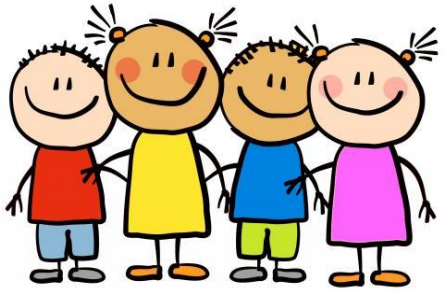
Tell Me More…

Maths at Wisborough Green Primary School

C Bennett/D Barnard June 2023

Early Years Maths Curriculum



Numbers

- Children should be able to **count** confidently, develop a deep understanding of **the numbers to 10**, the **relationships** between them and the **patterns** within those numbers.

Patterns and Connections

- It is important that children develop **positive attitudes** and **interests in mathematics**, look for **patterns and relationships**, spot **connections, 'have a go'**, **talk** to adults and peers about what they notice and not be afraid to **make mistakes**.

Spatial Reasoning

- Spatial reasoning is the understanding of **how objects can move** in a 3-dimensional world. It is important that the EY curriculum includes rich opportunities for children to **develop** their **reasoning skills** across all mathematical areas including **shape, space and measure.**

Aims of the National Curriculum (KS1 & KS2)

The national curriculum for mathematics aims to ensure that all pupils:

become **fluent** in the fundamentals, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop the ability to **recall and apply** knowledge **rapidly and accurately**.

reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing justification or **proof using mathematical language**

can **solve problems** by applying their mathematics, including **breaking down problems** into a series of simpler steps and **persevering** in seeking solutions.

National Curriculum

- Number and Place Value
- Number: Addition & Subtraction
- Number: Multiplication & Division
- Fractions (UKS2 includes decimals and percentages)
- Measurement
- Geometry: Properties of Shape
- Geometry: Position & Direction
- Statistics
- Ratio & Proportion (Year 6)
- Algebra (Year 6)

Statutory Assessment

- EYFS (GLD)
- End of KS1 (discontinued from 2024)
- Year 4 Multiplication Tables Check (MTC)
- End of KS2 (number and reasoning)

2022

KS1 70% expected or above (68%)

KS1 0% greater depth

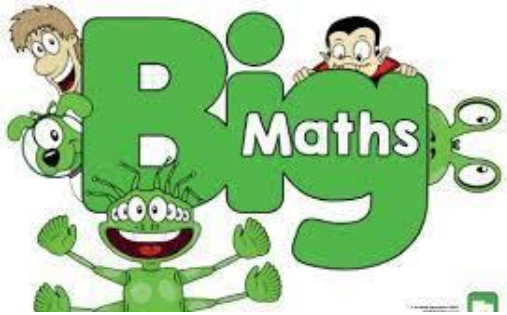
MTC mean score 21.5 (19.8)

MTC full marks 15% (27%)

KS2 67% expected or above (71%)

KS2 17% 110+ (36%)

Big Maths



At Wisborough Green, we teach mental maths strategies and fluency through Big Maths. Big Maths is based on four core skills that form the platform for virtually all other maths skills.

A session usually lasts for 20-30 minutes covering the following areas:

- Counting
- Learn Its
- It's Nothing New
- Calculation

We have adapted Big Maths to ensure it has the best possible impact on our children and their progress by focusing on the first three core skills and incorporating calculations into our daily sessions. We teach three Big Maths sessions per week.

Number Ninjas

- At Wisborough Green, every child has a personalised mental arithmetic objective that they are working towards. Once children have mastered their objective, they receive a wristband that they can wear proudly in and out of school. There are various wristbands to earn, and children focus on one objective each week.
- The objective may stay the same for several weeks while the children build their confidence in each objective.
- The system starts with ‘Number Bonds to 10’ and steadily progresses towards ‘Using 12x12 times tables facts fluently and confidently’. Apart from the Reception strand, the rest of the objectives are not year group specific as we want to ensure that gaps are filled and secured.
- Children have a clear focus to work on and wear their wristbands with pride!

White Rose Maths

Small-step, mastery-based schemes of learning with resources, including videos and slides

End of block and term assessments

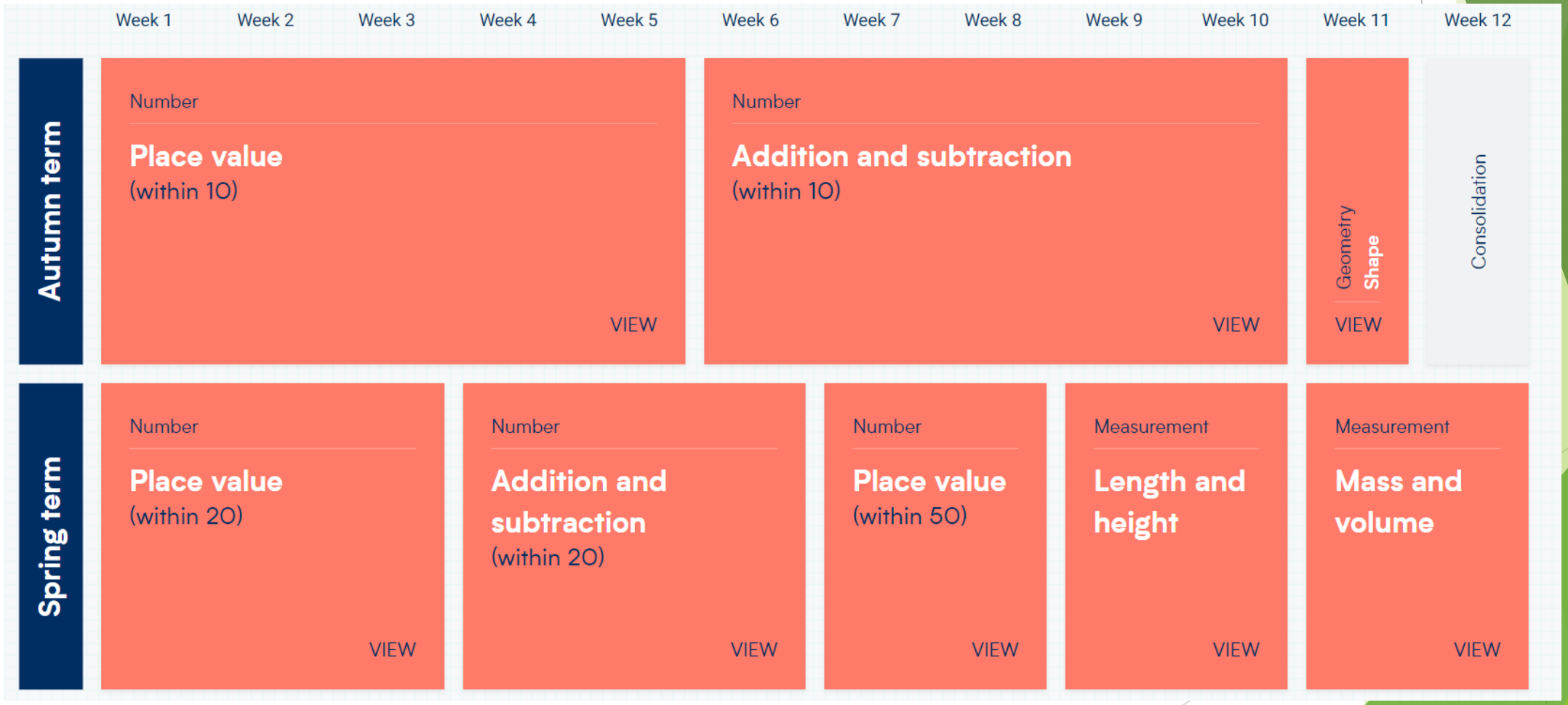
Overview for each year group linked to the National Curriculum

Blocks of Learning

- For each year group, the scheme of learning includes an overview of the maths that your child should be learning at any point in the year.
- Each year is split into three terms (autumn, spring and summer), and each term comprises individual blocks of learning about a particular topic.
- We spend lots of time building strong number skills in Key Stage 1 and Key Stage 2. These essential core skills lay a solid foundation for more complicated learning later on.
- Sometimes classes might be a little behind or ahead of the scheme schedule. The scheme deliberately builds flexibility to allow for these variations. We may also adjust the order to address gaps from previous years or to move learning on.

Blocks of Learning

White Rose MATHS



Sussex Maths Hub

A partnership of schools and colleges – from Early Years and Primary, to Secondary and Further Education – who work together with maths educationalists, researchers and practitioners to improve maths teaching and learning.

Aim to change perceptions of children and adults towards maths and ensure that everyone has a growth mindset when it comes to numeracy and mathematics.

The Sussex Maths Hub is one of a network of 40 Maths Hubs in England. The programme is funded by the Department for Education (DfE) and coordinated by the National Centre for Excellence in the Teaching of Mathematics (NCETM).

The Sussex Maths Hub is now in its sixth year. Wisborough Green is currently completing its third year: Embedding Mastery.

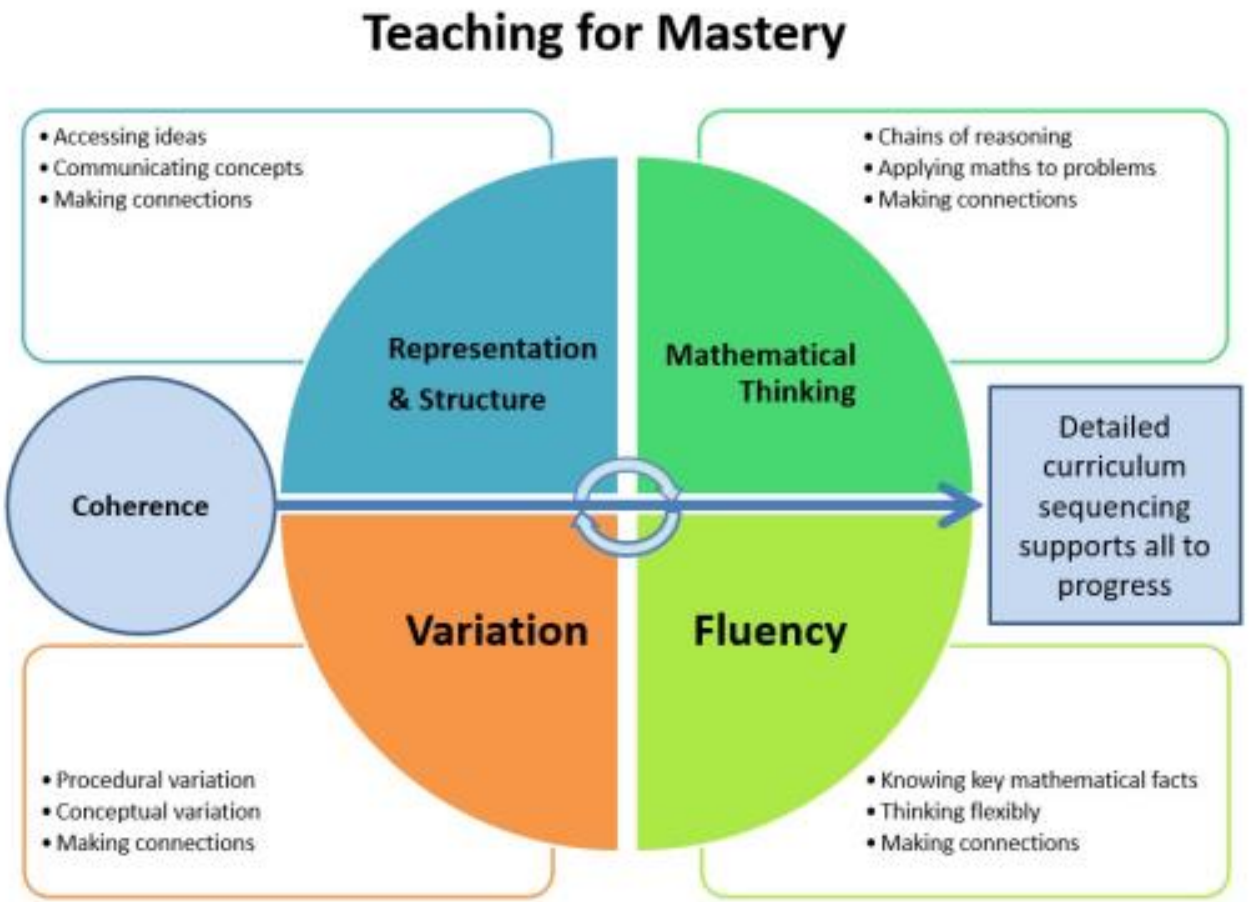
Teaching for Mastery

Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject.

The phrase ‘teaching for mastery’ describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths.

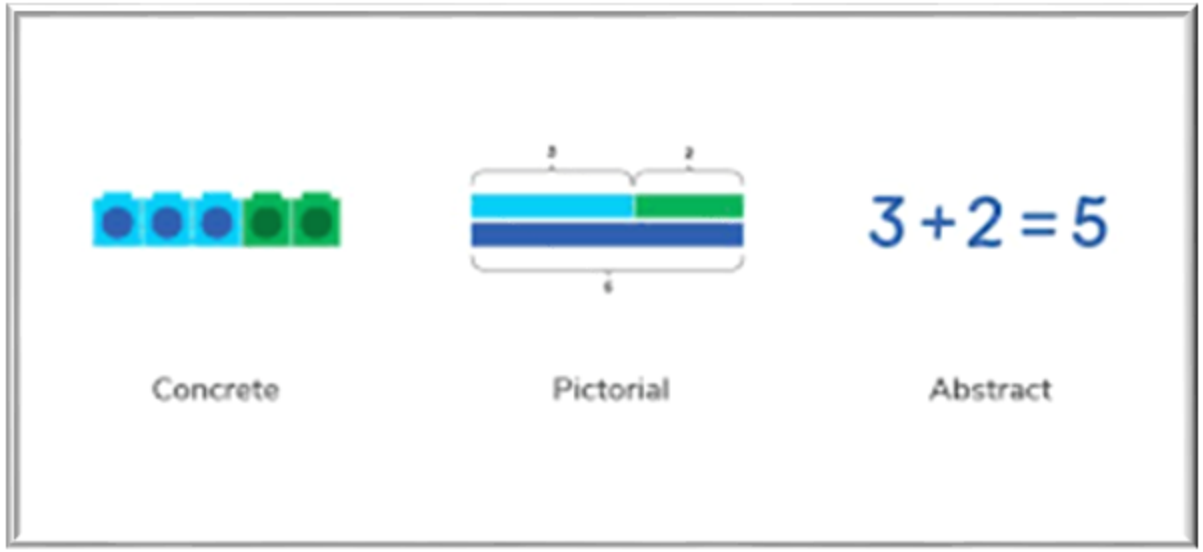
Achieving mastery means acquiring a solid enough understanding of the maths that’s been taught to enable pupils to move on to more advanced material.

The Five Big Ideas in Teaching for Mastery



Concrete – Pictorial – Abstract (CPA)

Research shows that all children, when introduced to a new concept, should have the opportunity to build competency by following the CPA approach. This features throughout our maths teaching.



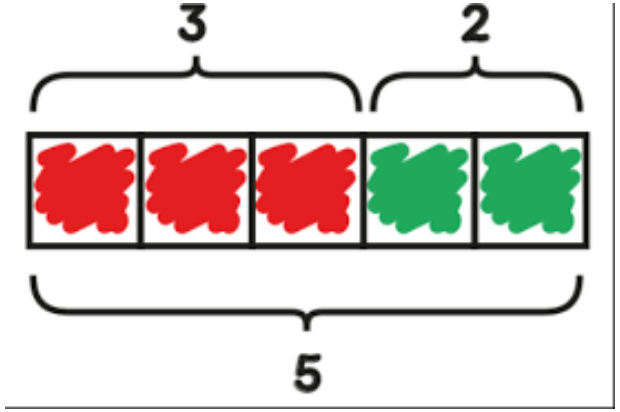
Concrete

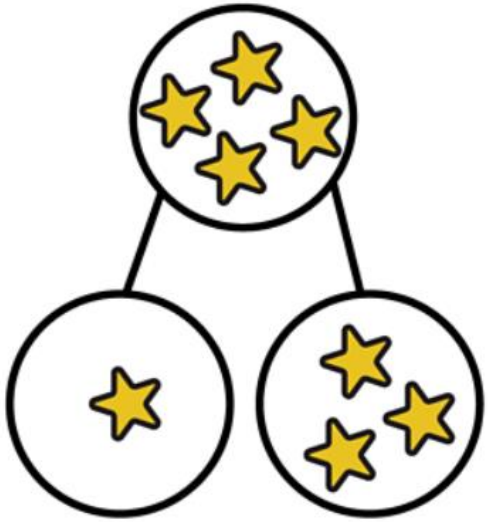
Children should have the opportunity to work with physical objects/ concrete resources, in order to bring the maths to life and to build understanding of what they are doing.

place value counters dienes numicon

Pictorial

Alongside concrete resources, children should work with pictorial representations, making links to the concrete. Visualising a problem in this way can help children to reason and to solve problems.

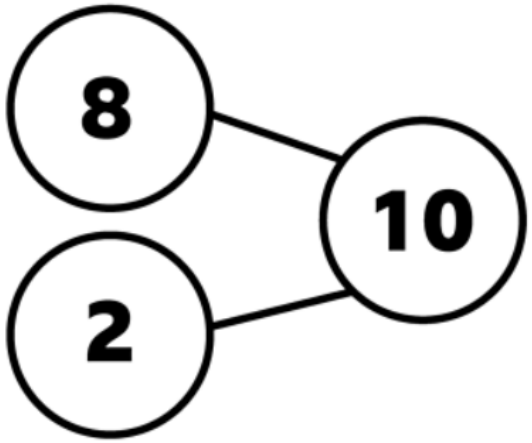




Abstract

With the support of both the concrete and pictorial representations, children can develop their understanding of abstract methods.

$$3 + 2 = 5$$



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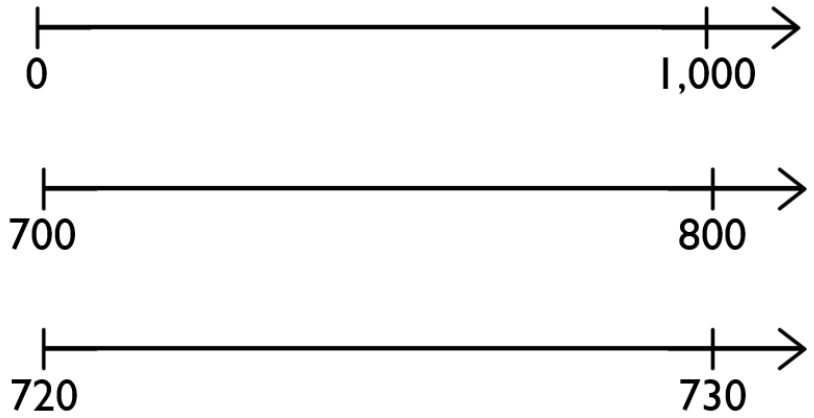
True or False?

When ordering numbers you only need to look at the place value column with the highest value.

Estimate where seven hundred and twenty-five will go on each of the number lines.



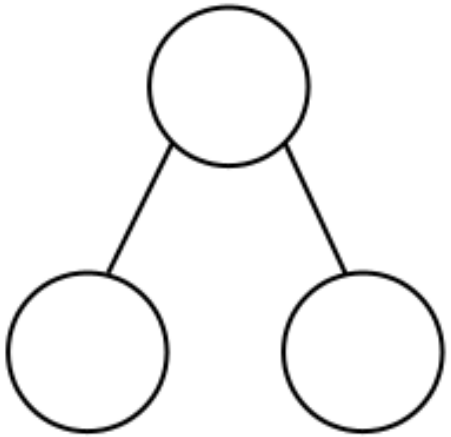
Explain why it is not in the same place on each number line.

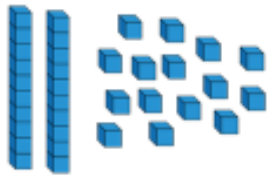
Deepening Understanding

Have a go! Remember to use concrete resources, a pictorial representation and abstract recording.

Can you use CPA to represent the following problem?

How many ways can you complete the part-whole model to show numbers up to 20, using the Base 10 equipment – you do not have to use it all.





Thank you for listening.

Any questions?