

Curriculum Principles

Mathematics

By the end of KS2, students of mathematics at Music Primary will:

- possess the fundamental skills which allow students to understand how to use this knowledge in future learning at secondary and beyond. These include money management; reading timetables; discovering and understanding patterns in data and being able to solve problems.
- recognise the beauty in sophisticated mathematical methods; be aware of naturally occurring mathematical structures; be analytical thinkers and have a thirst for mathematical reasoning.

On leaving Music Primary, students will have developed fluency in procedures and be keen problem solvers.

In order to achieve a true understanding of mathematics, topics have been intelligently sequenced based on the following rationale:

- the overall aim of the academy's intelligently sequenced mathematics curriculum is to provide all students with the knowledge they need to increase their cultural capital and be successful in their lives beyond the academy. With this in mind, the schemes of work sequence topics in an order closely following that set out by Ark Maths Mastery. Adopting a spiral curriculum, in which topic areas are revisited and extended on a yearly basis, this sequence of learning promotes a deeper understanding of the mathematical concepts being taught, both in-line with the National Curriculum and in the wider mathematical domain.
- within the classroom, lessons roughly follow a six-part lesson format: Do Now, New Learning, Talk Task, Develop Learning, Independent Task, Plenary. There is an emphasis on 'talk tasks' to develop deeper understanding and towards the end of KS2 further time is spent on practice to promote resilience and independence
- the concept of interrupting the forgetting process permeates the mathematics long term plan and schemes of work. The idea that memory of new information is lost without spaced learning and interleaving is addressed in several ways. Across each year, new learning is split into units of work, each beginning with revision and going onto extension of similar learning the year before. As a result, students will consistently revisit topics (spaced learning) and interleave concepts throughout their mathematics career. In addition, a daily mathematics meeting focusses on revision of previous concepts using 'call and response' and targeted questioning in order to address students' gaps

At Music Primary, the mathematics curriculum will address social disadvantage by addressing gaps in students' knowledge and skills:

- students in need of intervention are targeted by close teacher observation and ongoing effective formative assessment. With a particular focus of students performing below age related expectations, frequent short burst interventions occur 1-to-1 with the main class teacher either whilst other students complete work in morning meeting or during timetabled feedback slots. These ensure gaps are closed as swiftly as possible.
- oracy skills have been proven to be instrumental to a child's future success. Regrettably, students from disadvantaged backgrounds do not always receive the same opportunities to develop this skill. The mathematics curriculum aims to challenge this through the highly tailored questions with an emphasis is given to 'talk tasks' and opportunities to explaining mathematical reasoning.
- In addition, 'Rolling Numbers' and Times Table Rockstars encourage the drill like practice.

We fully believe mathematics can contribute to the personal development of students at Music Primary:

- students will be encouraged to develop socially in mathematics lessons through strategies such as 'TTYP' (Talk To Your Partner) and 'Tracking the Speaker'. Promoting a culture in which students are confident to 'give questions a go' and are not afraid to make mistakes is of upmost importance in our classrooms. Celebrating mistakes and setting these high expectations helps students to develop listening and speaking skills.
- self-awareness is developed through self-assessment, which enables students to have an accurate understanding of their strengths and weaknesses, to accept them and the understand how to learn from them