



# Year 2 Maths Curriculum Meeting

September 2023



# Primary Stars Maths

- \* This year we have chosen to implement Primary Stars Maths as a programme of study across Year 1 and Year 2.
- \* It follows White Rose Maths ( a scheme designed to make maths accessible for all, regardless of skill or understanding) which is in line with the National Curriculum targets and objectives.
- \* This scheme allows us to follow the mastery approach to teaching, which originates from Singapore. Singapore continues to rank amongst the highest in the world in maths due to this approach.
- \* The main positives around this scheme is that it allows and encourages team work, problem solving, reasoning and important discussions around maths.



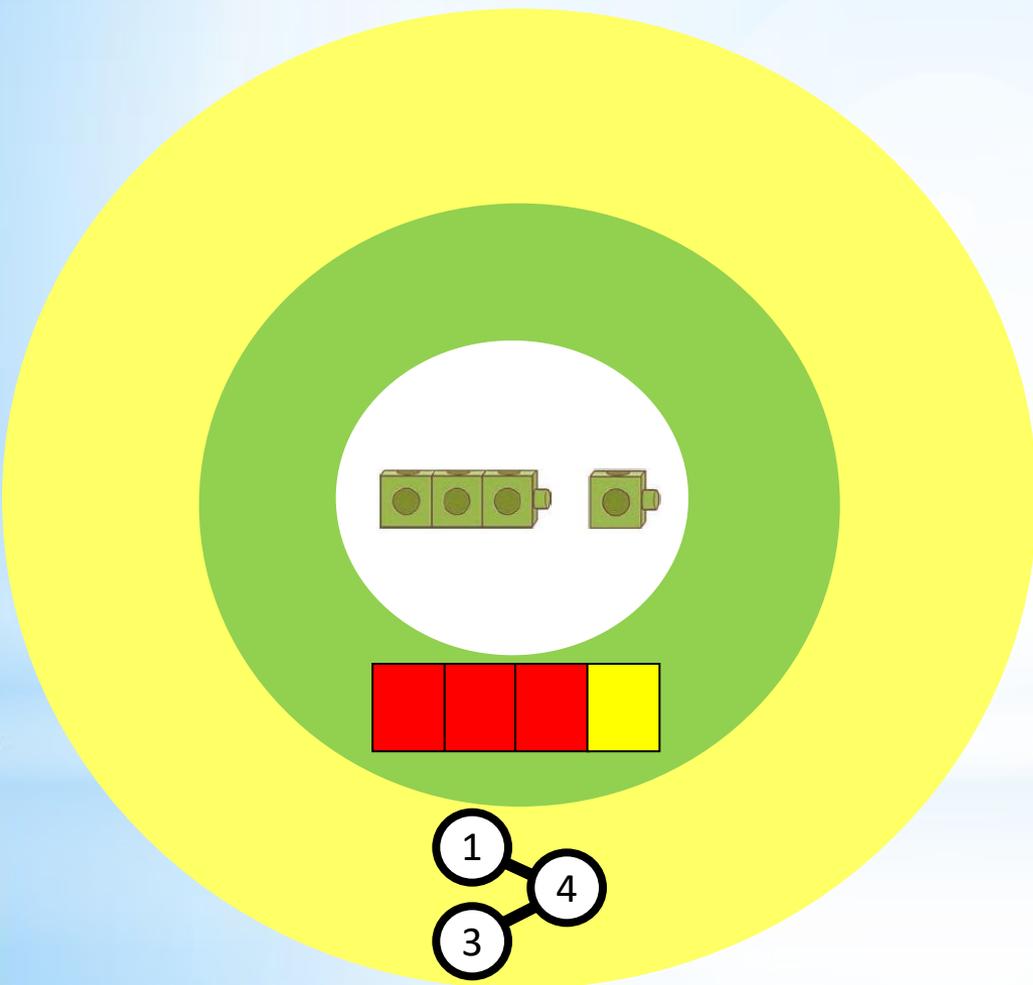
# CPA (Concrete, Pictorial and Abstract)

- \* Most of all, this mathematical approach allows us to use CPA within each lesson. It should be recognised that all children have different learning styles.
- \* We believe that all children are capable of achieving the same learning objectives and understanding within maths as long as they are given the correct tools and resources.





# \* The CPA approach



**Concrete:**

resources such as cubes,  
counters and shapes

**Pictorial:**

pictures, drawings

**Abstract:**

numbers and symbols

# CPA in action

# What will my child learn?

## Topic Yearly Overview

### Year 2 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Measurement: Money		Number: Multiplication and Division	Consolidation	
Spring	Number: Multiplication and Division				Statistics		Geometry: Properties of Shape	Number: Fractions				
Summer	Measurement: Length and Height		Geometry: Position and Direction		Consolidation and Problem solving		Measurement: Time	Measurement: Mass, Capacity and Temperature			Consolidation	

# Small steps for each lesson

## Year 2 – Yearly Overview – Autumn (2020 onwards)



		Week 1 – 3 (BLOCK 1)	Week 4 – 8 (BLOCK 2)	Week 9 – 10 (BLOCK 3)	Week 11 (BLOCK 4)	Week 12 (BLOCK 5)
		Number: Place Value	Number: Addition and Subtraction	Measurement: Money	Number: Multiplication and Division	Consolidation
TAF 5 statements 2018 – 2019	W T	<ul style="list-style-type: none"> <li>Read and write numbers in numerals up to 100.</li> <li>Partition a two-digit number into tens and ones and demonstrate understanding of place value, though they may use structured resources to support them.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract (one digit numbers) explaining their method verbally in pictures or using apparatus.</li> <li>Recall at least four of the six number bonds for 10 and reason about associated facts.</li> </ul>	<ul style="list-style-type: none"> <li>Know the value of different coins.</li> </ul>	N/A	
	W A	<ul style="list-style-type: none"> <li>Read scales in divisions of ones, twos, fives and tens.</li> <li>Partition two digit numbers into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus.</li> </ul>	<ul style="list-style-type: none"> <li>Recall all the number bonds to and within 20, and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships.</li> </ul>	<ul style="list-style-type: none"> <li>Use different coins to make the same amount.</li> </ul>	<ul style="list-style-type: none"> <li>Recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating and understanding of commutativity as necessary.</li> </ul>	All
	G D	<ul style="list-style-type: none"> <li>Read scales where not all numbers on the scale are given and estimate points in between. Use reasoning about numbers and relationships to solve more complex problems and explain their thinking.</li> <li>Solve unfamiliar word problems that involves more than one step.</li> </ul>	<ul style="list-style-type: none"> <li>Use reasoning about numbers and relationships to solve more complex problems and explain their thinking.</li> <li>Solve unfamiliar word problems that involves more than one step.</li> </ul>	<ul style="list-style-type: none"> <li>Use reasoning about numbers and relationships to solve more complex problems and explain their thinking.</li> <li>Solve unfamiliar word problems that involves more than one step.</li> </ul>	<ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts.</li> <li>Use reasoning about numbers and relationships to solve more complex problems and explain their thinking.</li> <li>Solve unfamiliar word problems that involves more than one step.</li> </ul>	
White Rose Maths Small Steps		<ul style="list-style-type: none"> <li>Count forwards &amp; backwards within 20</li> <li>Tens and ones within 20</li> <li>Count forwards &amp; backwards within 50</li> <li>Tens and ones within 50</li> <li>Compare numbers within 50</li> <li>Count objects to 100 and read and write numbers in numerals and words.</li> <li>Represent numbers to 100.</li> <li>Tens and ones with a part whole model.</li> <li>Tens and ones using addition.</li> <li>Use a place value chart.</li> <li>Compare objects.</li> <li>Compare numbers.</li> <li>Order objects and numbers.</li> <li>Count in 2s</li> <li>Count in 5s &amp; 10s</li> <li>Count in 3s.</li> </ul>	<ul style="list-style-type: none"> <li>Fact families – Addition and subtraction bonds to 20.</li> <li>Check calculations.</li> <li>Compare number sentences.</li> <li>Related facts.</li> <li>Bonds to 100 (tens).</li> <li>Add and subtract 1s.</li> <li>10 more and 10 less.</li> <li>Add and subtract 10s.</li> <li>Add by making 10</li> <li>Add a 2-digit and 1-digit number – crossing 10.</li> <li>Subtraction – crossing 20</li> <li>Subtract a 1-digit number from a 2-digit number – crossing 10.</li> <li>Add two 2-digit numbers – not crossing 10 – add ones and add tens.</li> <li>Add two 2-digit numbers – crossing 10 – add ones and add tens.</li> <li>Subtract a 2-digit number from a 2-digit number – not crossing 10.</li> <li>Subtract a 2-digit number from a 2-digit number – crossing 10 – subtract ones and tens.</li> <li>Find and make number bonds</li> <li>Bonds to 100 (tens and ones).</li> <li>Add three 1-digit numbers.</li> </ul>	<ul style="list-style-type: none"> <li>Recognising coins &amp; notes</li> <li>Count money – pence.</li> <li>Count money – pounds (notes and coins).</li> <li>Count money – notes and coins.</li> <li>Select money.</li> <li>Make the same amount.</li> <li>Compare money.</li> <li>Find the total.</li> <li>Find the difference.</li> <li>Find change.</li> <li>Two-step problems.</li> </ul>	<ul style="list-style-type: none"> <li>Make equal groups.</li> <li>Add equal groups.</li> <li>Make arrays</li> </ul>	All
National Curriculum Link		<ul style="list-style-type: none"> <li>Read and write numbers to at least 100 in numerals and in words.</li> <li>Recognise the place value of each digit in a two digit number (tens, ones) identify, represent and estimate numbers using different representations including the number line.</li> <li>Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs.</li> <li>Use place value and number facts to solve problems.</li> <li>Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.</li> </ul>	<ul style="list-style-type: none"> <li>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.</li> <li>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers.</li> <li>Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</li> <li>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.</li> <li>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.</li> <li>Find different combinations of coins that equal the same amounts of money.</li> <li>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</li> </ul>	<ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.</li> <li>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.</li> <li>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts.</li> <li>Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</li> </ul>	All

# Lesson Structure

Complete the sentences.

Fluency



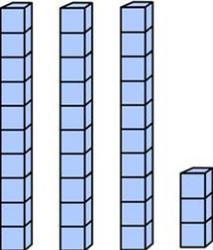
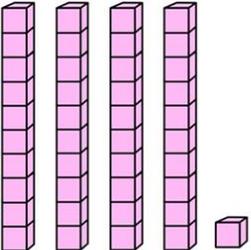
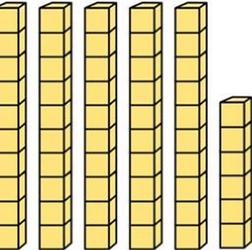
How many cakes are there? 5

How many candles are there? 20

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What numbers are represented below?

Fluency

		
Number:	Number:	Number:
Word:	Word:	Word:

\* Each lesson has a dedicated, child friendly PowerPoint that progressively builds upon a concept. This ensures a greater understanding. The children are encouraged to see numbers represented in many different ways.

\* The first part of the lesson focuses on basic fluency which is an essential skill for the children to have. This understanding ensures they can then apply their learning when problem solving and reasoning.

# Fluency

- \* Children will then move to their maths journals to complete a lesson related to the teaching PowerPoint. They will again initially focus on fluency as their task, which can be shown here.
- \* Children can access this lesson objective using CPA, as we discussed earlier, whatever best suits their learning style. They are able to choose on a daily basis how they would like to learn.
- \* We have an excellent standard of presentation within school and encourage children to consistently do this, this will help with place value in the future, placing numbers in the correct column.
- \* Another focus is also number formation, which is practised throughout the beginning of Year 1.

Number bonds to 10

1 2 . 9 . 2 2

Good ✓

10	5	5	$5 + 5 = 10$
10	4	6	$4 + 6 = 10$
10	8	2	$8 + 2 = 10$
10	9	1	$9 + 1 = 10$
10	3	7	$3 + 7 = 10$

10

1

2

# Problem solving and reasoning

**Challenge**  
Can you order the Numicon starting from the biggest number to the smallest?

**Challenge 2**

a Ten nine seven six five four  
b 6 5 4 2 1 0  
c Eight six five four three two  
d 7 6 5 3 2 1  
e Six five four two one zero

**Challenge 3**

I have counted backwards in ones from 8.

8, 7, 6, 4, 3, 2, 1, 0

Is Mo correct? no

What mistake has Mo made made?

Throughout the year children will be encouraged to explain WHY and answer in a sentence.

- \* If a child excels within the fluency part of the lesson and is confident with the concept they have just learned, we will provide them with a problem solving and reasoning challenge.
- \* This allows them to take the concept they have learned and explore it further using different skills and knowledge.
- \* They enjoy talking and discussing different possibilities.
- \* All children are exposed to challenges as we use them as a lesson plenary, to ensure that all children in class are accessing problem solving and reasoning. We clearly discuss different strategies and which one was the most efficient.

# Assessment

Year 1 - Autumn - Place value (within 10)

ASSESSMENT

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

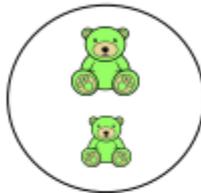
1 Tick (✓) to describe how the teddy bears have been sorted.



size



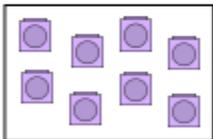
colour



number

1 mark

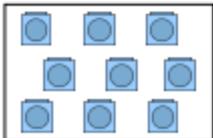
2 Match the cubes to the correct amount.



6



9



8

2 marks

- \* The first block of learning is place value with numbers to 10.
- \* Children learn about numbers to 10 on a deeper level and start to understand methods that will help them accomplish trickier maths in the future. For example, when they know  $3+7=10$ , they will see the pattern of  $30+70=100$  much easier.
- \* Children will complete a pre-assessment before any teaching has taken place. This allows us to see the clear progress they have made after the teaching input.

# Assessment Continued...

- \* Children will then complete the same assessment again at the end of a block.
- \* This allows us to see where each child has a strength and understanding, as well as some gaps that may need to be covered again and strengthened.
- \* We are extremely fortunate to have a teaching assistant in each class throughout Year 1. They are able to pre-teach concepts, or work through a tricky concept with your child if it is clear they need an extra helping hand.
- \* We may show them how to access the learning objective in a different way using concrete objects or pictures, to visually conceptualise a concept.

Year 1 - Autumn - Place value (within 10) **ASSESSMENT**

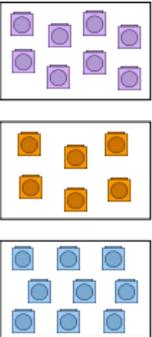
Name: \_\_\_\_\_ Date: \_\_\_\_\_

1 Tick (✓) to describe how the teddy bears have been sorted.



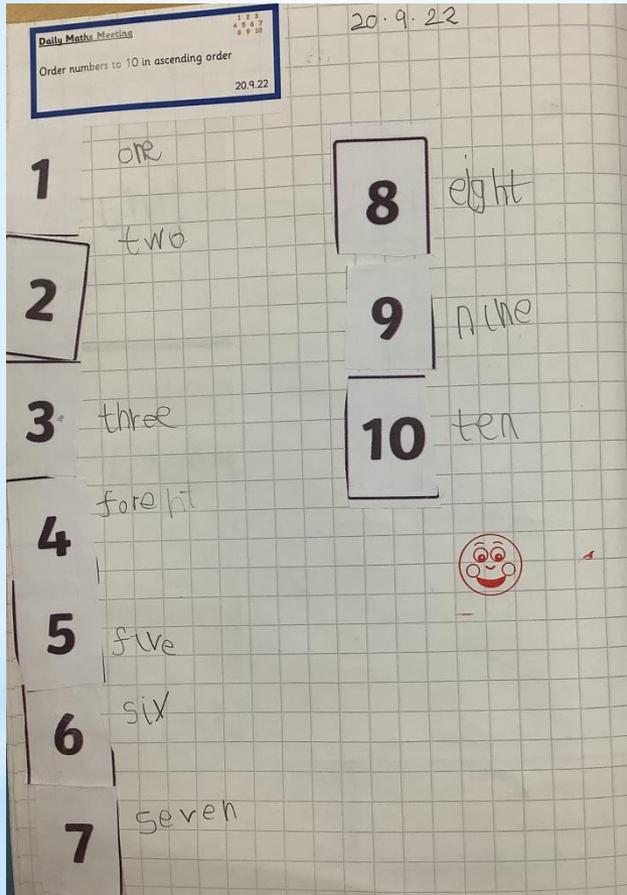
size  colour  number   1 mark

2 Match the cubes to the correct amount.



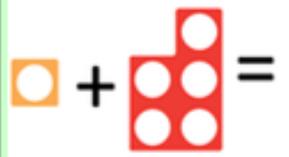
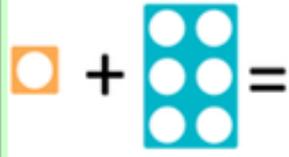
6  9  8  2 marks

# Daily Maths Meetings



- \* In addition to a daily maths lesson, we also teach a ‘daily maths meeting’.
- \* As your child will be focusing on a different ‘block’ of learning over a period of weeks, for example; place value, we feel it is important to teach other basic skills to allow your child grasp many concepts.
- \* We may focus on counting in 2’s, 5’s and 10’s or recapping different 2D and 3D shapes.
- \* Here is an example of how they are presented in books.

# Memory Joggers

Monday	
<p>Yesterday</p> <p>Counting in 2's</p> <p>2 4</p> <p>-----</p>	<p>Last week</p> <p><math>3 \times 2 =</math></p> 
<p>Different domain</p> <p><math>23 +</math></p>  <p>----- + ----- = -----</p>	<p>Last year</p>  <p><math>=</math></p>  <p><math>=</math></p>

\* A huge focus from both Ofsted and the national curriculum is the 'long term memory'. Children are not expected to retain information if they have only been taught it once. It is important to revisit concepts so they may be embedded in their long term memory, allowing them to build upon each concept and explore it further.

\* This is an example of what your child will complete. Something they have learned in Reception, something they learned yesterday, something they learned last week and finally another topic altogether.

# Maths Across The Curriculum

What did we find out?

Material	Amount of liquid (ml)
paper	10ml
balloons	18ml
cloth	4ml
tin foil	2ml

I found out that the tin foil was the best material. I also think the balloons were the worst material because it had lots of air in.

\* Where possible, we feel the need to link maths across the curriculum is an invaluable experience for children. This way, they can see how subjects are interlinked and have an important connection with one another.

Our predictions					Our results	
Large Funnel	Small Funnel	Funnel with sponge	Funnel with paper	Funnel with kitchen roll		
14s ✓	2m 35s	1m 30s	1m 35s	1m 32s	1	Large Funnel 14s
	X	X			2	Paper Funnel 1m35s
					3	Sponge Funnel 30s
					4	Kitchen Funnel 1m 35s
					5	Small Funnel 2m 35s

Which funnel do you think  
Which funnel do you think



\* Here is an example of how maths is used in Science to gather, analyse and compare data.

# How can you help at home?

You can help your child by finding and talking about maths in everyday situations.

For example, a shopping trip is rich in mathematical opportunities, such as:

Spending money, calculating change and working out which offers give the best value for money.

Empty packaging can provide your child with immediate access to 3D shapes.

Counting in 2's, 5's and 10's to later support multiplication.

Asking what comes before and after a given number so children recognise place value in 2-digit numbers.

Toy Shop

	5p		7p
	8p		3p
	6p		2p
	1p		4p
	4p		3p
	5p		2p



- \* Thank you for attending to understand how your child will access maths in our school.
- \* We believe maths is a key subject in life that can open many gateways and experiences for your child throughout their life.
- \* Teaching it is a passion for all teachers and we are proud to offer all children ways to learn that is best suited to them.
- \* We as a staff appreciate the hard work you do as parents to make your children willing learners and participants!



*"will enable children  
to reach their full potential"*

# Any questions?