

At the $\sqrt{\text{root}}$ of Mathematics at Bolingbroke Academy is a belief that all pupils can be successful mathematicians if they are given the tools and the confidence to access the material, all the while supported by passionate maths teachers who believe that maths is fun.

Courageous

Maths consists of a series of related topics, and the relationships that exist within numerical concepts are taught explicitly to enable pupils to unpack those relationships and to apply their mathematical skills across the curriculum. Our teaching aims to build conceptual understanding incrementally. Depth of understanding will then help pupils to become independent learners who use their existing knowledge to problem solve, as well as build their resilience to tackle unfamiliar questions. This journey enables our pupils to feel the triumph upon successful mastery of new topics.

Maths-focussed discussions are at the heart of our co-planning sessions: teachers **do** maths at every opportunity. We use our co-planning time as an opportunity to share best practice, develop subject knowledge and evaluate the effectiveness of lessons and the wider curriculum.

Compassionate

We aim to create engaging and thought-provoking lessons and to foster classrooms with a positive attitude to learning maths, where pupils are collaborative yet independent and risk-taking. For in maths, you often learn most when you get an answer wrong the first time, so we build a strong culture of error within our classrooms and encourage our pupils to try! We form strong relationships with our pupils and parents with regular contact and data sharing of our question level analysis documents. Ultimately, our aim is that pupils of all abilities can enjoy their mathematical learning in a collaborative and supportive environment. This will be achieved through three core concepts:

- *Concrete-pictorial-abstract*: physical manipulatives used to introduce all new topics, before the introduction of pictures (e.g. bar modelling) and abstract methods.
- *Depth for breadth*: our curriculum is structured to enable pupils to spend more time on each topic, building towards a foundation of knowledge, before moving on to the next topic.
- *Reasoning and Problem Solving*: open-ended and challenging tasks used to enable pupils to explore topics laterally and encourage application of skills.

Community

All learners need to build a strong base of number skills to be successful. We therefore begin our teaching in Year 7 focusing solely on written and mental methods for the four operations. Throughout their first-year at Bolingbroke pupils take part in Times Table Rockstars every lesson to strengthen numeracy skills and calculators are not introduced until Year 8.

Mathematical language and notation are prioritised through the insistence of right is right in every lesson in pupils verbal and written responses. Opportunities for paired/group discussion are built in every lesson to check for understanding and build justification skills. Modelling and teacher exposition are discussed within co-planning to ensure consistency and clarity for pupils.

Maths Minutes enrichments are embedded in every key stage to give pupils access to a supportive space in which to bring their maths questions, as well as offering a calm, quiet environment in which to study. Targeted regular small group tutoring takes place across all year groups in Key Stage 3 and 4 to provide pupils the opportunity to work closely with a maths specialist.

In addition to our unflinching dedication to maths within our classrooms, we provide opportunities for our pupils to engage even further with maths in various contexts outside the classroom. Every year we take part in the UKMT challenges and Ark Secondary School Maths Challenges as well as looking at opportunities for pupils to visit universities on maths focus days.

Empowering Excellence

Pupils are given dedicated independent practice time in every lesson to embed conceptual understanding. Homework aims to help pupils review topics from the previous week, revise previous learning and improve application skills through problem-solving questions. Hegarty Maths is used in KS3 and 4 as a further development tool for homework and independent revision.

All pupils are taught all topics, with support and stretch, to reach their target grade throughout the year on termly holistic assessments which are in the style of a GCSE or A Level paper. All pupils in KS3 and 4 are expected to make significant progress between pre- and post-assessments. Pupils in KS5 are expected to show significant gains in understanding on their three-weekly unit assessments. All assessments are analysed by question to enable teachers to accurately intervene where there are gaps and pupils to focus their revision appropriately.

A positive and aspirational attitude to mathematical learning is encouraged and reinforced throughout the year.