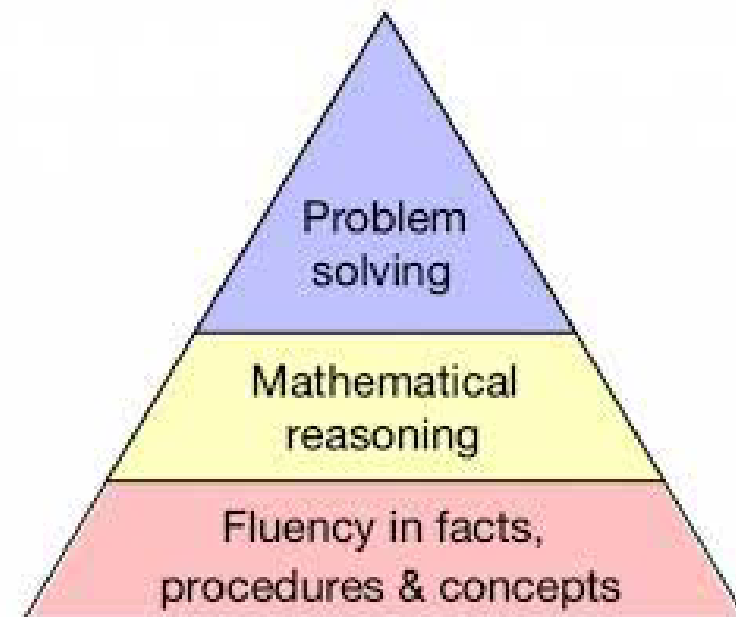
- multiply
- regroup
- tens
- ones
- base facts
- product
- sum of

\_\_\_ is \_\_\_ tens.  
\_\_\_ groups of \_\_\_ tens is \_\_\_ tens  
\_\_\_ tens is equal to \_\_\_ 0

\_\_\_  $\times$  \_\_\_ is ten times greater than \_\_\_  $\times$  \_\_\_

6

© Herts for Learning Ltd 2018



## What is fluency in Mathematics?

Fluency means that children can:

### Be Efficient

Choose the most efficient strategy rather than getting bogged down with too many steps.

### Be Accurate

That they know some things about number facts such as: two numbers that make 5; two numbers that make 8; two numbers that make 10.

### Be Flexible

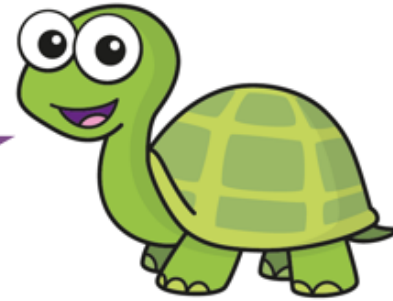
They know how to solve a problem and gradually realise that there are lots of ways to solve the same problem.

So fluency in mathematics demands more of pupils than memorising a single procedure – they need to understand why they are doing what they are doing and know when it is appropriate to use different methods. (Russell 2000)

# Main learning - reasoning

A book is  $\frac{1}{10}$  m long. How long would 12 books be if they were put next to each other?

I know! The books would be  $\frac{12}{120}$  m long.



Do you agree with Tiny? Explain why.

# Main Learning - problem-solving

7 Here are the ingredients for making a large cake.



Butter  $1\frac{3}{8}$  kg  
Sugar  $1\frac{5}{16}$  kg  
Self-raising flour  $2\frac{1}{4}$  kg  
6 eggs

- a) How much flour is needed for three cakes?
- b) Dora makes four cakes.  
How much more butter does she use than sugar?



# Main Learning - Independent learning

2 Work out the multiplications.

a)  $3 \times 8\frac{2}{7}$

c)  $6\frac{2}{11} \times 4$

e)  $2\frac{2}{25} \times 12$

b)  $2 \times 12\frac{2}{11}$

d)  $4 \times 6\frac{3}{19}$

f)  $3\frac{1}{15} \times 8$

What is the same and what is different about your answers?

4 Complete the calculations.

a)  $5 \times 2\frac{2}{3} = 10 + \frac{10}{3} = \square$

b)  $4\frac{3}{7} \times 5 = 20 + \square = \square$

c)  $8 \times 2\frac{5}{12} = \square + \square = \square$

d)  $7 \times 3\frac{1}{5} = \square + \square = \square$

e)  $4\frac{2}{9} \times 8 = \square + \square = \square$

f)  $11 \times 4\frac{3}{10} = \square + \square = \square$

3 The mass of one bag of potatoes is  $1\frac{3}{4}$  kg.  
What is the mass of five bags of potatoes?

5

$5 \times 3\frac{2}{11}$  is equal to  
 $3 \times 5\frac{2}{11}$



Do you agree with Ron?

Explain your answer.

6 Eva drinks  $3\frac{1}{3}$  litres of water every day.  
How many litres of water does she drink in a week?

7 Here are the ingredients for making a large cake.



Butter  $1\frac{3}{8}$  kg  
Sugar  $1\frac{5}{16}$  kg  
Self-raising flour  $2\frac{1}{4}$  kg  
6 eggs

a) How much flour is needed for three cakes?

b) Dora makes four cakes.

How much more butter does she use than sugar?

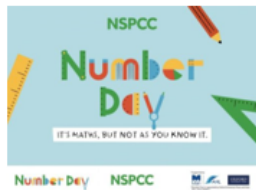
# Plenary

- ▶ Address issues and misconceptions



# Themed weeks - Money Matters, NSPCC Numbers Day and TTRockstars competitions

NSPCC NUMBER'S DAY 2023



This year the children took part in completing Mystery Maths Challenges in teams. They had to work together to solve the clues to find out who had carried out the act. Children also took part in the NSPCC Rocks times table competition playing on a range of modes including garage and studio.

### The Place Value Mystery in the Palace Kitchen Maths Game

Mr Durr, the royal baker, bakes for the queen. He loves his job but is having a hard day.

First, he steps in and was late for work. Then, his cat made him jump and he dropped a cake!

Can you help him work out who the robber is? Solve the clues to find out who did it.

### The Mystery of the Missing Shortbread Sugar

In a small junior school, the children are making Victoria's Big shortbread biscuits to raise money for charity. After gathering the ingredients and preparing a delicious batch, the teacher notices something terrible: the sugar is missing! Without this ingredient, the biscuits cannot be made.

Quickly, the children begin searching for the missing sugar. Solve these fraction puzzles and reveal clues to find out who stole the shortbread sugar. Good luck!



FRIDAY 3 FEBRUARY  
7:30am - 10:30am

Winning class will have the highest number of correct answers per pupil.

## BATTLE OF THE SCHOOLS

WPT Battle Feb 2022 :)

Info **School Results** Class Results Pupil Results Certificates

School Average Correct

School Total Correct

### Position (Out of 5 schools taking part)

- 1 Aston Lodge Primary School
- 2 Aston Hall Junior And Infant School, Sheffield
- 3 Monkwood Primary School
- 4 Thrybergh Primary School, Rotherham
- 5 Foljambe Primary

Money Matters  
Key Stage 2

## Making money choices

