







Primary Curriculum Maths Handbook

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MULTI ACADEMY TRUST

Primary Curriculum Aims

Through studying our maths curriculum, we don't forget our overall curriculum aims, and ensure our pupils are:

Knowledgeable and skilled:

- Regardless of their experience of disadvantage, our pupils will be exposed to a breadth of coverage that will equip them with knowledge of future possibilities, cultural capital and a wide range of vocabulary.



Good humans:

- Our pupils will be articulate and able to communicate effectively. They will be able to solve problems and resolve conflict – treating others with kindness and respect. They will learn to understand themselves, developing a sense of belonging, while learning to understand differences and the wider world.



Inspired to learn:

- A love of learning will enable our pupils to cope with challenge and show enthusiasm – encouraging hard-work.



Share MAT Primary Maths

The aims of our maths curriculum are to foster fluency, reasoning and problem solving. Pupils should develop a strong understanding of numbers, operations, and mathematical concepts, enabling them to solve a variety of problems. They should also be able to reason mathematically, explain their thinking, and use mathematical language to communicate their ideas.

Fluency:
Pupils should become proficient in basic mathematical skills, including number facts, place value, and operations. This involves developing a strong understanding of number relationships and being able to recall and apply knowledge rapidly.

Reasoning:
Pupils should be able to follow a line of inquiry, draw conclusions, and develop justifications or proofs using mathematical language. They should also be able to explain their methods and reasoning.

Maths Aims

Maths Aims

Problem-solving:
Pupils should be able to apply their mathematical knowledge to a variety of problems, including routine and non-routine problems. They should be able to break down problems into simpler steps and persevere in seeking solutions.

Mathematical language:
Students should develop a strong understanding of mathematical vocabulary and be able to communicate their ideas clearly and concisely.

Real-world connections:
Students should be able to see the relevance of mathematics in their everyday lives and appreciate its contribution to various fields.

Maths Aims

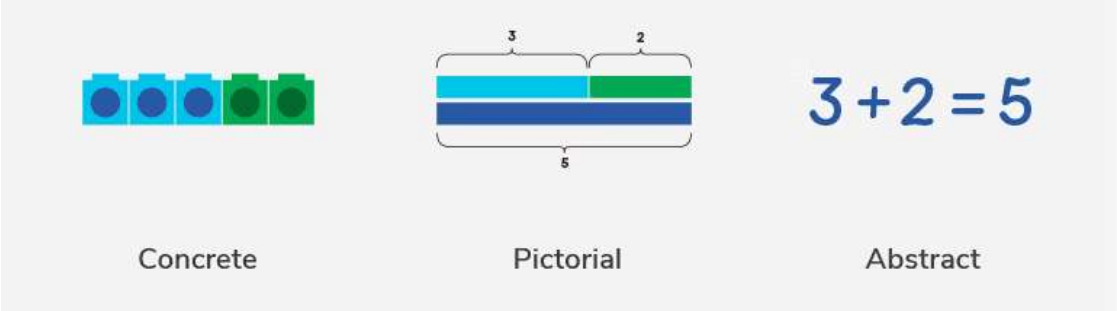
We value helping pupils develop mathematical skills through the CPA approach.

The Concrete, Pictorial, Abstract (CPA) approach uses a three-stage process to help pupils learn mathematical concepts. It starts with hands-on experiences using concrete objects, moves to visual representations (pictures), and finally progresses to abstract symbols and notation.

Concrete:
Pupils use real objects to explore and manipulate the concept being learned. For example, they might use counters to represent numbers and perform addition or subtraction.

Pictorial:
Once pupils understand the concept concretely, they move to visual representations like drawings or diagrams to represent the same concept. This helps them connect the physical objects with visual symbols.

Abstract:
Finally, pupils use abstract symbols (numbers, equations, etc.) to represent the concept. This stage allows them to solve problems and work with the concept in a more symbolic way

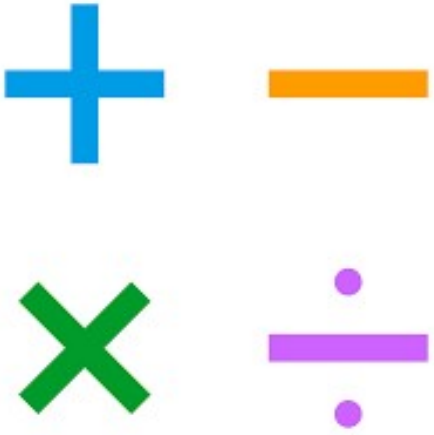


Primary Maths – Calculations Policy

Our Calculations Policy sets out how pupils progress in the four operations in maths – it also clarifies which methods and strategies teachers should teach pupils to use.

There is an aim to ensure pupils calculate quickly and efficiently.

The strands of addition, subtraction, multiplication and division are unpicked cumulatively with a focus on how the CPA approach fits – the foundational skills required to enable pupils to make progress with strategies and methods are also identified.



Click here to access the Calculations Policy

Maths Curriculum

Primary Maths – Curriculum

Our maths curriculum is based on the National Curriculum – teachers make use of supplementary resources to help with lesson delivery and task design.

National Curriculum

White Rose Maths

Other appropriate supplementary resources as decided by the teacher based on the needs of pupils.

NCETM
NATIONAL CENTRE FOR EXCELLENCE IN THE TEACHING OF MATHEMATICS

Maths Curriculum

Primary Maths Curriculum - Arithmetic

To ensure that pupils are equipped to deal with maths content and coverage proficiently, in addition to content and coverage from long term plans, we focus more specifically on key arithmetic skills per year group.

These are identified termly on the Arithmetical Fluency Plan and these skills are tracked carefully so that teachers can understand gaps and diagnose potential issues when pupils access the maths curriculum.

Images + links

Maths Curriculum

Primary Maths Curriculum – Long Term Plan

Images + links

Maths Long Term Plan

Primary Maths Curriculum – Medium Term Plans

So that teachers are well supported to make best sense of the long-term plan and best use of supplementary resources, medium term plans are available. MTPs (in addition to the Arithmetical Fluency Plan) make clear the Golden Knowledge that pupils must know and remember in maths.

Images + links

Maths Medium Term Plans

Primary Maths - Retrieval



We value the importance of providing opportunities to make sure that learning in maths is not forgotten.

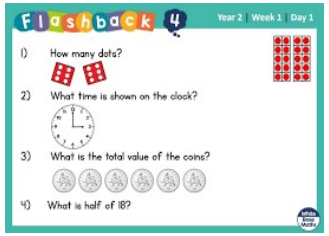
Our maths curriculum is a spiral curriculum – coverage automatically returns to previous learning to build knowledge cumulatively.

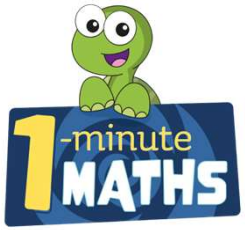
In addition, teachers make use of regular retrieval practice:

- In lessons - to check that learning has 'gone in' or to recap skills to support new learning
- Spaced - to check that learning has been remembered – spaced repetition can be skill specific or interleaved (a mix of skills).

testbase

MathsBot.com
Tools for Maths Teachers









Retrieval in Maths

Primary Maths Assessment

Assessment in maths happens all the time.

Taking every opportunity to establish what pupils know, and what they don't know, is essential for teachers to be able to plan/adapt teaching and task design to ensure pupils achieve.

There is a Teacher Assessment Framework (TAF) for mathematical understanding that teachers should refer to continuously – this can be used to ascertain whether pupils are working at their age-related expectation. It also helps to identify gaps.

The Arithmetical Fluency tracker is another form of assessment information – informing teachers of any gaps in fundamental mathematical skills.

Termly tests (from Y2) are in place as a form of interleaved retrieval practice. This provides teachers with an additional opportunity to establish what pupils remember and to gap analyse – guiding the direction of future teaching and task design.

Using all information available, primarily the TAF, teachers make judgements termly about whether, or not, pupils are working at the expected standard. Pupils can also be deemed as working towards or working at a greater depth.

Assessment in Maths