

Moral purpose

‘To unlock students’ academic and personal potential’

Our mathematics journey and rationale for change

WAT’s Maths Curriculum has previously been co-constructed by leaders and staff from across our family of schools. Over the last few years we have sharpened the content so that it is ambitious, challenging and exciting for all pupils. The next step in this process is adopting a research driven, evidence based approach.

There has been some positive work on improving outcomes in mathematics, but we want the best for pupils and to push our expectations even further. Headteachers and subject leads have been part of the journey to look at the best teaching approaches and resources available. Maths Mastery has a proven track record of delivering high impact on teacher subject knowledge and pupils’ attainment in mathematics.

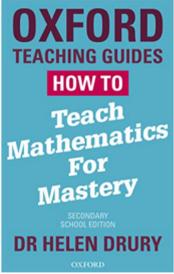
It’s been designed to give our young people the knowledge, skills and understanding to be successful in learning and in life. Research conducted by the EEF has shown that it can boost a child’s progress by up to one month per year on the programme.

In addition to this, feedback from schools currently using the programme shows that Maths Mastery deepens pupils’ understanding of mathematical concepts, boosts pupils’ enjoyment of Maths and leads to an improvement in Maths teaching..

We will fully embrace the ethos and approach of Maths Mastery, with the intention of embedding this fully across our family of schools.

Why Maths Mastery?

- **Success for all** through high expectations
- **Deep conceptual understanding** - using and making connections between concepts
- **Confidently solving problems** in unfamiliar contexts
- High-quality **CPL** for staff – vast and precise
- **Planning and resource** support for teachers
- At least **1 month additional progress** per year.



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How will Maths Mastery be implemented?

On 28th June 2021, all staff took part in a full day’s training led by Maths Mastery. This included an introduction to the comprehensive platform, a look at the schemes of work and accompanying resources and a look into the ongoing CPL opportunities for all staff.

In addition:

- The mastery lead in each school will receive 2 days of additional training.
- All schools will gain access to a School Development Lead for support via email and over the phone (will eventually include school visits).
- Each school will receive four development sessions across the year to focus on supporting the Mastery lead in implementing the programme and leading Maths.
- All of the above will support the implementation of the programme in Sep 2021.

Collaborative next steps



Summer Term	Autumn Term
<ul style="list-style-type: none"> Maths Mastery Leads Training Full Teacher access to Maths Mastery platform Maths Mastery Teacher Training (Today) WAT Implementation Plan WAT Maths Mastery Guidance Personalised school 121 session with Maths Mastery All teachers teach a Maths Mastery Unit over two weeks. 	<ul style="list-style-type: none"> Full launch Monday 6th September Years 1-5 follow curriculum map Year 6 follow first two units and then flexibility after October half-term WAT Subject Leads Meetings Ongoing Maths Mastery Training Personalised school 121 session with Maths Mastery.

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T&L Cycle

When compared to our teaching and learning model, there are strong similarities in the way Maths Mastery structure their lessons.

Do Now	Connect & Engage	L e a r n i n g C h e c k s	The 6 part lesson structure advocated by Maths Mastery links directly to our current model, with a small tweak offering 2 explain and model sections.
New Learning	Explain and Model		
Talk Task or Let's Explore	Practise		
Develop Learning			
Independent Task			
Plenary	Review		

When delivering lessons, teachers should use Maths Mastery's language and lesson structure. However the WAT Teaching and Learning cycle still applies and the language can be used interchangeably. For example, 'In our new learning, we are going to model how to...' or 'In your independent task, you are going to practice...'

How is the curriculum designed (planning)

The Mathematics Mastery curriculum is cumulative - each school year begins with a focus on the concepts and skills that have the most connections, these concepts are then applied and connected throughout the school year to consolidate learning. This gives pupils the opportunity to 'master maths'; by using previous learning throughout the school year, they are able to develop mathematical fluency and conceptual understanding.

The Maths Mastery curriculum is designed to make sure that the requirements of the 2014 National Curriculum for England are fully met. Each year's curriculum includes all of the National Curriculum objectives for that year, plus a small number from the year above – usually from number – the objectives chosen will help pupils build connections in their learning.

For integrity of the Maths Mastery approach, we will be following the suggested curriculum map in Reception to Year 5.

In Year 6, the first 2 modules need to be completed as suggested, which should take 5 weeks. After this period, question level analysis from the mock SATs should be considered when selecting the remaining units or designing learning that is best going to accelerate students' progress in their final year of primary school.

The scheme provides 30 weeks of planning. This allows for flexibility within each school's calendar (to allow for events, school trips, performances etc) and consolidation lessons feature within the majority of units, for teachers to use as required. Where appropriate this offers flexibility for the individual needs of a cohort.

Due to a heavy focus on number, there are some concepts which appear once in a year (for example, time, shape and money) with the expectation for this content to be revisited and consolidated regularly during Maths Meetings.

For each unit within the Maths Mastery Programme, teachers will be provided with the following resources:

- **Unit narrative** – Overview of the journey through the unit with support, advice and guidance in the form of videos, articles and comments
- **Unit Tutorial** – A video exploring the pre-requisite knowledge, key representations, progression of lessons and potential misconceptions for each unit.
- **CPL Videos** – Where appropriate, short CPL videos (identified on the Unit Narrative) focussing on a specific element from the unit are provided to support teacher's subject knowledge.

- **Lesson slides** - Maths Mastery provides daily lesson PPTs. Teachers do not need to use an exact copy of these, however your final teaching slides must contain the content from Maths Mastery planning.
- **Task Sheets** – Suggested task sheets in PDF and Powerpoint formats which are aligned with the planning guide. For Years 2-5, each lesson will have a suggested example for increased scaffolding and challenge alongside the task sheet.
- **Planning Guides** – One page per lesson planning guide to support teachers in focussing on the key elements for each of the six-part structure

Other lesson and classroom considerations

In addition to the resources provided for each unit, the following documents must be referred to when planning:

- Progression in Calculations
- Vocabulary Lists
- Reasoning Stems
- Key Representations
- Programmes of Study (containing links to the National Curriculum)
- Key Constructs

Teachers should utilise a range of representations (concrete, pictorial and abstract) in each lesson where appropriate. Children should be encouraged to answer in full sentences using accurate mathematical vocabulary and questioning should be open-ended, with a focus on reasoning and process rather than the final answer.

Our Mathematics Mastery curriculum display

Purpose: To inspire pupils and support their learning across Maths. The Maths display may have:

- Working walls: Including key vocabulary necessary for the unit, modelled examples of processes and good examples of children's work.
- Key questions: What's the same? What's different? What is known? What is unknown? Is this always, sometimes, never true? What would be an example? Or a non-example?
- Key knowledge that needs to stick
- High-quality examples of pupils' work
- Subject specific resources and models
- Key representations document relevant to the specific year group.

Maths Meeting display

This may be presented on the IWB (to allow for easy editing) and or on the main maths display. This should become an important focal point during all Maths meetings. This display must include: key vocabulary, revision of key skills or facts and important areas of the curriculum which are not recurring throughout the academic year.

Progressions in calculations document

This document sets out the methods that should be utilised by each year group and follows a logical progression from Year 1- Year 6 (EYFS are not included in this document as the focus should be on understanding number). Representations of concrete, pictorial and abstract methods can be found within this document to support understanding and teaching. This document is supported by model videos integrated into the planning for each unit and year group.

Teachers should also look at the prior/next year year groups' calculations policy in order to ensure high challenge for all.

Timetabling

In order to be a success from September, appropriate time should be allocated to Maths Mastery each week.

The expectations of timetabling are as follows:

- 1 hour maths lesson each day
- Daily maths meeting (EYFS- 10 minutes, KS1- 15 minutes, KS2- 20 minutes)
- Schools may choose to teach additional discrete arithmetic lessons based upon pupil need, however this will not be compulsory as arithmetic is interwoven throughout the Maths Mastery programme.

Subject Knowledge CPLs (SKEWs) will take place once every half term and will last for 1 hour. These should be led by the Mastery Lead, once they have received the training themselves via Maths Mastery.

Assessment

As a family of schools, we will continue to utilise the NTS assessments, which are broadly aligned to the Maths Mastery programme of study. There are a few minor discrepancies between NTS and the programme, however these are minor and by the end of the year all areas are covered. Test data should reflect the good progress made by pupils throughout the academic year.

Year 6 will continue to assess children's progress via past SATs papers, which will be administered termly.

The Aspire Framework and the Mathematics Mastery Curriculum





Maths Mastery - WAT Approach and Guidance



Our Aspire learning skills and character virtues are 'caught, sought and taught' throughout the curriculum. Part of our mission is to ensure that our children have the metacognitive skills (learning to learn) to be successful in learning and in life.

Throughout the programme, children will have the chance to demonstrate the full range of character virtues and learner skills via independent study, pair and group work, formal and low stakes testing and problem solving and reasoning activities.

How is the Maths Mastery curriculum powered up by iPads for Learning?

Digital technology is used to power up the curriculum where meaningful opportunities arise. Year groups are already using iPads for Learning to consolidate and accelerate their learning with regular practise on our Trust-wide subscribed APPs such as TTRS, Numbot and IXL. We will gradually work together and see how we can further enhance mathematics teaching and learning through digital technology, e.g. through high quality modelling or feedback.