



# Welcome

**Maths Open Morning**  
**Miss Lawless– Maths Leader**

# Agenda

- \* What maths looks like at St Michaels
- \* Calculation policy – methods
- \* Maths Magicians
- \* Rock stars
- \* Testing and assessment

# Mastery

We follow White Rose Maths.

- \* Fluency

Teachers often start new topics by developing fluency in order to give learners confidence with the skill.

- \* Reasoning - Reasoning in maths is the ability to make logical links and connections which help you tackle a new maths problem.

Spot the mistake / Which is correct? True or false?  
What comes next? Do, then explain

- \* Problem solving

Problem-solving questions are often open-ended, with more than one right answer. Problem solving is an important skill for all ages and abilities and, as such, needs to be taught explicitly. We often have challenges like these at the end of the lesson.

Fluency, reasoning and problem solving underpins the deepening of understanding. Fluency alone doesn't give students the chance to delve deeper into the mathematics. They may well be able to answer the questions, but can they also justify their answer or explore other possibilities?

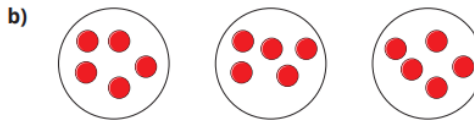
# Fluency

1 Complete the sentences.



There are  pairs with  mittens  
in each pair.

There are  mittens altogether.



There are  groups with   
counters in each group.

There are  counters altogether.

3 Write < or > to compare the fractions.

a)  $\frac{1}{7}$  ○  $\frac{1}{9}$

d)  $\frac{11}{12}$  ○  $\frac{11}{11}$

b)  $\frac{4}{5}$  ○  $\frac{4}{7}$

e)  $\frac{19}{5}$  ○  $\frac{19}{6}$

c)  $\frac{3}{13}$  ○  $\frac{3}{8}$

f)  $\frac{107}{53}$  ○  $\frac{107}{40}$

1 How much money is there?



p



p

What do you notice?

1 Match each coin or note to its value.



£5



£1



£50



£20



£10

# Reasoning

6 Sam has this money.



Ron has this money.



I have more money because I have notes.



Is Ron correct? \_\_\_\_\_

How do you know?

4 a) Explain how you can compare  $\frac{2}{3}$  and  $\frac{4}{5}$  using the same numerator rule.

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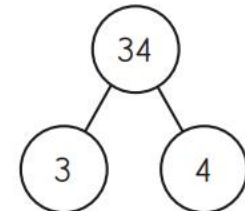
8



I paid for a drink using one coin and I got £2 and 19p change.

How do you know that Jo is wrong?

2 Tiny has filled in this part-whole model.



What mistake has Tiny made?

# Problem solving

- 7** Mrs Dean buys a T-shirt.  
She pays with a £10 note.  
She gets four coins in change.  
Each coin is different.



**a)** What is the lowest possible price of the T-shirt?

£  and  p

**b)** What is the highest possible price of the T-shirt?

£  and  p

Compare answers with a partner.

Find different ways of completing the calculation.

$$\underline{\quad} + \underline{\quad} = -2$$

**8** Here are some clues to a 7-digit number.

- There is nothing in the thousands or hundreds columns.
- The tens digit is 1 less than the millions digit.
- The ones digit is 1 less than the tens digit.
- The hundred-thousands digit is 4
- The digit sum is 15

**a)** What could the number be?

**b)** Write the number in words.

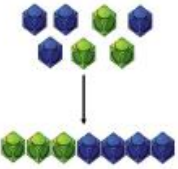
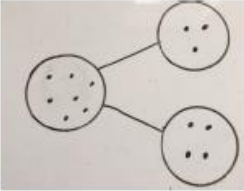
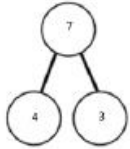

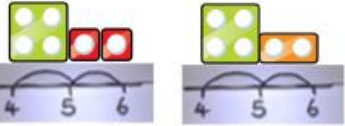
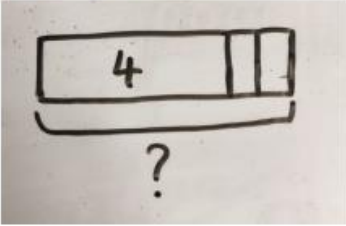

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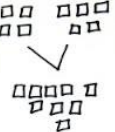

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Compare answers with a partner.

# Mastery

## \* Concrete, pictorial and abstract

Concrete	Pictorial	Abstract
<p>Combining two parts to make a whole (use other resources too e.g. eggs, shells, teddy bears, cars).</p> 	<p>Children to represent the cubes using dots or crosses. They could put each part on a part whole model too.</p> 	<p><math>4 + 3 = 7</math> Four is a part, 3 is a part and the whole is seven.</p> 
<p>Counting on using number lines using cubes or Numicon.</p>  	<p>A bar model which encourages the children to count on, rather than count all.</p> 	<p>The abstract number line: What is 2 more than 4? What is the sum of 2 and 4? What is the total of 4 and 2? <math>4 + 2</math></p> 

concrete	Representational	Abstract
<p>①</p> 		<p>Abstract</p> $4 + 5 = 9$
<p>②</p> 		

# KS2 methods for Addition and Subtraction

789 + 642 becomes

$$\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ \hline 1 \quad 1 \end{array}$$

Answer: 1431

874 - 523 becomes

$$\begin{array}{r} 874 \\ - 523 \\ \hline 351 \end{array}$$

Answer: 351

932 - 457 becomes

$$\begin{array}{r} 8 \quad 12 \quad 1 \\ \cancel{9} \quad \cancel{3} \quad 2 \\ - 4 \quad 5 \quad 7 \\ \hline 4 \quad 7 \quad 5 \end{array}$$

Answer: 475

932 - 457 becomes

$$\begin{array}{r} 1 \quad 1 \\ 9 \quad 3 \quad 2 \\ - \cancel{4} \quad \cancel{5} \quad 7 \\ \hline 5 \quad 6 \\ 4 \quad 7 \quad 5 \end{array}$$

Answer: 475



# KS2 methods for Multiplication

24 × 6 becomes

$$\begin{array}{r} 24 \\ \times 6 \\ \hline 144 \\ \hline 2 \end{array}$$

Answer: 144

342 × 7 becomes

$$\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \\ \hline 21 \end{array}$$

Answer: 2394

2741 × 6 becomes

$$\begin{array}{r} 2741 \\ \times 6 \\ \hline 16446 \\ \hline 42 \end{array}$$

Answer: 16 446



# KS2 methods for division

98 ÷ 7 becomes

$$\begin{array}{r} 14 \\ 7 \overline{) 98} \\ \underline{7} \phantom{0} \\ 28 \\ \underline{28} \\ 0 \end{array}$$

Answer: 14

432 ÷ 5 becomes

$$\begin{array}{r} 86 \text{ r } 2 \\ 5 \overline{) 432} \\ \underline{40} \phantom{0} \\ 32 \\ \underline{30} \\ 2 \end{array}$$

Answer: 86 remainder 2

496 ÷ 11 becomes

$$\begin{array}{r} 45 \text{ r } 1 \\ 11 \overline{) 496} \\ \underline{44} \phantom{0} \\ 56 \\ \underline{55} \\ 1 \end{array}$$

Answer:  $45 \frac{1}{11}$



# What can children do at home?

Maths magicians

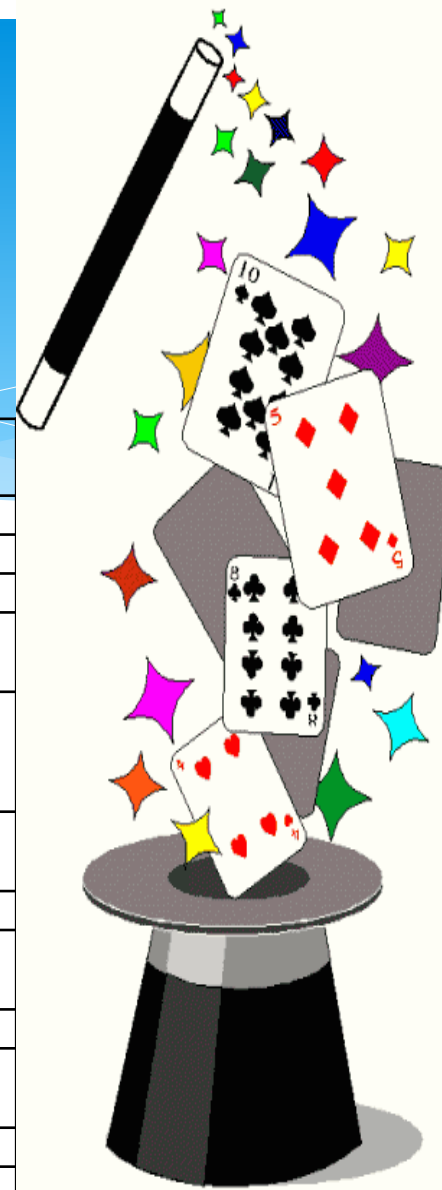
Numbots

TT rockstars

Top marks have maths games.

# Maths Magicians

Colour	Number Facts Target	Achieved ?
Rainbow	Number bonds to 10 ( $3 + 7 = 10$ Pairs to 10)	
Red	Addition and Subtraction Facts to 5 ( $4 - 3 = 1$ )	
Blue	Addition and Subtraction Facts to 10 ( $8 - 3 = 5$ )	
Yellow	Number bonds to 20 ( $15 + 5 = 20$ Pairs to 20)	
Orange	Doubles to 20 and their corresponding halves (Double no's up to 20 and Half of even no's to 40)	
Purple	Multiplication and Division Facts: 2s 5s 10s (Inc. $50 \div 10$ and how many 2's in 18)	
Green	Addition and Subtraction Facts to 20 ( $15 - 7 = 8$ )	
Pink	Multiplication and Division Facts: 3s 4s 6s (Inc. $42 \div 6$ and how many 3's in 18)	
Bronze	Number bonds to 100 (Pairs to 100: $37 + 63$ )	
Silver	Multiplication and Division Facts: 7s 8s 9s (Inc. $64 \div 8$ and how many 7's in 56)	
Gold	Number bonds to 1000 (Pairs to 100: $375 + 625$ )	
Platinum	An Upper Key stage 2 challenge when an understanding of fractions, decimals and percentages is secure)	



# Times Table Rockstars

The screenshot shows the Times Table Rockstars website dashboard. At the top, there is a navigation bar with the following items: Dashboard (highlighted in pink), Tournaments, Me, My Record Label, Events, Guides, Playlist, and Logout. The user profile is for 'Smokey Flores, New Artist' with a 'Logout' button. The main content area is titled 'Rock Festival' and features a list of events:

Event Name	Count	Icons	Image
Glastonbury	3	Three small icons	Pyramid
Woodstock	18	Two small icons	White chicken
Lollapalooza	33	One small icon	Stage

At the bottom left of the screenshot, the URL [trockstars.com/dashboard](https://trockstars.com/dashboard) is visible.

For years 2 – 6  
Log ins are in their reading records  
School postcode HX3 7QU

# Numbots for EYFS and KS1



[NumBots | Motivational maths practice for schools and families.](#)

School postcode HX3 7QU





# Testing

- \* Baseline in early years
- \* ELG
- \* KS1 teacher judgement
- \* KS2 SATS

# Our website

Find out more about each curriculum area below!



Reading and  
phonics



Writing and  
spelling



Maths



Science



Computing  
and E-Safety



Music



PSHCE and RSE



Design and  
Technology



Art and Design



French



Religious  
Education



Geography



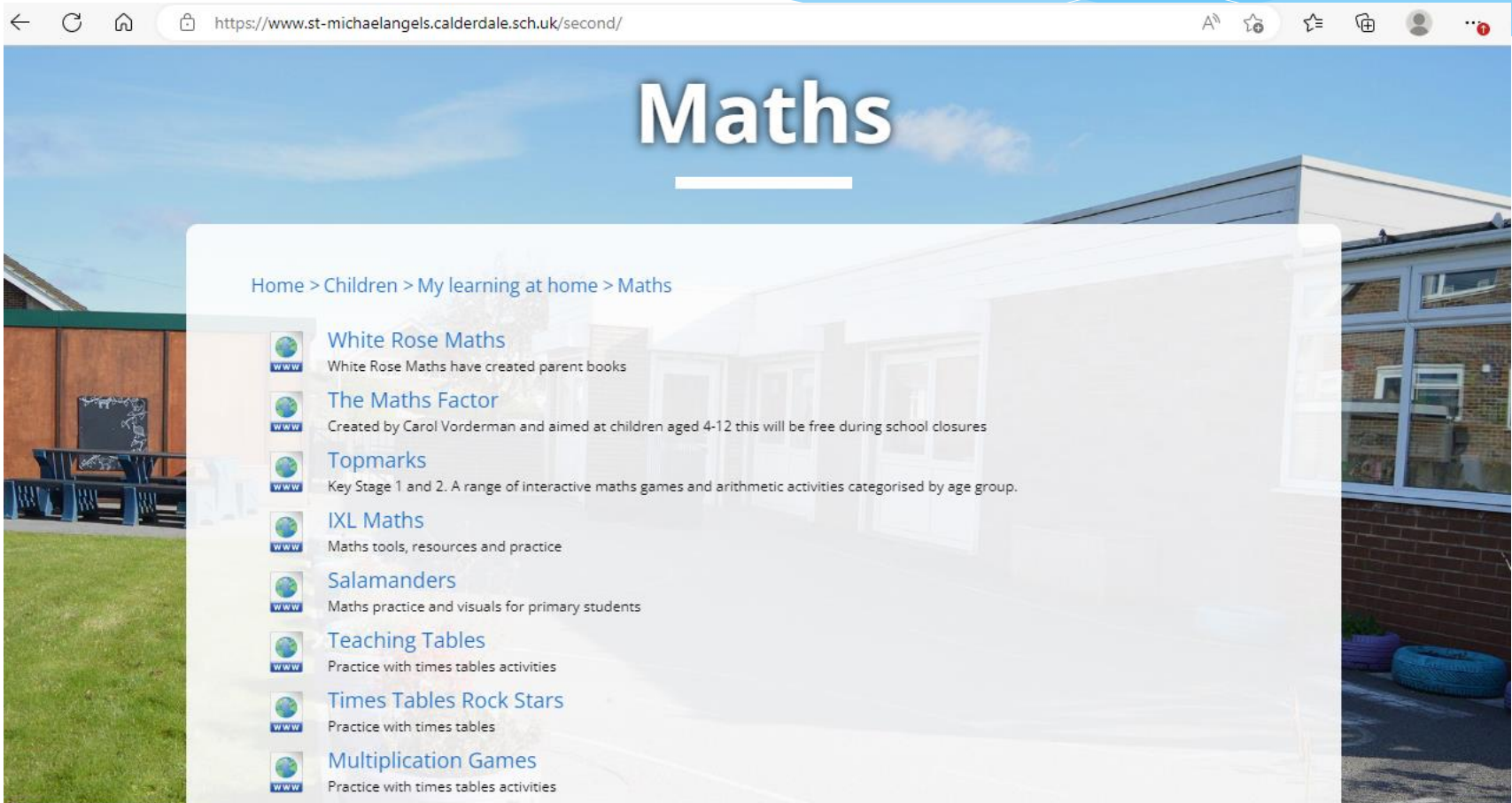
History



PE

<https://www.st-michaelangels.calderdale.sch.uk/my-learning-at-home/>









# Our website



← ↻ 🏠 🔒 <https://www.st-michaelangels.calderdale.sch.uk/second/> 🔍 ⭐ 📄 👤 ⋮

# Maths

Home > Children > My learning at home > Maths

-  [White Rose Maths](#)  
White Rose Maths have created parent books
-  [The Maths Factor](#)  
Created by Carol Vorderman and aimed at children aged 4-12 this will be free during school closures
-  [Topmarks](#)  
Key Stage 1 and 2. A range of interactive maths games and arithmetic activities categorised by age group.
-  [IXL Maths](#)  
Maths tools, resources and practice
-  [Salamanders](#)  
Maths practice and visuals for primary students
-  [Teaching Tables](#)  
Practice with times tables activities
-  [Times Tables Rock Stars](#)  
Practice with times tables
-  [Multiplication Games](#)  
Practice with times tables activities

# Our website

https://www.st-michaelangels.calderdale.sch.uk/maths/



## Whole school overview



Overview

## Calculation Guidance



Calculation Guidance

## Progression in Maths



Maths progression EYFS



National Curriculum Progression

## EYFS Early learning goals and the Development matters for Mathematics



Mathematics ELG from Statutory framework for the Early Years Foundation Stage



Development Matters - Non-statutory curriculum guidance for the early years foundation stage (Mathematics)

## National Curriculum Programme of study for each year group



Year 1

# Ideas for home

## EYFS

Recognise numbers on doors and number plates

Car park with cars and parking spots

Baking

Lego – comparing towers, counting blocks and making patterns

Board games- snakes and ladders

Hide and seek numbers in the garden or around the house

Bingo

Dominoes helps subitising

