



# Maths Open Morning

Great Missenden School

# Aims

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What Maths at GM looks like

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Lesson structure

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Scaffolding in lessons

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How you can support at home

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What we will find today

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# Maths at Great Missenden

## *Mastery Approach*

- **Deep, long-term, understanding** of mathematical concepts
- **Fluency and recall:** enables children to quickly and accurately recall facts
- **Problem solving skills:** encourages children to apply their understanding to a variety of problems
- **Reasoning:** children have the ability to explain their thinking and make connections between ideas

Mathematics teaching for mastery embraces the idea that **everyone** can learn and enjoy mathematics!

ALL THE EVEN MORE FUN STUFF

GRAPHS, SHAPES & ALGEBRA

FRACTIONS AND %

$\times$   $\div$

$+$   $-$

COUNTING

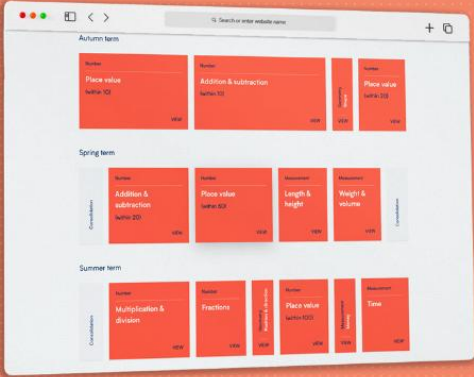




# How is maths taught at GM?

## *White Rose Curriculum*

- We follow the 'White Rose' maths curriculum. The curriculum is split into 'blocks' and then further into 'small steps'. A whole school overview is available



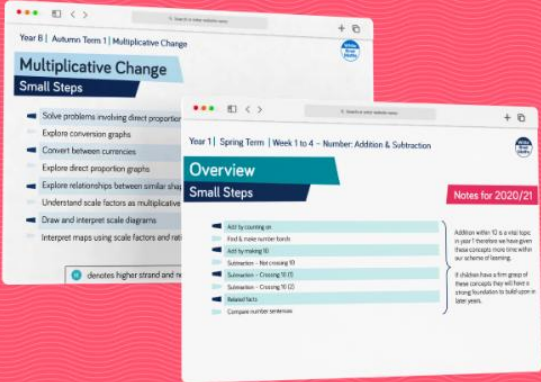
**Blocks of learning**

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.



# What does a typical GM Maths lesson look like?

- **Starter**
  - 2x a week feedback starter
  - 3x a week arithmetic starter
- **Teacher Input**
  - Teacher modelling, children taking part
- **Fluency first**
  - Fluency in maths relates to the rapid recall of mathematical concepts, number facts and being able to choose the most efficient method to solve a problem.
- **Reasoning/problem-solving**
  - Teacher modelled, then independent/group based
- **Plenary**
  - True or False/Always, Sometimes, Never/Consolidation
  - Traffic light reflection

# Scaffolding in Maths

- Scaffolding is used to ensure that everyone has access to succeed in their learning objectives, no matter their ability!

## Visual



- A list of steps (e.g. in a method)
- Modelled example of work (on flip chart paper or using interactive digital tools)
- Use of manipulatives (or digital tools on white rose website and mathsbot)
- Images to support vocab learning (e.g. greater than / less than images stuck into children's books)
- Modelled examples stuck in children's books for them to refer back to
- Use of colours to draw attention to certain parts of calculations (e.g. a place holder zero)

# Scaffolding in Maths

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## Verbal



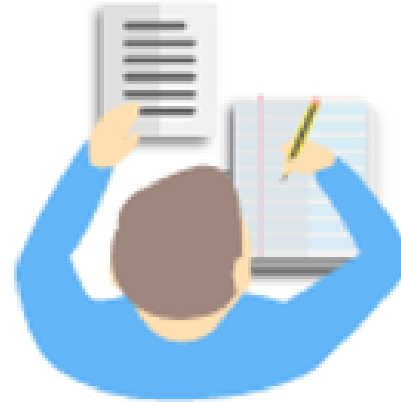
- Gather a group of children to reteach a tricky concept
- Use of 'thinking aloud' to model the mathematical process including checking answers for accuracy
- Use of questioning to unpick a misconception
- Use of questioning to establish level of understanding
- Whole class reminders e.g. "Don't forget, your work needs to include..."
- Use of mixed ability partner talk to discuss concepts and methods
- Use of mixed ability talk partners to rehearse reasoning sentences



# Scaffolding in Maths

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## Written



- A calculation frame (work laid out, some parts completed etc) which slowly reduces during the lesson
  - Carefully sequenced questions chosen to increase in difficulty or questions which change one element each time
  - Carefully sequenced lessons that build upon previous learning (white rose steps)
  - Sentence stems for reasoning and oracy clearly displayed on the PowerPoint or in books
  - Writing frames for some pupils when doing reasoning with gaps for key vocab
  - Key vocab bank
  - Children or LSAs making notes on a whiteboard or in books
  - Reviewing previous work in books
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# How can you support at home?

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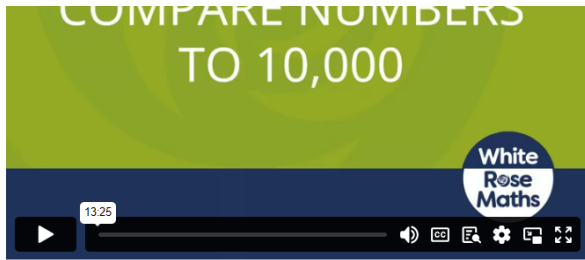
- Be positive about Maths!
- Encourage regular practice of times tables/number sense through the use of TTRS and Numbots.
- Engage with Maths in everyday life
  - Measuring
  - Time
  - Shape
  - Money



# How can you support at home?



- White Rose Website – home learning area with videos
- Parental support page
- <https://whiteroseeducation.com/parent-pupil-resources/maths>
- Use Mathsbot



Compare numbers to 10,000



Order numbers to 10,000

|    |    |    |    |    |    |    |    |    |     |
|----|----|----|----|----|----|----|----|----|-----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  |
| 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20  |
| 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30  |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40  |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50  |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60  |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70  |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80  |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90  |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |

26 = XX VI

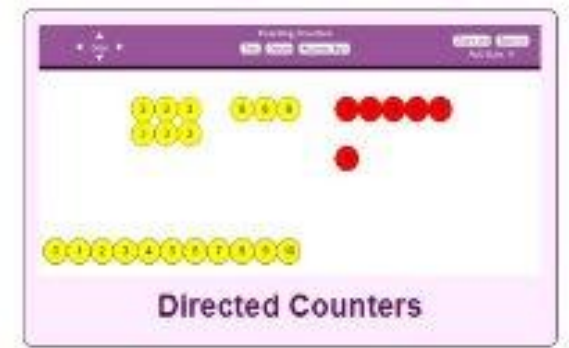
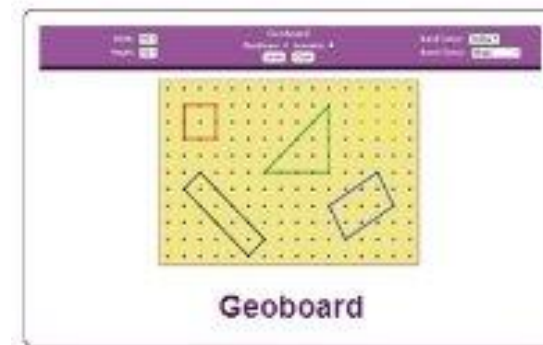
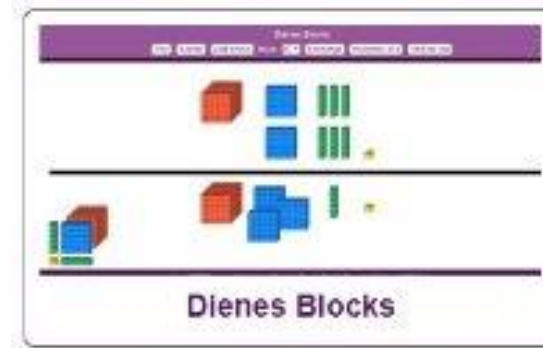
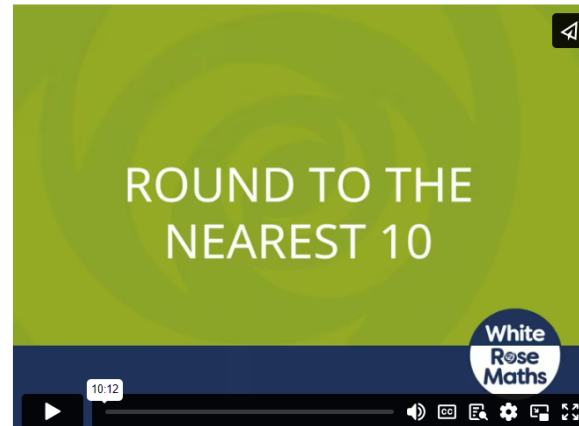
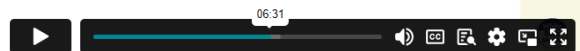
46 = XL VI

76 = LXX VI

96 = XC VI

What do you notice?

## ROUND TO THE NEAREST 10

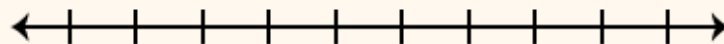
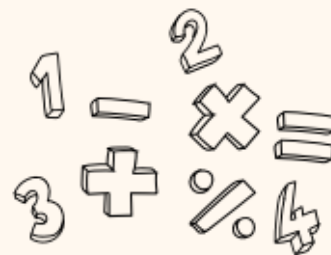
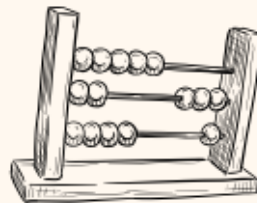


# Maths at Great Missenden

## SCAVENGER HUNT



- ☐ Arithmetic/Feedback Starter
- ☐ Teacher Modelling
- ☐ Visual Aids
- ☐ Fluency First Activity
- ☐ Thinking Deeper Questions
- ☐ Sentence Stems
- ☐ Oracy - Mathematical Discussion
- ☐ Problem Solving (applying their understanding)
- ☐ Reasoning (children explaining their thinking - written or verbal)
- ☐ Working Wall Examples
- ☐ Concrete Resources





Thank you for  
coming!