

An introduction to
Maths Mastery
IN EARLY YEARS



- **EYFS goals (next slide)**
- **Whole school approach**
- **EYFS - prepare children for year 1**

Introduction



The early learning goals

Mathematics Number ELG Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

- Maths Mastery is an approach to maths teaching which stems from Asian nations such as Singapore.
- The main concept is that children develop their mathematical fluency, without resorting to rote learning and then are more able to solve non-routine maths problems without having to memorise procedures.

What Is Maths Mastery?



- Evidence-based approach to teaching maths
(giving children concrete apparatus to make use of while learning)
- Helps develop a deep, long-term and adaptable understanding of maths
- Inclusive approach where all children achieve together *(aided by instant interventions as and where necessary)*
- A slower more, in depth pace is taken allowing for greater exploration and questioning to take place,

Why Maths Mastery?



Maths is taught daily - whole class input and focus group

Maths activity set up daily in maths area and there are other opportunities around the room.

Show a video/recap on that day's learning at the end of the day.

Homework always reflects that week's learning

Daily routine



A typical maths lesson in Reception - A new way of thinking and teaching

Whole class moves through content at the same pace

We move through topics at broadly the same pace. Each topic is studied in depth and we don't move to the next stage until all children demonstrate that they have a secure understanding.

Builds self-confidence

Traditionally, children are put in different groups and given different content based on their ability. We offer all children access to the full maths curriculum. This inclusive approach, and its emphasis on promoting multiple methods of solving a problem, builds self-confidence and resilience in pupils

Differentiates through depth rather than acceleration

Though the whole class goes through the same content at the same pace, there is still plenty of opportunity for differentiation, those pupils who grasp concepts quickly are challenged with rich and sophisticated problems within the topic. Those children who are not sufficiently fluent are provided additional support to consolidate their understanding before moving on.

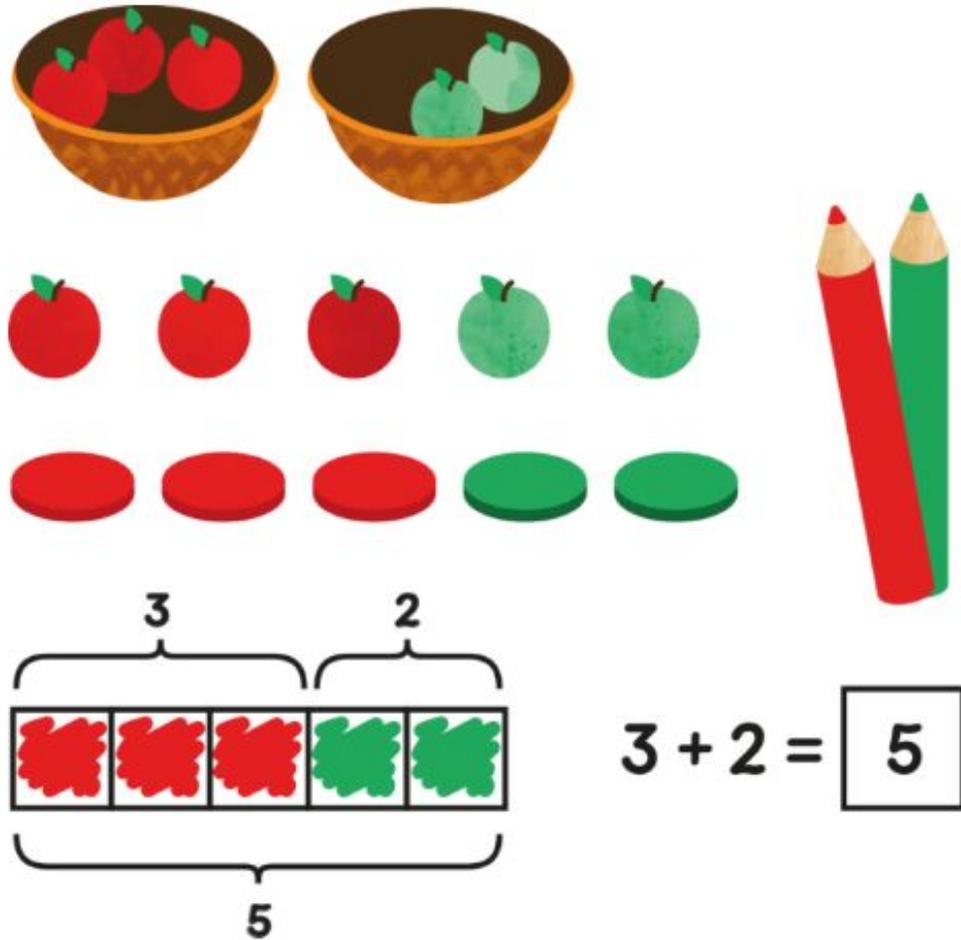


- By using the 'Concrete, pictorial and abstract' (CPA) method.
- Develops a deep and sustainable understanding of maths in children.
- Helps to build on a child's existing understanding



How we teach maths





Concrete is the “doing” stage. During this stage, children use concrete objects to model problems allowing them to experience and handle physical (concrete) objects

Pictorial is the “seeing” stage. Here, visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures

Abstract is the “symbolic” stage, where children use abstract symbols to model problems.

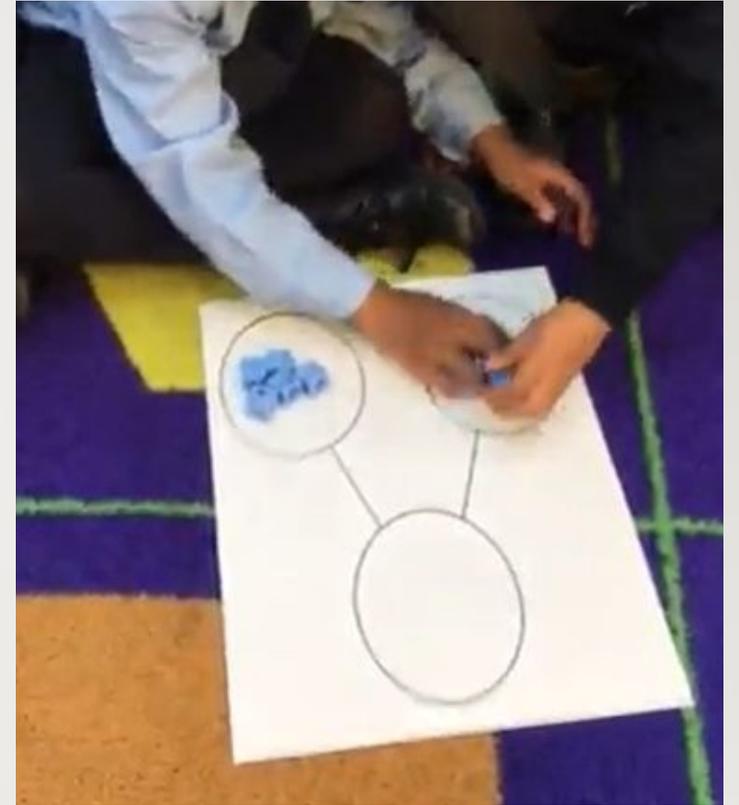
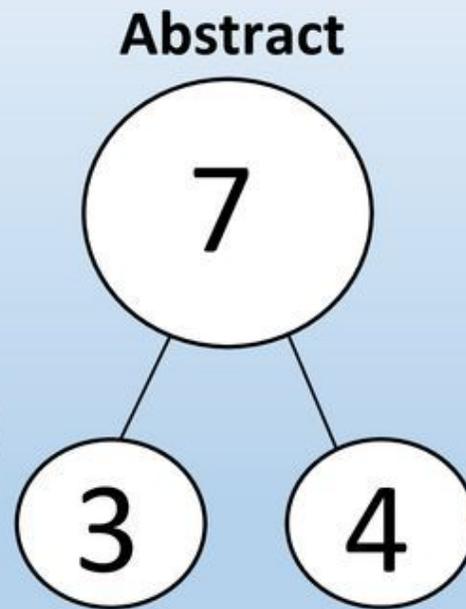
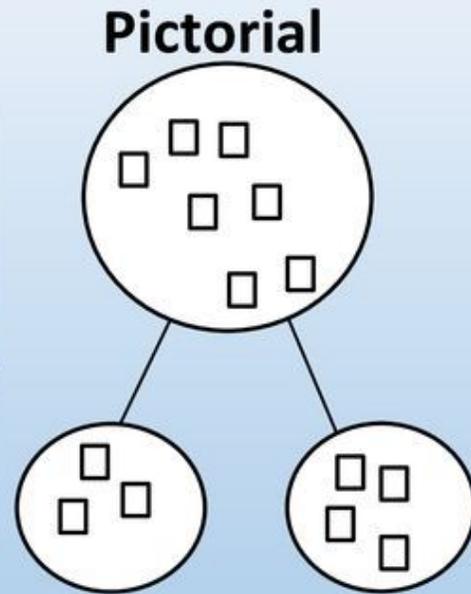
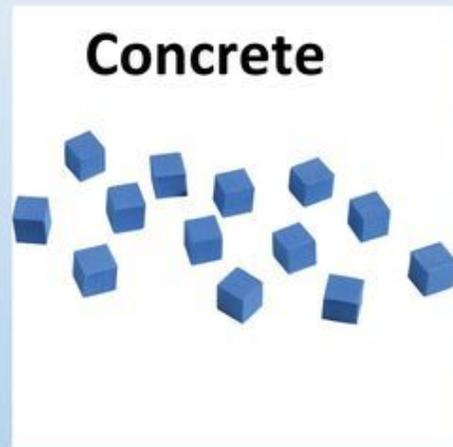
Number Bonds

What is a number bond?

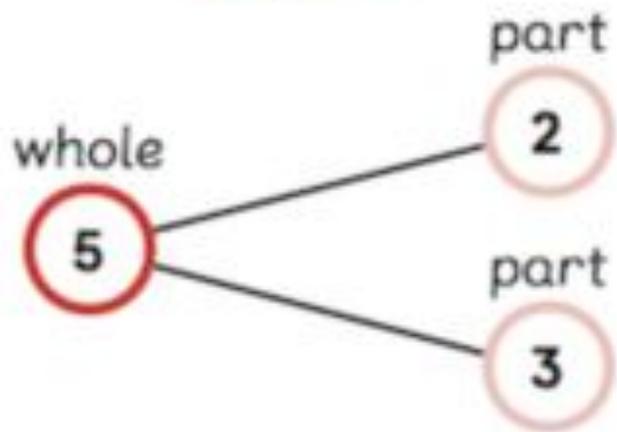
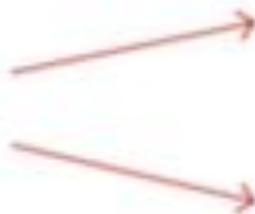
Number bonds are an essential component as they foster number sense in children. They let children split numbers in useful ways. They show how numbers join together, and how they break down into component parts. When used in Rec, number bonds forge the number sense needed to move to addition and subtraction and then become an essential mental problem-solving strategy.



Part whole model



Put 5 cupcakes on two plates.



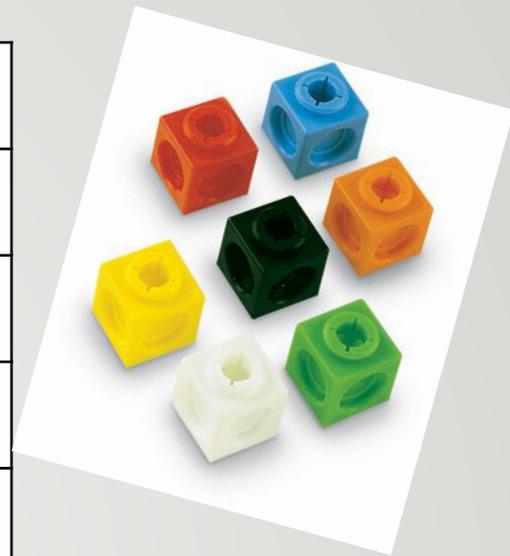
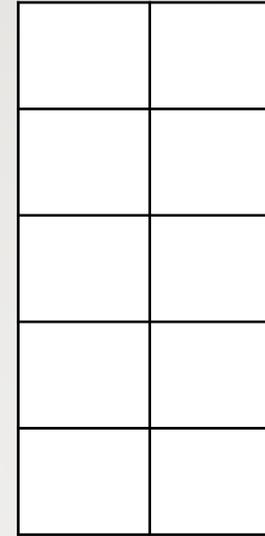
2 and 3
make 5.



Ten Frame

By mastering a variety of strategies early on, children build the foundations needed for subsequent learning and are better equipped to develop mental strategies and mathematical fluency.

By building a strong number sense, pupils can then decide what action to take when trying to solve problems in their head.



ONE LESS	THE NUMBER	ONE MORE
<p data-bbox="140 178 267 285">2</p> 	<p data-bbox="407 149 649 314">  3 </p> 	

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1, 2 and 3 Maths Sorting Activity

Can you sort 1, 2 and 3?

1 one 	2 two 	3 three 
  	  	  

ink saving Eco

Fill in the gaps on the number line.

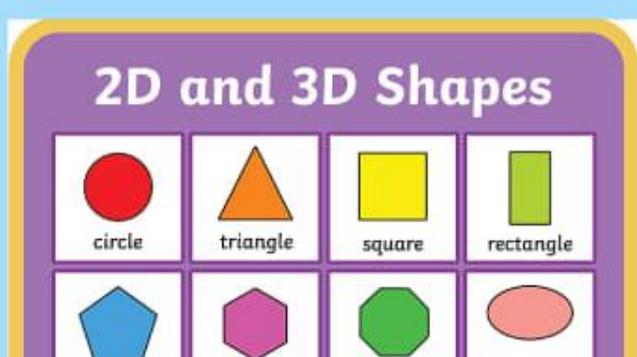
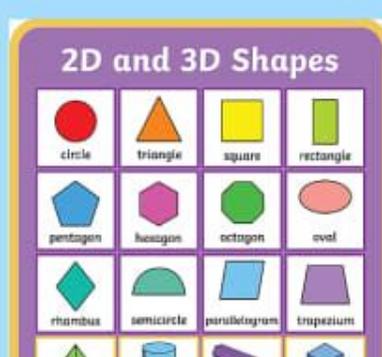
0		2			5	
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1	3	4	6
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I can order numbers.

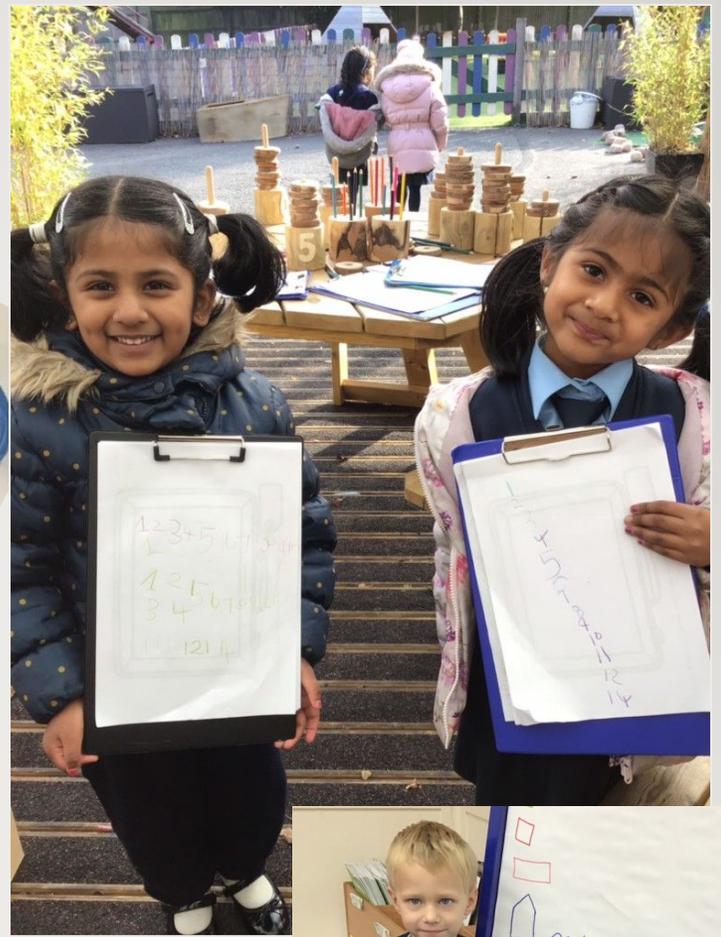
5	1	2	3			4
7						6

8	9	10
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Reception 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	Baseline/ getting to know your learners			Numbers: counting and recognition			Shape, space and measures: 2D shape		Shape, space and measures: money	Numbers: addition and subtraction		
Spring	Numbers: counting and recognition			Shape, space and measures: size, weight and capacity			Numbers: addition and subtraction			Shape, space and measures: 3D shape		Shape, space and measures: time
Summer	Numbers: counting and recognition		Numbers: addition and subtraction		Numbers: doubling, halving and sharing			Shape, space and measures: position and distance			Consolidation/ assessments	



And finally...
...any questions?

