

Intent (Curriculum Planning)

All students should have the opportunity to benefit fully from a broad mathematical experience, which makes a relevant and strong contribution to their other studies as well as their everyday lives.

We work to develop the mathematical knowledge of students through mathematical concepts, terminology, notation, facts, generalisations, methods and techniques.

Our five-year scheme of work is based upon the exam boards curriculum. It aims to boost students' knowledge of topics throughout Key Stage 3 and then during key stage 4 we consolidate previous learning and take it to further levels.

We aim to give students the confidence to use their mathematical abilities and skills and the ability to understand and interpret mathematical information presented in a variety of forms. The concepts and techniques mastered by the end of year 8 should provide a solid basis for the further development of the skills needed with each strand (number, algebra, data, shape & measure and ratio & proportion) to be successful at the full GCSE curriculum, whether higher or foundation tier, by the end of Year 11. Students for whom GCSE isn't accessible will be given the opportunity of taking entry level qualifications.

Implementation (How to teach your intent)

Mathematics is taught in a variety of ways to ensure that students are motivated and involved in their learning. Staff ensure that students are shown examples of how to answer questions and advice is always being given to improve. Pupils are provided with a variety of online resources to help develop their skills and help support their learning in lessons and at home.

The curriculum covers all strands in every year, building upon prior learning of concepts and techniques.

The scheme of work is built around a spiral based structure where topics are routinely revisited and built upon to add more depth to understanding and relevance for future life.

Teachers try to add variety to lessons to keep students engaged with a range of activities. Trails, relay races and card sorts are regularly used to keep students motivated as well as practical hands on activities such as the use of multilink cubes for isometric drawings, 3 dimensional shapes, building nets and the use of cards, dice etc for probability lessons.

Within lessons activities are differentiated to suit all learners. Regular use of RAG style questions allow students to choose an appropriate level and make progress in order to build their confidence. Coloured paper is used in lessons and for assessments and extra time/scribes are used where appropriate. Seating plans are annotated to include key information regarding PP/AEN students and prior attainment. Setting and tier entry is dependent on assessment data as well as a students' emotional resilience.

Throughout the year several assessments are used to inform teachers of students understanding and to aid planning. Colour coding is used to highlight weaker areas and students work through review tasks to show improvement in these areas. Teachers can then use this information to inform future planning and topics which may be revisited straight away or later in the year in preparation for the end of year exams. This is also used alongside PP data to identify students for Maths intervention. When topics are revisited using the spiral scheme of work it is useful to look back at what students struggled with in previous years to guide future planning.

Impact (Success Indicators)

Half termly assessments show what students have learnt through doing question by question analysis for each individual and at class level. The spiral scheme of work allows time for topics to be revisited where necessary. In year 11 mocks this is also carried out across the tiers of entry. The majority of the department are involved in the Economic Awareness strand of PSHCE lessons. During Maths lessons we incorporate real-world applications, for example interest rates and mortgages. Cross-curricular links are regularly made and discussed, in particular Science, Geography, Art and Design & Technology.

Students are prepared for further life whether that be college or an apprenticeship by gaining a grade 4 or above, those who fall short will resit the following year. Students for whom GCSE isn't accessible will be given the opportunity of taking entry level qualifications. Those who show aptitude and drive and are aiming for the higher grades are encouraged to continue studying Mathematics at a higher level.

A significant number of students go on to study Maths and related subjects such as science, IT and business in Year 12. Results Plus is used to identify best and worst topics from GCSE exams. Also, the increased demand at both higher and foundation tier has highlighted the need for a non-GCSE option to keep developing the numeracy skills and prepare students for later life.