Overview

Statements of Intent:

- We believe that all students can be successful with mathematics regardless of their starting point.
- To teach students the right maths for them (where they are on *their* journey, not where they supposedly *should* be).
- To ensure that there is appropriate challenge for all students with a particular emphasis on depth of understanding.
- To ensure meaning-making is a priority and 'trick' methods are entirely avoided.
- To make use of regular assessment in order to tap in to the benefits of retrieval practice and to inform next steps in teaching.
- The curriculum is deliberately planned to revisit concepts, thereby helping students move knowledge and skills in to their long-term memory.
- To promote the joy and beauty of mathematics, problem solving and learning in general.

Our Philosophy and approach

Our curriculum promotes the mastery of concepts. We spend longer on topics and delve deeper in to them, as opposed to rushing through content. We believe that this allows students a greater opportunity to develop fluency and become more proficient in applying what they have learnt.

Our assessment structure is one that is designed around retention. We use regular low stakes quizzes on various topics to assess whether our students have retained their prior learning and are able to apply it. We plan lessons around the information taken from these quizzes to ensure that we are always plugging the gaps of what has not been retained.

As a staff we are committed to our own professional development. We regularly spend departmental meeting time improving our teaching by engaging with current educational research. We often observe each other teach in order to learn from each other. Currently the evidenced based practice that we have been engaging with consists of (but is not limited to) cognitive load theory, retrieval practice, variation theory in teaching mathematics, interleaving practice, spaced practice and research around feedback.

We regularly collaborate with the GLOW Maths Hub on a national project to embed the delivery of mastery style lessons. This allows us to ensure all our learners have a deep and secure understanding of the mathematics they are being taught.

Our Curriculum

Please click the below links to find our schemes of learning at KS3 and KS4 with supporting videos.

Year 7 scheme of learning please click HERE
Year 8 scheme of learning please click HERE
Year 9 scheme of learning please click HERE
Year 10 scheme of learning please click HERE
Year 11 scheme of learning please click HERE

Year 12 Maths and Further Maths HERE
Year 13 Maths and Further Maths HERE

Key Vocabulary

Year 7
Year 8
Year 9
Year 10
Year 11

Maths Assessment Calendar 2022-23

Sparx Maths

As a department we make use of Sparx Maths as a tool for setting homework. Sparx learns from what the students do on the site and provides bespoke homework at the right level of challenge for each student. It is important that the first attempt of any work done on Sparx is their own work, otherwise it will become too challenging too quickly. If students struggle then, after their first attempt, they are able to watch a video and then ask for help if they are still stuck. Each week students are set approximately one hour of maths homework on the platform.

It is also incredibly useful as an independent learning tool. Practise is the only way to improve in maths, there is no shortcut, but the excellent explanations in the videos make a big difference to how successful students can be.

If students are struggling with maths then they are able to make use of the 'independent learning' section on the Sparx website for extra practise. We recommend focusing on the topics detailed in this document: HERE

Go to the relevant tab (either KS3 or GCSE) and work through the topics listed, or select from the topics listed, and type the 'code' in to the topic search bar.

Key Stage 5 Maths

A Level Induction Booklet - Questions

At Wyedean we have an excellent track record of results at A Level Maths and Further Maths. We have a team of very experienced teachers where all members of the department are able to teach A Level maths. We are all incredibly passionate about our subject and enjoy sharing this with our students.

We are also proud to offer Maths in Context as a qualification. This is targeted at students who would like to continue their maths learning after GCSE, but don't particularly want to do A Level Maths. It is ideal if you would like to study subjects such as Psychology or Geography at university, where being statistically literate is essential. With many universities, it is now a great advantage to study Maths in Context (you can find more information on the qualification HERE)

Year 12 Maths and Further Maths
Year 13 Maths and Further Maths

Enrichment

Mathematics is a hugely interesting subject with many opportunities for enrichment. Enrichment opportunities we are running or have recently run are:

- UKMT mathematics challenges
- UKMT team maths challenges competing against other schools

- An extra GCSE in further maths for students suited to this qualification
- Opportunities with the Further Maths Support Programme who have come in to the school to work with our year 11's
- Maths Feast problem solving trip
- Enrichment trip to Bristol University
- Big Bang STEM trip in conjunction with the Science department
- Pi day on the 14th of March
- Maths inspiration trip to Bath University

- Times Table Rockstars Rock Wrangle competition
- Lunchtime opportunities for students applying to universities such as Oxford, Cambridge and Warwick to work on STEP and MAT questions

How to Help Your Child at Home

We get a lot of requests from parents who would like to support their child at home. Below there is advice on how to do so. The words extending, secure, developing, emerging and not yet reached refer to our Key Stage 3 reporting system.

If they are Extending

Students should create an account on Dr Frost Maths (www.drfrostmaths.com) which is free to do. From here students can find UKMT maths challenge questions which will really stretch and deepen their understanding.

Students should also look to participate in 'Parallel' which is run by Simon Singh (https://parallel.org.uk/).

Students can also make use of the Sparx topic list above and push themselves ahead working independently.

If they are Secure/Developing

Students should use the scheme of learning alongside the Sparx topic list above to help them find relevant practice on Sparx under 'independent learning'. They should watch the videos of the topics currently being studied, or that they know they struggle with and should then practice questions from that topic. A great source of practice questions for every topic can be found at Corbett Maths. If you are unsure which topic your child would benefit from looking over most then please email their class teacher for advice.
Not all parents are confident with mathematics themselves, so the videos provide an excellent opportunity to learn along with the student, or to be confident that the explanations the students are receiving are up to date and accurate.

If they are Emerging/Not yet reached

Students who are emerging or not yet reached very often struggle with their times tables. If they are in year 7 or year 8 they will automatically have been signed up the Times Table Rockstars. They should use this website to continually practice their times tables. Little and often is the best way so a few games each day would be hugely beneficial.

If they are not in year 7 or 8 but struggle with their times tables, please contact Mr Moss by email (mossb@wyedeanschool.com) and he will set an account up.

Students would also find it very beneficial to use Sparx independent learning and work through the topics listed on the above Sparx topic document, on the 'fundamentals' tab.

Websites to be aware of

***** denotes log in details required. Please contact your child's class teacher for these.

- Times Table Rockstars* (There is also an app available on apple and android. Times Table Rockstars is used extensively throughout Year 7).
- MyMaths*
- Corbett Maths
- Diagnostic Questions*
- Integral* (A Level only)
- Exam Solutions (A Level only)
- Physics and Maths Tutor (A Level only)
- Mathschase

- Fun and educational math games
- Dr Frost Maths