

Greythorn Primary School

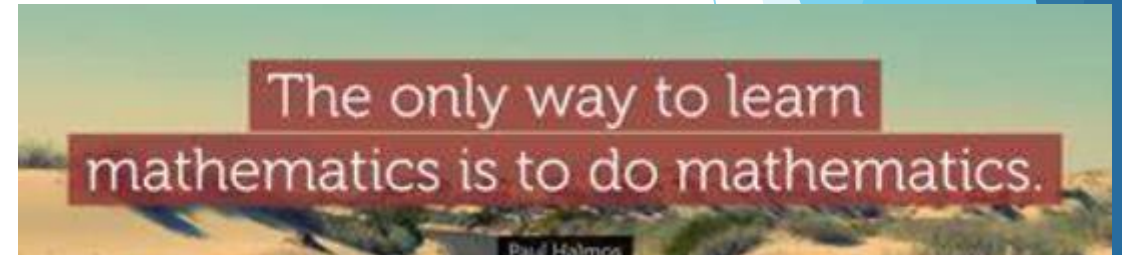
Maths Presentation



“

Mathematics is not about numbers, equations, computations, or algorithms: it is about **understanding.**

-William Paul Thurston



“

Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers.

-Shakuntala Devi

Overview of maths at Greythorn

	Summer B				Summer A				Spring B				Spring A				Autumn B				Autumn A			
R	Measures	Automatic Recall	Patterns within Numbers to 10	Counting Beyond 20	Comparison	Substising	Time	Comparison	Composition	Composition	Counting & Cardinality	Measures	Geometry	Comparison	Composition	Composition	Counting & Cardinality	Measures	Counting & Cardinality	Composition	Comparison	Substising	Counting & Cardinality	Substising
	Consolidation	Time	Money	Place value (within 100)	Position & Dir	Fractions	Multiplication & Division	Weight & Volume	Length & Height	Place value (within 50)	Multiplication & Division	Length & Height	Weight & Volume	Place value (within 20)	Addition & Subtraction (within 20)	Place value (within 20)	Shape	Consolidation	Shape	Addition & Subtraction (within 10)	Place value (within 10)	Shape	Place value (within 10)	Substising
1																								
2	Consolidation	Position & Direction	Statistics		Time	Fractions		Mass, Capacity & Temperature	Length & Height					Multiplication & Division			Money		Shape	Addition & Subtraction		Place value		
3	Consolidation	Statistics		Shape	Time	Money	Fractions B	Mass & Capacity		Fractions A				Multiplication & Division B					Multiplication & Division A	Addition & Subtraction		Place value		
4	Position & Direction	Statistics		Shape	Time	Money	Decimals			Fractions				Multiplication & Division				Consolidation	Multiplication & Division	Area	Addition & Subtraction		Place value	
5	Volume	Converting Units	Negative Numbers	Decimals	Position & Direction	Shape		Statistics	Perimeter & Area	Fractions B				Multiplication & Division					Fractions A	Multiplication & Division	Addition & Subtraction		Place value	
6	Themed Projects, Consolidation & Problem Solving				Position & Direction	Shape	Statistics	Area, Perimeter & Volume	Fractions, Decimals & Percentages	Decimals	Algebra	Ratio	Converting Units	Fractions B	Fractions A	Four Operations				Place value				

Maths in FS

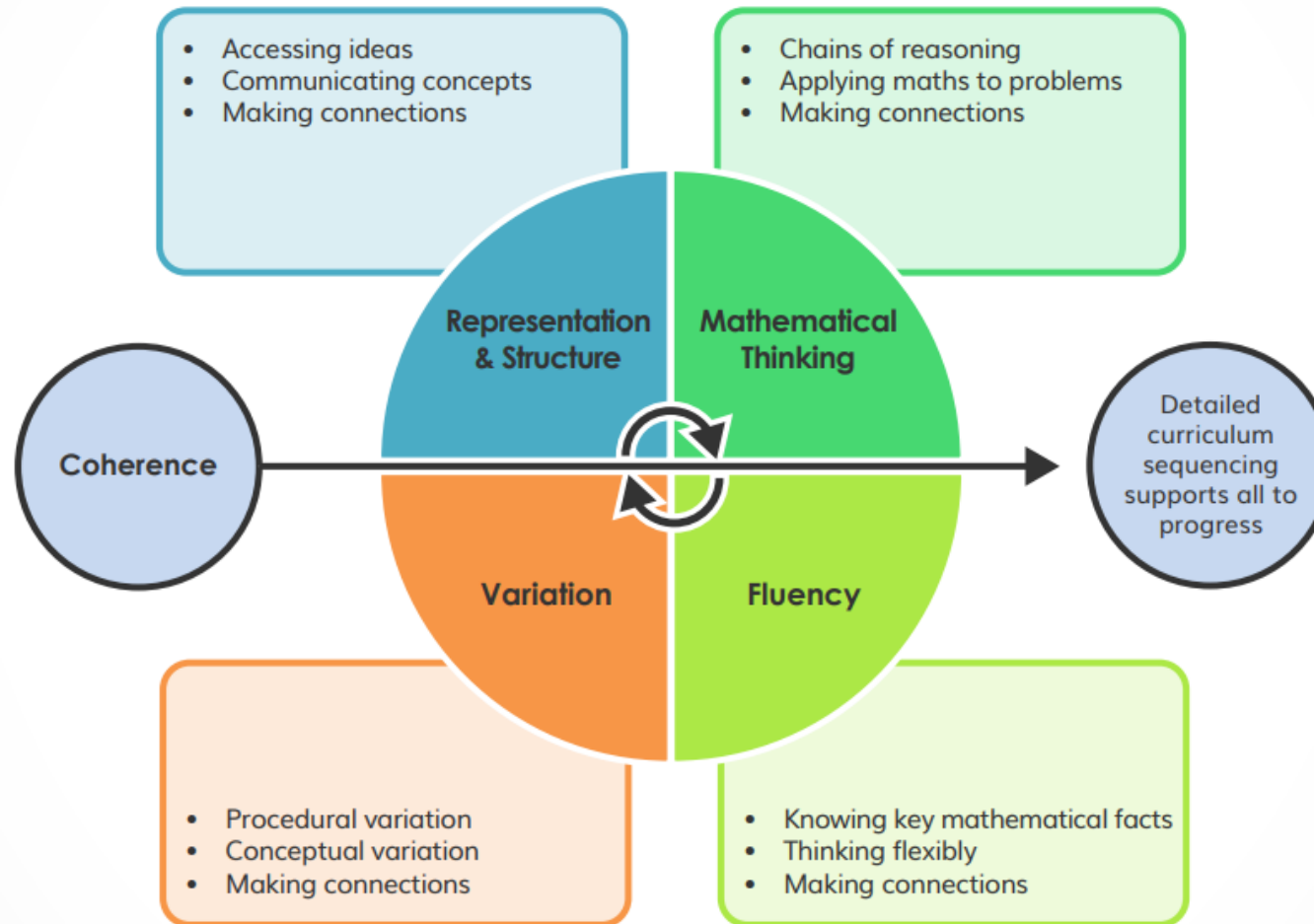
- ▶ Maths in FS curriculum is split into 3 sections. **Number, numerical pattern & shape, space & measure.**

	Autumn A						Autumn B						Spring A						Spring B						Summer A						Summer B					
R	Subitising	Counting & Cardinality	Composition	Subitising	Comparison	Time	Counting & Cardinality	Comparison	Composition	Composition	Counting & Cardinality	Measures	Subitising	Counting & Cardinality	Composition	Composition	Comparison	Geometry	Counting & Cardinality	Comparison	Composition	Subitising	Composition	Measures	Counting & Cardinality	Subitising	Composition	Composition	Comparison	Time	Subitising	Comparison	Counting Beyond 20	Patterns Within Numbers to 10	Automatic Recall	Measures
	Shape						Pattern						Shape						Multiplication & Division						2D Shape						3D Shape					

- We use the mastering number programme by NCETM.
- Mastering Number develops pupils' fluency with and understanding of number to build firm foundations for future success in mathematics learning.
- This covers all 3 areas of our maths curriculum and breaks down into sub sections to include counting & cardinality, subitising, composition, comparison of numbers within 10 and up to 20.
- We teach 5 maths lessons each week. 4 on number/numerical pattern and 1 on shape space and measure.
- We also have 2 weekly provision enhancements to develop the children's knowledge. 1 enhancement will be supporting the children to deepen and cement their knowledge of previous learning and the other will be a new concept from that week.

Mastery Maths

Teaching for Mastery Five Big Ideas



Features of Mastery Maths

- ▶ **Fluency**- number facts, writing numerals

Automaticity in number- number bonds, 1 more, 1 less, 10 more, 10 less, tables

- ▶ **Reasoning**- what if? What comes next? Is that the only answer? Is that the quickest method?

Promoting curiosity

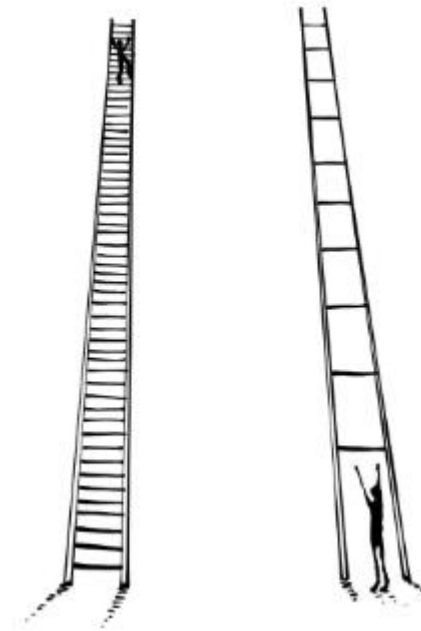
- ▶ **Problem Solving**- applying methods to real life problems

Showing resilience and perseverance and thinking creatively about problems

Features of Mastery Maths

- ▶ Reactivating prior knowledge
- ▶ Modelling methods
- ▶ Working together to practise the maths
- ▶ Using structures that support the learning
- ▶ Using manipulatives that aid the understanding
- ▶ Identifying misconceptions
- ▶ Giving varied practice
- ▶ Using small steps
- ▶ Independent practice

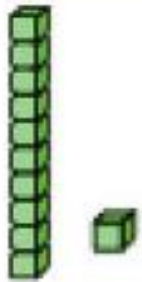
The importance of small steps



Concrete, pictorial, abstract

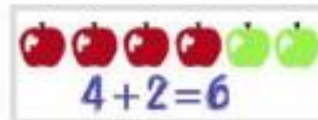


Active/Concrete



$$13 - 8 = 5$$

Building Visual
Images



$$13 - 8$$

Abstract

$$12 + 19$$

Maths at Greythorn

► What does a lesson look like?



- Reactivate prior knowledge



- Teach and model the new learning
Look at common misconceptions, use of manipulatives.



- Work together as a class on some varied problems

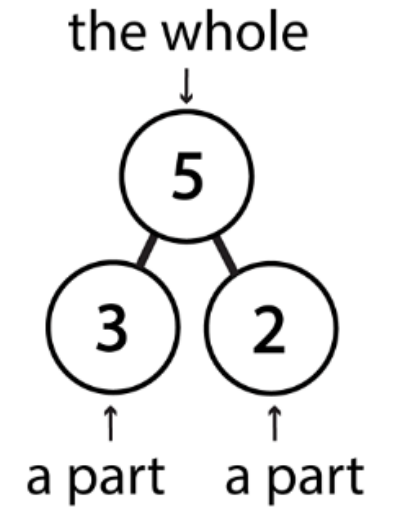
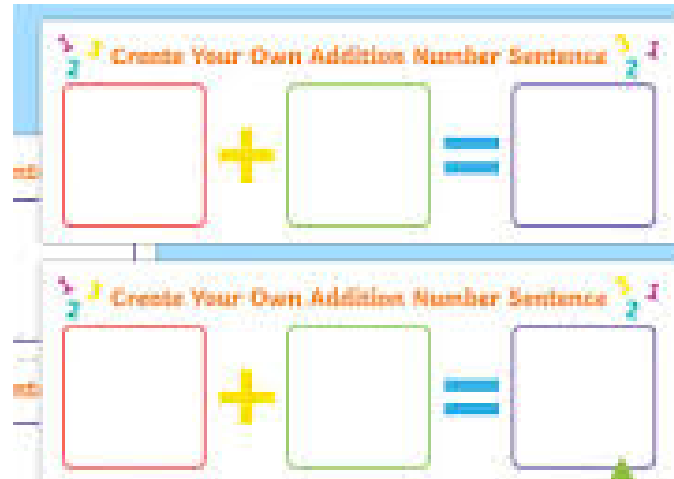
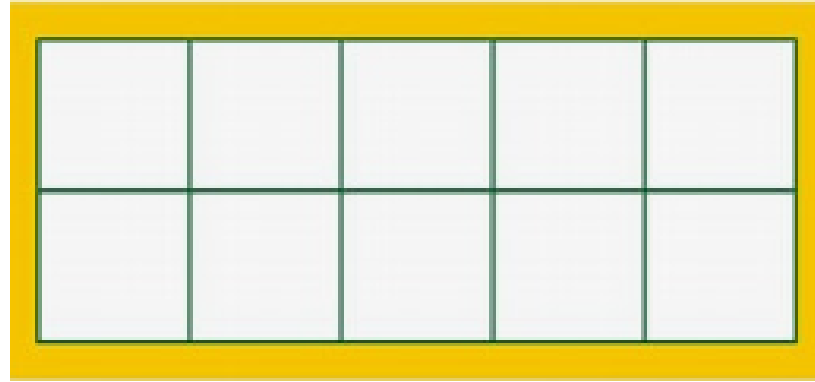


- Work independently on varied practice



- Reflect on learning

Structures and Manipulatives



Reactivate: Sing the number songs to remind you of the numeral order and pattern.



What do you notice about the numbers?

Do the numbers go forwards or backwards?



FIVE currant buns in a baker's shop,



Teach, facilitate, model.



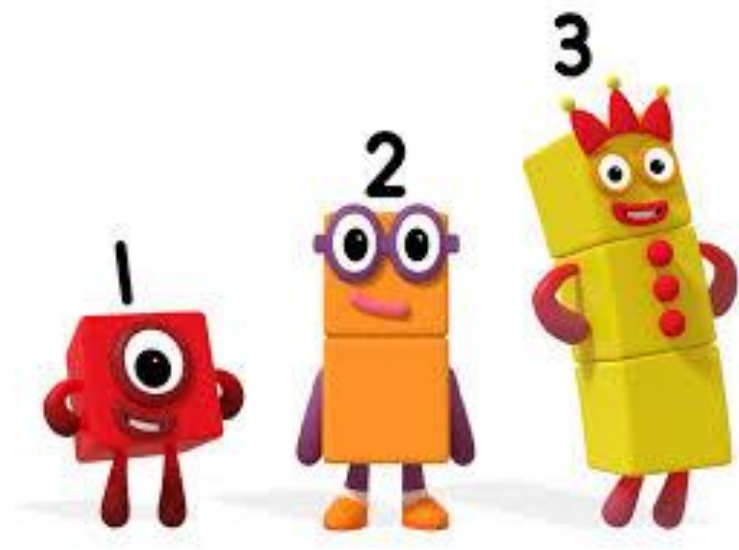
LO: To know the composition of numbers to 3.



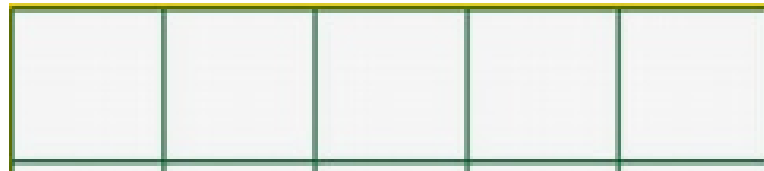
- Modelling how the numbers up to 3 can be made and represented in different ways.
- Use manipulatives including cubes, 5 frames, Numicon to show this.
- Challenge misconceptions – children to notice teacher error.

Learn, together.

We know which number each
Numberblock represents but what
clues can you see that helps us?

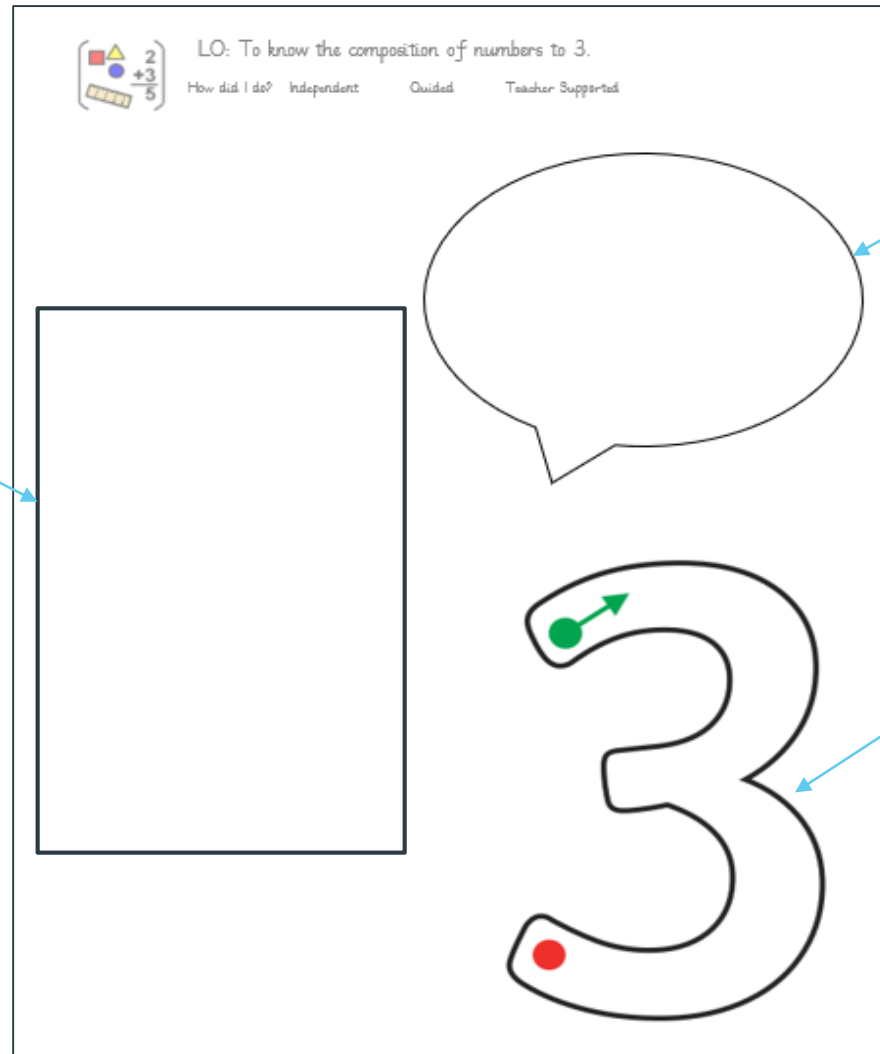


Work together with your partner to represent the numbers up to 3 using the resources.



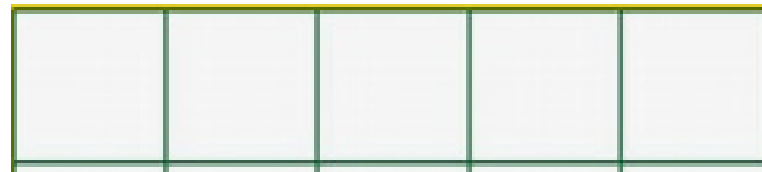
Independent practice.

Photograph of child completing task with their chosen manipulatives.

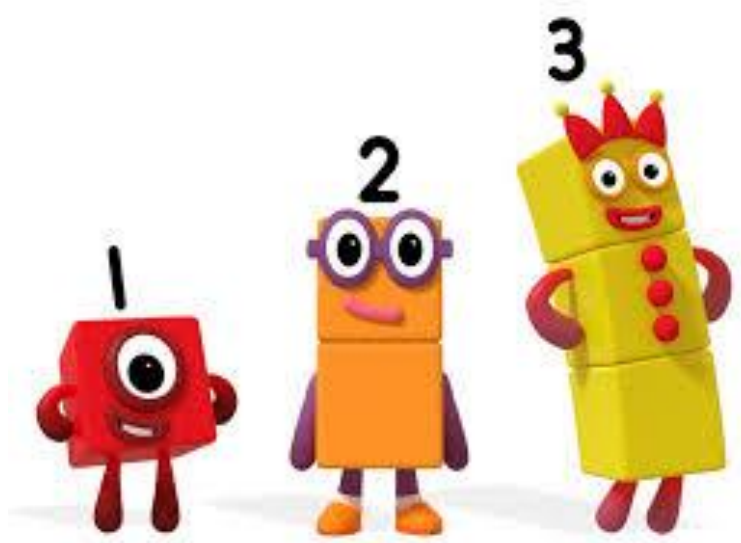


Child voice

Number formation



Reflection



We know which number each Numberblock represents but what clues can you see that helps us?

What do we use these for? How do they help us to learn about composition?



How to encourage your child.

- ▶ The best thing that parents and carers can do for children is to have a **positive attitude** towards maths. Please don't say things like "I can't do maths" or "I hated maths at school"; your child might start to think like that themselves.
- ▶ **Point out the maths in everyday life.** Include your child in activities involving maths such as using money, cooking and travelling.
- ▶ **Praise your child for effort rather than talent** – this shows them that by working hard they can always improve
- ▶ **Help your child to learn their Number Facts**