

Mathematics Curriculum Statement

In line with our whole school curriculum statement, Saint Aidan's is a Church of England High School with an inclusive Christian ethos. Our vision is:

- We **aspire** to be a school where life is lived in "all its fullness" (John 10:10).
- We **believe** in the God-given potential of every one of our students.
- We **succeed** by working together as a school where all can thrive and where excellence is valued.

As a result the mathematics curriculum is designed to match this vision, whether in formal lessons or in the wider experience of students.

The formal mathematics curriculum

Aims: Through the teaching of mathematics at Saint Aidan's we aim:

- to stimulate, develop and maintain students' curiosity, interest and enjoyment in mathematics
- to maximise each student's mathematical potential
- to enhance each student's ability to communicate and reason mathematically; developing a level of fluency in the fundamentals of mathematics as they proceed
- to promote a variety of mathematical teaching and learning methods to raise the achievement of students working individually, in pairs or in groups
- to allow students to develop transferable mathematical skills that will aid their progression in other areas of the curriculum (especially in science, geography, computing and technological subjects)
- to provide mathematical continuity and progression from KS2, through KS3 and KS4 and prepare students for Mathematics at KS5 or for life and work outside of education

Objectives: By the end of their mathematical education at Saint Aidan's all students should be able:

- to solve mathematical problems precisely, communicating their answers through clear and logical reasoning both verbally and on paper
- to approach a variety of problems and tasks systematically, choosing the appropriate techniques or strategies independently or through collaboration
- to approach numerical or mathematical problems occurring elsewhere in the curriculum confidently and competently
- to obtain the highest Mathematics GCSE grade that they are capable of
- to perform the basic mathematical skills required for entry into higher or further education or needed in their chosen careers

Key Stage 3

From day one in the Autumn term of Year 7 students are taught in three sets according to their EOKS2 test scores. The Schemes of Learning are split into three separate tiers (Extension, Core and Support) which fully meet the requirements of the National Curriculum and spiral from one year to the next but with controlled and minimal repetition. The content within each tier is predominantly the same but designed, through the careful sequencing of the basic maths skills and knowledges, to stretch students of all abilities. The aim when teaching all topics, is for students to become fluent and precise mathematicians by working upon their declarative and procedural knowledges and enriched mathematically by being exposed to a wide range of associated contextualised problems. SEND students have access to the same curriculum as everyone else, with TA support given as appropriate. Progress is tracked using half-term assessments and end of year exams based upon the work covered with a variety of intervention strategies adopted for those who struggle to meet their targets.

Key Stage 4

At GCSE we move from three lessons a week and three sets in each half-year group to four lessons and four sets. This enables us to have a more flexible and comprehensive approach to raising achievement through strategically positioning students/tiers/teachers within smaller classes. Each GCSE class is taught by two mathematics teachers which we believe ensures a more comprehensive coverage of the curriculum. The content within both Foundation and Higher tiers is designed to fully meet the requirements of the topic areas "Number", "Algebra", "Ratio, proportion and rates of change", "Geometry and measures", "Probability" and "Statistics" as described in the AQA 8300 GCSE specification. The Schemes of Learning are sequenced, with plenty of associated interleaving opportunities, to build fluency in the skills necessary to succeed in these six strands. Everybody, including SEND

students, are entered for GCSE mathematics but the AQA Entry Level Certificate is also offered to all low attainers at KS4. Progress of all students is carefully tracked using five mock exams positioned throughout the course, with changes in tier sometimes the outcome.

Assessment

Students work is assessed in mathematics regularly through homework, tests and exams to check on understanding, to allow the right support to be provided, to inform the next stages of teaching and to allow students and parents to be informed of progress. At KS3, all work is marked using a standardised scale to decide whether students are working "Above", "At", "Slightly below" or "Well below" the target range expected of that class. At KS4, all work is marked using GCSE sub-grades in accordance with whole school policy (e.g. 5L/5M/5U = Lower/Middle/Upper GCSE grade 5)

Beyond the formal mathematics curriculum

A selection of top set students in Years 7 & 8 and Years 10 & 11 are entered in the "Foundation" and "Intermediate" UKMT maths challenges in which they can gain bronze, silver and gold certificates.