



# Mathematics Mastery

Fully resourced KS3  
curriculum programme,  
helping students  
achieve in maths

Student success through empowered teaching



# Student success through empowered teaching

Teachers hold the key to unlocking students' potential, and we are here to help you on that journey.

Grown out of Ark Schools, one of the highest achieving academy groups in the UK, our team of well researched and highly skilled curriculum designers and expert trainers partner with you and your team to provide consistent, high-quality education for all students.

We help you provide your best teaching to all students, working with you to close the attainment gap. We've seen the impact on disadvantaged students through our Ark Schools (making nearly half a grade more progress than their peers nationally) and are here to give all students the opportunities that an excellent education provides.



## Success for all

We believe that education has the power to help every young person excel – and it all starts with you.

By enriching the curriculum to move beyond achieving grades alone, we create a learning structure that constantly builds contextual and conceptual knowledge.

Our holistic approach helps you to identify and support specific needs. As a result, we help to narrow the attainment gap, ensuring no child is left behind.

## Teachers make the difference

Our programmes are built for teachers, because you are the people who can make a real difference to a young person's understanding.

Personal development is central to our approach. We build teachers' subject and pedagogical expertise without taking time away from the classroom.

We also ensure that teachers remain in control. You choose the material and topics, but can access pre- and post-teaching assistance to make the most impact with every lesson.

## Evidence meets practice

When creating our programmes, we conduct in-depth research into the latest curriculum designs and pedagogical theories. This approach means our support is always grounded in evidence-based principles.

Teachers also help to develop and test our curriculum in the classroom, meaning you can be confident that our programmes are accessible, easy to implement and make a tangible difference to the teacher and student experience.



## Driving progress

Ark Curriculum Plus is already having an impact in hundreds of secondary schools across the UK.

Our Mathematics Mastery programme offers:

- A meticulously sequenced and interlinked Key Stage 3 maths curriculum
- Integrated professional development and planning tools to support teachers' curriculum and pedagogical knowledge
- Fully resourced classroom materials, allowing students of all abilities to make explicit, observable progress throughout Key Stage 3



Mathematics  
Mastery

The Mathematics Mastery programme is also available for Key Stages 1 and 2

Find out more details on our website.

## Proven impact

A Fischer Family Trust (FFT) Education Datalab impact report showed that our programme had a **positive impact on helping to lift GCSE maths grades.**



Another study run by the Education Endowment Foundation (EEF) drew similar conclusions. It found that students made an average of **one months' additional progress** after one year on the programme.



Teachers in our partner schools repeatedly tell us what a difference our programme is making:

*“Mathematics Mastery has transformed the teaching and learning of maths in our school.”*

Judith Woodfield | Headteacher | Bordesley Green Girls' School

*“It's very cool to see how students really get into the material. We're in a city school with some very difficult students and now they are engaged and having arguments about maths.”*

Tom Vinten | Head of Maths | Ark All Saints Academy

Visit our website to hear more about the positive impact Mathematics Mastery has had in other secondary schools:  
[www.arkcurriculumplus.org.uk/case-studies](http://www.arkcurriculumplus.org.uk/case-studies)



# Our approach

We are committed to our partnership together, knowing the journey to full-school transformation takes dedication and a consistent approach over time.

## Providing integrated, consistent professional development, helping you improve students outcomes

We work with a goal in mind – to help your teachers deliver their best teaching possible. Our style of support responds to your team’s growing confidence and expertise.

Stage 1: Launch

Stage 2: Develop

Stage 3: Sustain



### Launch 1 YEAR

Laying the foundations for impactful implementation

#### PD to lay foundations:

- Whole-school and 1:1 training on subject knowledge and pedagogy
- Dedicated training for your Mastery Lead
- Dedicated support from our team of Development Leads to help determine your areas of focus for greatest impact

### Develop 1-3+ YEARS

Building on your team’s subject and pedagogical understanding to develop their practice

#### PD to hone classroom skill:

- Teacher training covering planning and adaptation of lessons, diagnosing and responding to learning gaps, providing challenge, assessment, and more
- Further training of Mastery Lead, equipping them to provide in-house training
- Annual 360 review ensuring you’re on track in transforming pupil outcomes

### Sustain ONGOING

Making the programme your own

#### On-demand PD:

- Regular webinars and embedded training within resources to refine your teachers’ classroom practice
- Annual summative assessment tracks students’ progress and identifies development areas
- Option to add-on personalised support

✓ Classroom resources ✓ Subject knowledge development ✓ Teaching guidance



## Developing deep understanding

The programme is carefully sequenced to enhance pupils' understanding of maths. It is underpinned by the **Dimensions of Depth**, which address conceptual understanding, language & communication and mathematical thinking.

These support mathematical problem solving and enable students to make connections between topic areas, draw on representations to support their thinking and be prepared to articulate, justify and explain this thinking.



## Route to recovery

To help support your school's route to recovery after the pandemic, the Mathematics Mastery programme includes:

- **Additional booster units** for the start of the school year, focusing on critical content from the previous year
- **Start of unit quizzes** to identify gaps in learning
- **Pre-teach guidance**, outlining the prior learning that will be revisited and drawn upon, with intervention signposts to address gaps and help adapt planning
- Specific **retrieval practice tasks** within each lesson to enhance and boost learning
- **KS4-ready resources** for Year 9, helping prepare students for GCSEs



# What do I get when I join the programme?

## Mastery Curriculum

The Mathematics Mastery curriculum is cumulative, building on learning and allowing students to make deep connections across topics.

We sequence concepts so that established ideas can be linked to new learning, supporting students in developing mastery by understanding the coherent and connected nature of the subject.

## Full suite of resources, accessed online

The MyMastery learning platform offers 'anytime, anywhere' access to the full suite of Mathematics Mastery content. This includes all of the teaching support, assessment materials and lesson resources needed to deliver the programme.



## Integrated Professional Development

Throughout, your team can make use of videos, tutorials and workshops to grow their subject and teaching expertise.

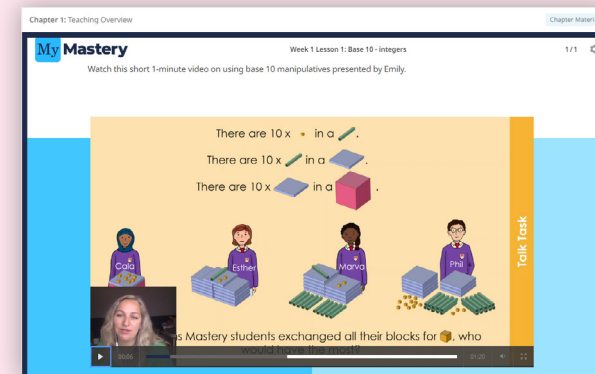
Our partnership packages offer a range of additional support, from one-to-one coaching to developing a subject lead.

You choose the level of support that your school needs – with dedicated subject experts to help you.

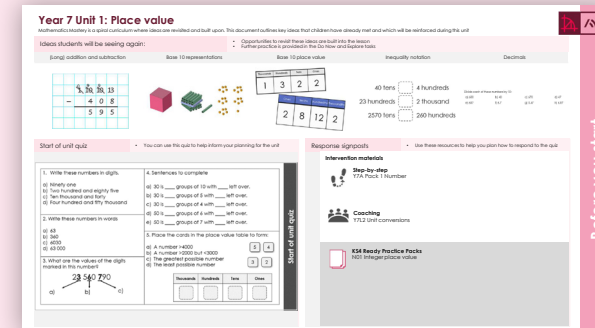
See page 14 for full details of our partnership package options.

## Teaching support

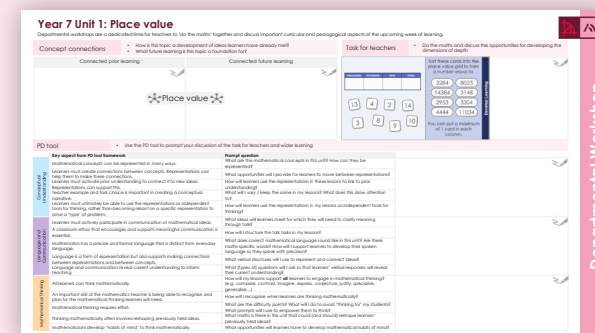
Teaching overview videos are provided for every lesson – giving a quick recap of the key content and learning covered.



Before you start ... guidance shows the overarching week-long learning objectives, lesson and unit narratives, and lesson-by-lesson learning objectives.



Weekly departmental workshops offer dedicated time for teachers to 'do the maths' together and discuss important curricular and pedagogical aspects of the upcoming week of learning.



Before you start ...

Departmental Workshop



## Lesson resources

Slide decks are provided for each lesson, including notes and guidance to support delivery.

Fully  
editable

There are 10 x in a .

There are 10 x in a .

There are 10 x in a .

Phil

How many would Phil have if he exchanged all his blocks for ?

We use a **base 10** number system. Each block has **ten times** as many yellow blocks as the next smallest.

Thousands    hundreds    tens    ones

1	1	0	7
---	---	---	---

Cala has 1107 x

Thousands    hundreds    tens    ones

0	8	20	14
---	---	----	----

Does Phil have 82014 x ?

How many would Phil have if he exchanged all his blocks for ?

Sort these cards into the place value grid to form a number equal to:

Thousands	Hundreds	Tens	Ones

3284    8023

14384    3148

2953    3304

4444    11034

You can put a maximum of 1 card in each column.

3    4    2    14

3    8    9    10

## Student resources

PDF Student Books provide a range of activities to support independent tasks or homework.

Y7U1 Lesson 1 Exercise P1

**Concept Corner**

The number system we use must be **base 10**. This means each column is **ten times** greater than the column to its right.

The position of each **digit** in a number tells you about its value.

Thousands	Hundreds	Tens	Ones
4	7	3	2

The number above in words is **four thousand seven hundred and thirty-two**.

Write the number two thousand and ninety-six in the empty row.

1. Copy and complete the sentences filling the spaces below by looking in the grey box: **2708**

a) The digit **2** is in the **thousands** place.  
 b) The digit **7** is in the **hundreds** place.  
 c) The digit **0** is in the **tens** place.

2. Write the numbers shown in the place value table in words:

ten thousands	Thousands	Hundreds	Tens	Ones	in words
	3	0	9	6	
	9	9	0	7	
1	2	3	0	4	
8	5	0	3	0	

Y7U1 Lesson 1 Exercise P2

3. Using all four number cards below:

7    4    3    6

a) What is the **largest** number you can make?  
 b) What is the **largest even** number you can make?  
 c) What is the **smallest** number you can make?  
 d) What is the **smallest even** number you can make?  
 e) What is the **closest** number to **4000** you can make?  
 f) What is the **closest** number to **4000** you can make?  
 g) Is it possible to make a number closer to 4000 or closer to 7000 with the four cards? Explain your answer.

4. Insert either < , > or = symbols in the boxes to make these statements correct:

a) 40 tens < 4 hundreds  
 b) 23 hundreds > 2 thousand  
 c) 2570 tens < 260 hundreds  
 d) 400 tens < 4 thousands  
 e) 26 hundreds > 26 tens  
 f) 134 thousands > 1300 hundreds

5. Rewrite these tables so they still give the same number but with a single digit in each row:

e.g.

1000s	100s	10s	1s
12	53		
1	2	5	3

a) 

1000s	100s	10s	1s
6	3	2	14

b) 

1000s	100s	10s	1s
8	18	16	15

c) 

1000s	100s	10s	1s
9	26	41	20

**Questions for depth:**

1. How many tens less than 4000 is 1300?  
 How many tens more than 50 110 is 53 290?  
 How many hundreds less than 234 000 is 22 000?

2. Three cards each have a single digit written on them. The digits are in consecutive order. The three cards are used to form three-digit numbers.

a) What can you say about the greatest and smallest numbers it is possible to form? What if the cards were sequential even digits? Or odd digits?

## Assessment and intervention

The programme features formative assessment throughout, including **Quick checks** to get immediate feedback on understanding and **Exit ticket** questions to check students have mastered the lesson's learning objectives.

Complete the table:

Base 10 blocks	Place value grid				Number in base 10
	Thousands	Hundreds	Tens	Ones	
	1	3	2	2	
					1054

Exit ticket

Question 1 of 8

Using the same number in each box, make the statement true.

$84 \square > 84 \square 6$

6    7    9    5

A    B    C    D

I= Eedi

**Multiple-choice quizzes**, specifically written for the Mathematics Mastery curriculum, are available on Eedi. These support teachers in identifying and addressing misconceptions, with detailed analytics to inform teaching and planning.



## Customise the level of support for your school

Our partnerships team will be happy to talk you through the programme and help you decide on the right approach and package for your school.

To book a demo, or sign up for a free trial, contact us on:  
E: [partnerships@arkcurriculumplus.org.uk](mailto:partnerships@arkcurriculumplus.org.uk)  
T: 020 3116 6363

Or book a call online at  
[www.arkcurriculumplus.org.uk/book-a-demo](http://www.arkcurriculumplus.org.uk/book-a-demo)

“Based on the strength of pedagogy Mathematics Mastery brings, I've certainly seen better structured talk, more resilience to problem solving and many more students getting started on harder problems.”

Tom Vinten | Head of Mathematics at Ark All Saints Academy

## Pricing

We are a non-profit organisation. The schools that we work with are charged a financial contribution which goes towards delivering and developing the programmes. You can find pricing information on our website – but do get in touch to receive a quote for your specific setting.

<https://www.arkcurriculumplus.org.uk/join-us>



Also available at Key Stage 3:



English  
**Mastery**



Writing  
**Mastery**



Science  
**Mastery**

Ark**Curriculum+**

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