



Maths at Great Missenden

How is maths taught at GM?

Maths Mastery



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

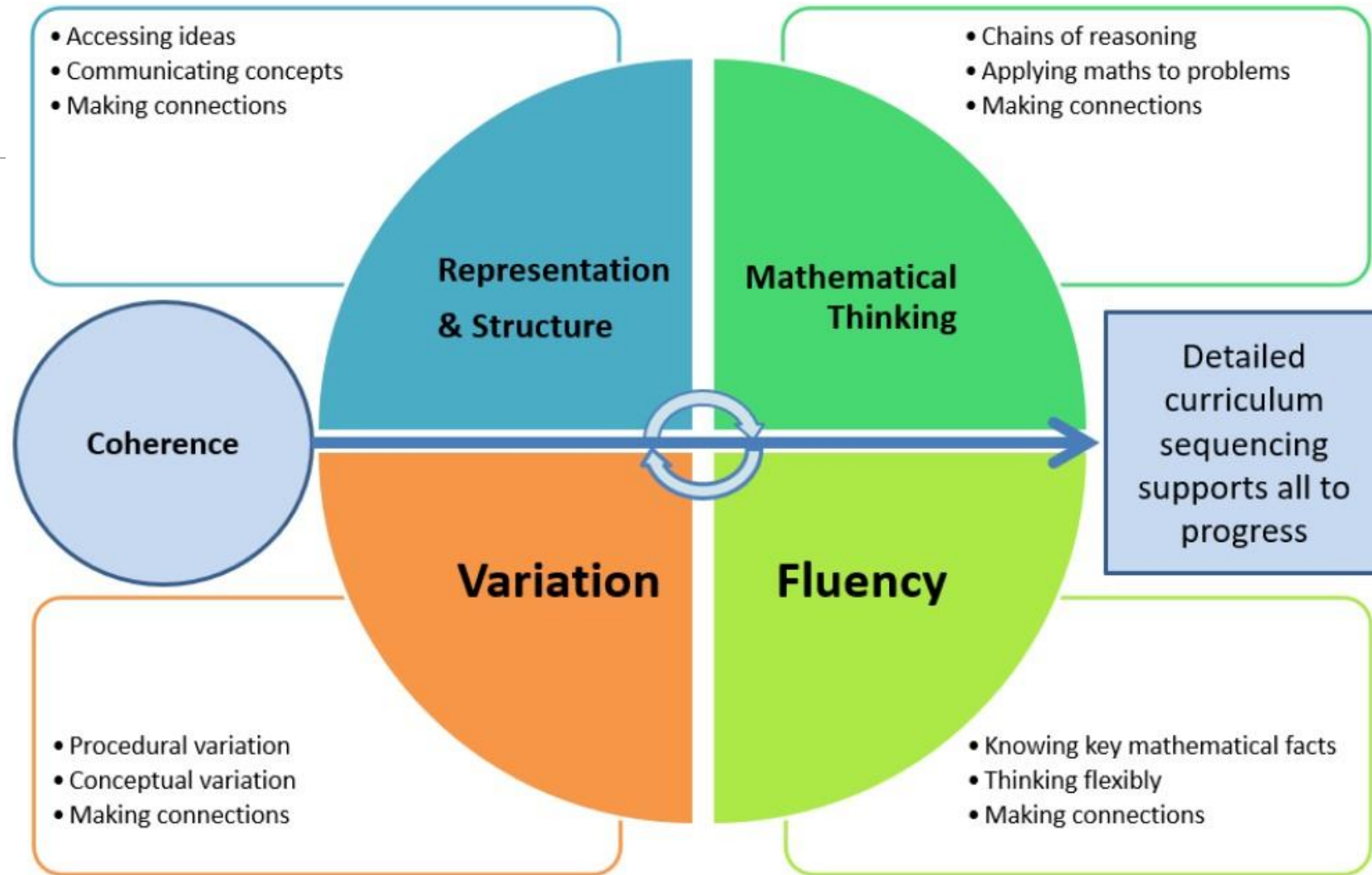
Achieving mastery means acquiring a solid enough understanding of the maths that's been taught to enable pupils to move on to more advanced material.

Mathematics teaching for mastery assumes **everyone** can learn and enjoy mathematics!

The Five Big Ideas underpin teaching for mastery:

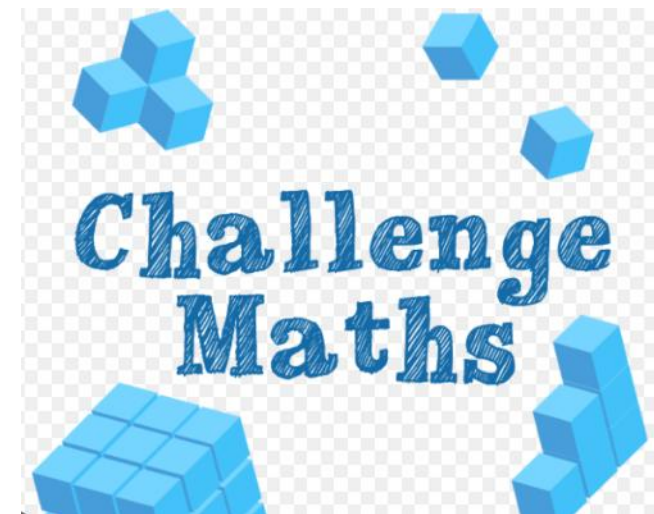
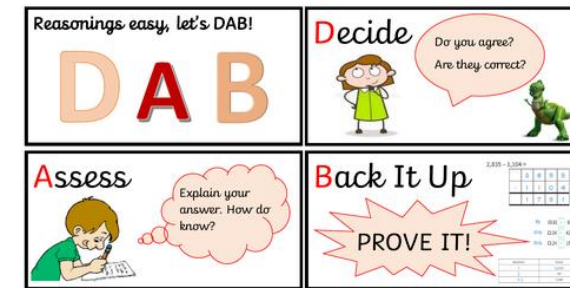
All children develop a deep and connected understanding of maths that they can apply in a range of contexts.

Teaching for Mastery



How are children challenged?

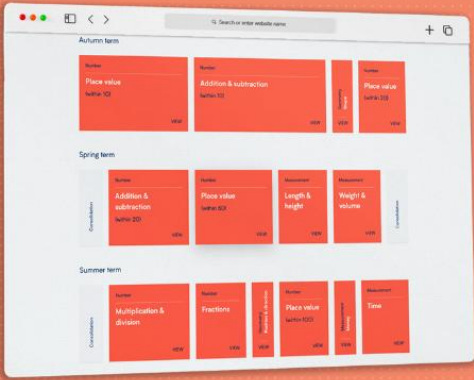
- Reasoning and problem solving challenges
- Investigations
- Writing their own problems
- Teaching to someone else
- Thinking deeper questions
- Developing explanations
- Finding mistakes



How is maths taught at GM?

White Rose Curriculum

We follow the 'White Rose' maths curriculum. The curriculum is split into 'blocks' and then further into 'small steps'.



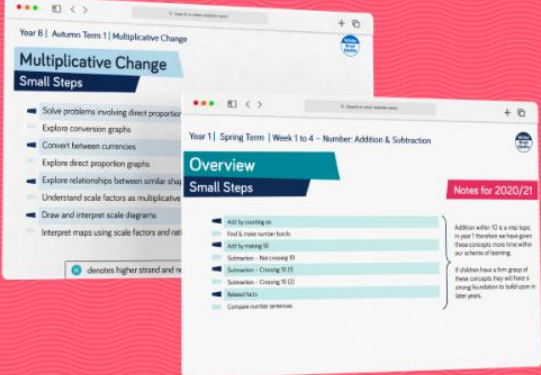
Blocks of learning

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. So the Year 4 overview looks like the picture, and Autumn Block 2, for example, focuses on addition and subtraction.

You'll notice that we spend lots of time building strong number skills in Key Stage 1, Key Stage 2 and early secondary years. These essential core skills lay a solid foundation for more complicated learning later on.

Sometimes schools might be a little behind or ahead of the scheme schedule. That's fine: we deliberately build flexibility into our schemes to allow for these variations.



The small steps

We've divided each block of knowledge into a series of small learning steps. Together, these small steps cover all the curriculum content that your child needs to know.

Brain science tells us that your child will remember more by learning maths in small, related chunks. We also used the best available research to map out the crucial learning steps that will help your child to understand what they are learning clearly.



Expert help at your fingertips

We are a group of teachers and mathematicians, dedicated to developing maths education for everyone.

What does maths look like at GM?

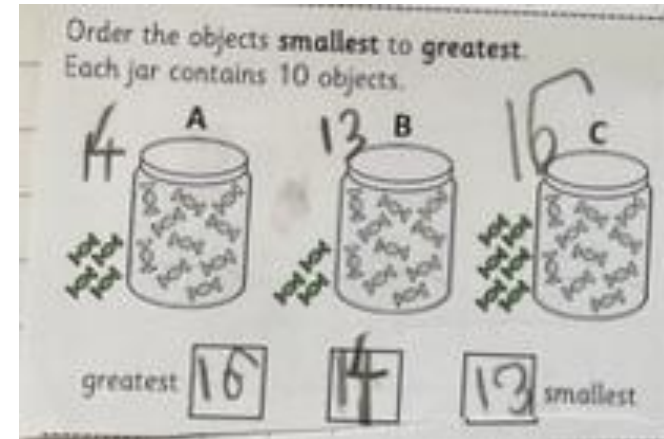
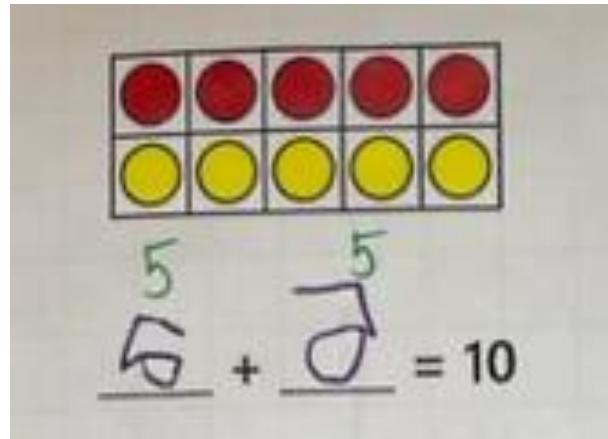
Lessons

A typical lesson might look like:

Early Years – lots of practical activities based on number using a variety of representations, a focus on a specific number for the week

KS1 – fluency, reasoning and problem solving tasks based on a 'small step' with some guided and group activities as well as some independent tasks.

KS2 – fluency, reasoning and problem solving based on a 'small step' with some group and partnered work as well as independent tasks.





What does an outline of a daily lesson look like?

Starters -

Feedback starters 2 per week

3 arithmetic starters per week

Main input-

Independent fluency questions

Whole class reasoning/problem solving (teacher led)

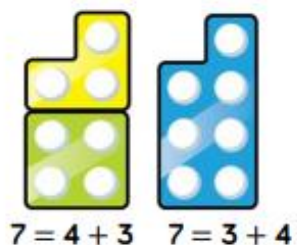
Independent reasoning/problem solving

What does maths look like at GM?

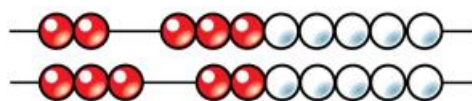
Concrete-Pictorial-Abstract

Some of the most common objects and pictorial representations we use are:

Number Shapes



Bead Strings

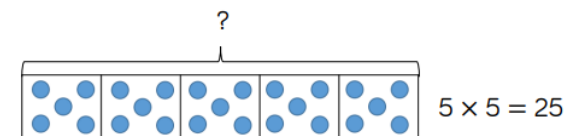


Cubes

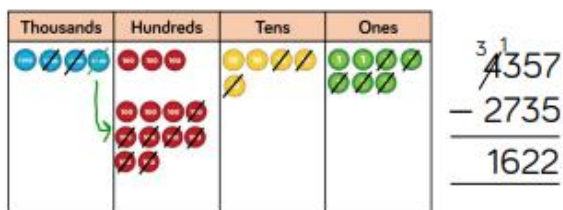


$$7 = 4 + 3$$

Bar Model



Place Value Counters (Subtraction)

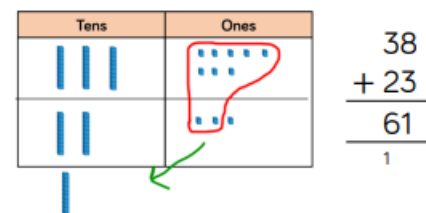


Ten Frames (within 10)

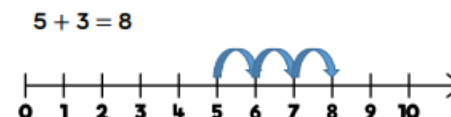


$$\begin{aligned} 4 + 3 &= 7 & 4 \text{ is a part.} \\ 3 + 4 &= 7 & 3 \text{ is a part.} \\ 7 - 3 &= 4 & 7 \text{ is the whole.} \\ 7 - 4 &= 3 \end{aligned}$$

Base 10/Dienes (addition)



Number Lines (labelled)



How can I support my child at home with maths?

White Rose Workbooks, Mathletics, TTRS and Numbots



White Rose have created workbooks which are aligned with our 'blocks'. These are free to download and print and are helpful if your child needs to recap concepts further.

<https://whiterosemaths.com/parent-resources>



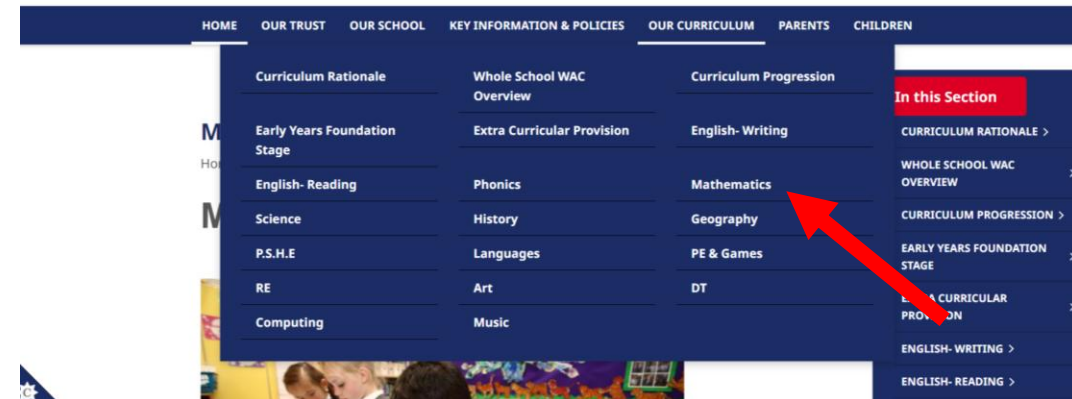
A 3P Learning Product



Your child will have mathletics / TTRS / Numbots tasks to complete for their homework. You can apply any of our 'concrete, pictorial and abstract' methods to support your child's understanding with these activities. We are going to try using some of these approaches now and all of them can be found on our website.



Great Missenden
Church of England Combined School
An Academy of the Great Learners Trust



White Rose Calculation Policies



[White Rose Addition and subtraction calculation policy July 2022 v2.pdf](#)



[White Rose Multiplication and Division calculation policy July 2022.pdf](#)

How can I support my child at home with maths?

Using our CPA approach!

There are stations set up around the room with 'manipulatives' and examples for you to try out so you can see how children learn the 4 operations in different year groups.

No maths manipulatives at home?
No stress! Just use the following
website:

<https://mathsbot.com/manipulativeMenu>

