Mathematics Policy on Gifted and Talented

This policy describes how the mathematics department addresses the needs of gifted and talented students.

Identification

Students are identified as gifted and talented in mathematics using a variety of indicators. These may be quantitative, including data from in-school tests, Cognitive Ability Tests (CATs), Fischer Family Trust (FFT), and qualitative judgements by teachers who know the students and their work. Particular attention is paid to the identification of underachieving gifted and talented students.

Students who have been identified as gifted and talented are informed of their inclusion on the register of gifted and talented students in mathematics.

The maths department gifted and talented policy and identification criteria are displayed on the school website in the appropriate section.

If a student is removed from the register of gifted and talented students in mathematics for any reason, the student and their parents/carers are also informed.

Subject knowledge

The mathematics department recognises that gifted and talented students are best catered for in a culture of intellectual enquiry and of insistence on excellence; teachers in the department are therefore expected to refresh continually their collective subject knowledge and understanding.

Gifted and talented students may be resistant to teaching which they perceive to be based on limited subject knowledge; it is therefore important that teachers are open about the limits of their expertise. Most importantly, classrooms should be places where gifted and talented students feel part of a dynamic of ‘co-learning’ with the teacher (ie in which the teacher is a ‘partner in learning’).

Teaching and learning

The mathematics department recognises that the principles underlying good teaching and learning are appropriate for all students, including the gifted and talented.

It is the department’s aim that the curriculum is presented to students as a series of problems to be solved, not as a body of knowledge to be absorbed. All students are helped to understand how learning takes place and what they can do to make the most of all learning opportunities. The department make full use of the range of Mathematical Challenge resources available as starters and as part of lessons to help the students develop a range of problem solving techniques as well as an enjoyment and confidence in problem solving.

A culture of risk-taking is of particular importance in supporting the development of gifted and talented students. For example, students are given problems out of context and are encouraged to experiment to find a solution.

Questioning is central to learning and to teaching. The mathematics department aims to be constantly working to develop the effectiveness, range, purpose and focus of the questions asked by teachers and by students in mathematics lessons.
In planning for differentiation, teachers are expected to take account of all abilities in the class. Activities should be challenging for all students, and all students should be encouraged to develop as independent and interdependent learners. It is departmental policy to offer extension and enrichment activities to all students, and to ensure that gifted and talented students have the opportunity to develop at the highest level. Gifted and talented students can occasionally present particular behavioural and emotional challenges in and out of the classroom which form significant barriers to learning. The department recognises that such challenges can be pre-empted and offset through effective differentiation.

At the start of each major unit of work, parents/carers are given a course outline, which includes information about what and how their child might achieve at the highest levels.

**Assessment for learning (AfL)**

Effective assessment for learning recognises that there is no ceiling to intellectual development. Assessment for learning encourages and enables students to think and work beyond arbitrary subject limits and – of particular importance to gifted and talented students – beyond the limits of level and grade descriptors. The mathematics department encourages effective assessment for learning in all lessons in order to allow students to explore how they might make exceptional progress.

**Resources (materials and people, etc)**

The scope of departmental resources takes account of the full range of students’ attainment and potential. Gifted and talented students in mathematics have access to challenging mathematics beyond the curriculum, and are asked to consider ‘real-world’ applications of mathematics. Students are given extra-curricular opportunities where possible to work with adults other than their classroom teachers in and out of the classroom.

**Monitoring and Evaluation**

Departmental monitoring and self-evaluation pay specific attention to how well the needs of gifted and talented students are being met. The views of gifted and talented students as a group are sought and considered, along with other groups such as girls, boys and ethnic minority students. The analysis of these views enables the department to assess how effectively it is contributing to the achievement of whole school strategies and targets for gifted and talented students, and to identify the next steps for improvement.