



# The Fernwood School Mathematics Faculty

Welcome to the mathematics department at The Fernwood School. We are a team of 10; 9 teachers and a numeracy support teacher. We are particularly proud of our GCSE results and over the last few years as we have seen our attainment for Grades 9 – 5 and 9 – 7 increase. Progress 8 for maths is also healthy, positive and rising.

The ethos however, isn't just about the outcomes but that mathematics encompasses all aspects of everyday life and, as such, we focus on the use of mathematics in the real world and problem solving and encourage our students to become independent learners in the subject. This is exemplified by the 'Maths Challenge Wall Problem of the Month', which offers students a range of challenges which (if successfully completed, with worked solutions) can allow them to receive Award Points towards their Fernwood Award, and a £10 voucher for a local cinema. Students are also encouraged to try challenges from the 'Challenge Wall' in the department, or look at other enrichment activities, such as those found on the NRICH website.

Students who may struggle with mathematics are supported by specialist teachers, and can also benefit from interventions, including regular numeracy sessions during tutor time, and, where appropriate, small group and one-to-one sessions.

We have a wealth and breadth of experience in the department, with our practitioners able to deliver personalised lessons which seek to engage, enthuse and encourage our learners to make rapid progress and achieve their potential.

Throughout the course of this academic year we are teaching our Year 7 in mixed attainment classes with a focus on the 3 national curriculum aims; fluency, reasoning and problem solving.

## **Key Stage 3 Curriculum**

Year 7 and 8: the current structure of the year 7 & 8 curriculum is in mixed attainment groups. Each year group are taught the same content and the differentiation within lessons is personalised to the group. There are a wealth of resources that provide opportunities to deepen thinking and develop mathematical understanding within each topic. These activities are not just for the rapid learners, but for all learners. Shared lessons are used to provide consistency of pedagogy and terminology.

At the end of each unit students complete an assessment, which checks progress and understanding on the topics in that unit. Students are encouraged to reflect on their performance in these unit tests, and use their results to target their areas for improvement with a formal 'assessment analysis' process and improvement activities. This also provides information to their class teachers, who can then provide personalised interventions to help them progress.

There are a number of enrichment opportunities provided in Key Stage 3. More able students are entered for the UKMT Maths Challenge Papers at an appropriate level. The



most successful students (2 boys and 2 girls, from year 8 and Year 9) may also be invited to participate in the team for the connected 'Maths Team Challenge'. There are also a number of enrichment clubs put on at lunch time for students to attend.

## Key Stage 4 Curriculum

We begin teaching the Key Stage 4 curriculum in Year 9, allowing three years to complete the course. Year 9 are taught in banded groups, higher or foundation, but are then mixed attainment within those bands. The curriculum, in year 9, targets topics so students are 'GCSE ready' by the end of year 9, thus ready to take on the challenge of more complex GCSE topics studied in years 10 and 11. This means that students will revisit some topics studied in year 7 and 8.

Students follow the curriculum appropriate for their needs leading to a mathematics GCSE taken at Foundation (OCR J560 Grades 1-5) or Higher (AQA 8300 Grades 4-9) in the summer of Year 11. From September 2019 students will receive:

Year 9 – 4 x 60 minutes lessons

Year 10 & 11 – 2 x 60 minutes lessons and 1 x 90 minutes lesson

The GCSE course is split into 15 Units. Units 1 to 12 are for all students, 13 and 14 are for students taking the Higher GCSE only, and unit 15 is relevant to the more able students who will be sitting the 'Level 2 Certificate in Further Mathematics' in addition to the standard GCSE. Each unit is taught in 2 bands, each follows a parallel curriculum with overlapping learning outcomes and extension opportunities, allowing some movement of students between groups where appropriate. Each unit is concluded with an end of unit test, which, in addition to end of year exams in Year 9 and 10 and mock exams in Year 11, and are used to monitor students' progress. As in Key Stage 3, students are encouraged to reflect on their performance in these unit tests, and use their results to target their areas for improvement with a formal 'assessment analysis' process and completion of improvement activities.

Students have access to a large array of revision resources through the school website, including past papers, exam revision packs, as well as the MyMaths learning platform. Students are encouraged to use these resources for independent study and revision. In addition, staff provide support for students in a 'Maths Hub' run every lunchtime, with additional '7th session' revision lessons targeted at students in Year 11.

In addition to the enrichment activities in Key Stage 3 more able students in Key Stage 4 are entered for the UKMT Maths Challenge Papers at Intermediate level. The school is also part of the 'Further Maths Support Programme', and organises trips to some of their events where appropriate.

When visiting the Fernwood School you will find a team that are dedicated and passionate about their subject, who want all students to appreciate the beauty and importance of their subject.