

Our Vision for Mathematics

Every child a mathematician:

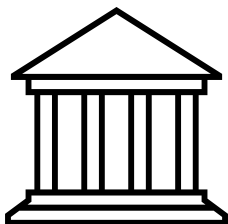
bringing mathematics to life by living mathematics



At Green Meadow and all Excelsior Multi Academy Trust schools, we aim for every child, no matter their background, to become a fluent mathematician – skilled, knowledgeable and equipped with a deep and secure understanding of mathematics, that gives the accuracy, efficiency and flexibility to problem solve and reason in a range of contexts. Equally, we seek to ensure every child sees the beauty of maths, finding a love of the subject through curiosity, exploration and the deep satisfaction of mathematical thinking. After all, the answer is just the beginning.

We have fully adopted a Teaching for Mastery approach to our mathematics curriculum, underpinned by the National Curriculum and the National Centre for Excellence in the Teaching of Mathematics' principles in 'The Essence of Mathematics Teaching for Mastery':

Underpinning principles:



- *Mathematics teaching for mastery assumes everyone can learn and enjoy mathematics.*
- *Mathematical learning behaviours are developed such that pupils focus and engage fully as learners who reason and seek to make connections.*
- *Curriculum design ensures a coherent and detailed sequence of essential content to support sustained progression over time.*

At Excelsior, children are guided along a coherent, small step journey together, using concrete, pictorial and abstract representations to explore concepts and build connections, with opportunities to both support and challenge thinking and reasoning.

We believe that all children can succeed in mathematics with our growth mindset approach.

We intend that all children believe they can achieve mathematical excellence; that they can learn from both mistakes and challenge; and that they can experience a sense of awe and wonder as they investigate number, structure, space and change.

Our mathematics offer includes the following key elements:

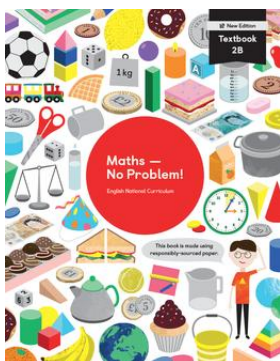
- 1) Main maths lesson
- 2) Number fact fluency
- 3) Arithmetic practice

1) Main Maths Lesson

In **EYFS**: achievement of Number and Numerical Patterns Early Learning Goals is fully supported by the delivery of NCETM's Mastering Number programme, alongside



mathematical provocations in continuous provision, both in the classroom and outside.



In **KS1 and KS2**, children are guided along a coherent, small step journey together, using representations to explore concepts and build connections, with opportunities to both support and challenge thinking and reasoning. This approach ensures a deep, secure understanding for all and is achieved using the DfE approved Maths – No Problem! programme.

2) Number fact fluency input

The importance of number fact fluency cannot be emphasised enough. Ofsted’s Maths Report: Coordinating Mathematical Success (2023) found that most older children who struggle had a weakness in recalling arithmetical facts such as number bonds.

Recall and automaticity in number facts is the effortless recall of facts, such as number bonds and times tables facts, whilst understanding the relationship between these facts. This relieves cognitive load and develops pupils’ confidence to achieve success.

+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

Adding 1

Bonds to 10

Adding 10

Bridging / compensating

Year 1 facts

Adding 2

Adding 0

Doubles

Near doubles

Year 2 facts

2 × 2 = 4

2 × 3 = 6

3 × 2 = 6

2 × 4 = 8

4 × 2 = 8

2 × 5 = 10

5 × 2 = 10

2 × 6 = 12

6 × 2 = 12

2 × 7 = 14

7 × 2 = 14

2 × 8 = 16

8 × 2 = 16

2 × 9 = 18

9 × 2 = 18

3 × 3 = 9

3 × 4 = 12

4 × 3 = 12

3 × 5 = 15

5 × 3 = 15

3 × 6 = 18

6 × 3 = 18

3 × 7 = 21

7 × 3 = 21

3 × 8 = 24

8 × 3 = 24

3 × 9 = 27

9 × 3 = 27

4 × 4 = 16

4 × 5 = 20

5 × 4 = 20

4 × 6 = 24

6 × 4 = 24

4 × 7 = 28

7 × 4 = 28

4 × 8 = 32

8 × 4 = 32

4 × 9 = 36

9 × 4 = 36

5 × 5 = 25

5 × 6 = 30

6 × 5 = 30

5 × 7 = 35

7 × 5 = 35

5 × 8 = 40

8 × 5 = 40

5 × 9 = 45

9 × 5 = 45

6 × 6 = 36

6 × 7 = 42

7 × 6 = 42

6 × 8 = 48

8 × 6 = 48

6 × 9 = 54

9 × 6 = 54

7 × 7 = 49

7 × 8 = 56

8 × 7 = 56

7 × 9 = 63

9 × 7 = 63

8 × 8 = 64

8 × 9 = 72

9 × 8 = 72

9 × 9 = 81

GOING
FOR
GOLD

3) Arithmetic practice

Indeed, Ofsted's report, Coordinating Mathematical Success, identified that, '*Pupils need procedural fluency to be able to solve a range of problems and to then learn which types of problems a method is useful for. Both of these develop with practice.*'

Fluency demands more of students than memorisation of a single procedure or collection of facts. It encompasses a mixture of efficiency, accuracy and flexibility. Quick & efficient recall of facts and procedures is important for students to think strategically and solve problems. In these daily sessions, children practise to stay skilled, and to develop their arithmetic toolkits.

On this page, you will find links to our long-term plans for our mathematics curriculum and also some ways that you can help your children to learn at home!

