

Imperial College London Mathematics School

Monitoring visit report

Unique reference number:	149733
Name of lead inspector:	Joanna Walters, His Majesty's Inspector
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Type of provider:	16-19 free school
Address:	Woodhouse Road London N12 9EY

Monitoring visit: main findings

Context and focus of visit

Ofsted undertakes to carry out monitoring visits to all newly directly funded providers of education programmes for young people within the further education and skills sector. This monitoring visit was undertaken as part of those arrangements and as outlined in the 'Further education and skills inspection handbook', especially the sections entitled 'Monitoring visits' and 'Monitoring visits to providers that are newly directly publicly funded'. The focus of these visits is on the themes set out below.

Imperial College London Mathematics School (known as Imperial Maths School) opened in September 2023. It is part of the Frontier Learning Trust, a multi-academy trust consisting of Woodhouse College and Imperial Maths School. It is a specialist mathematics school, working in collaboration with its partner university, Imperial College London, offering A levels to 16- to 19-year-olds. The school is co-located on the same site as Woodhouse College in Finchley, north London. At the time of the monitoring visit, there were 104 learners.

Themes

How much progress have leaders and managers made in designing and delivering relevant education programmes that have a clearly defined purpose? Significant progress

Leaders have a very clear vision and curriculum structure for the mathematics school. They provide young people from a diverse range of backgrounds who have keen interests and skills in mathematics and science with significant knowledge and skills to prepare them for further study and careers in these areas. They have developed an extremely coherent curriculum where all learners study mathematics and further mathematics. In addition, learners choose to study either physics or chemistry, or both. Learners have the option to study a fourth A level at Woodhouse College.

Leaders work very collaboratively with Imperial College London academic staff to develop the knowledge and skills of learners far beyond the basics of the A-level specifications. They have developed a programme that includes academic research projects set by an industry or academic professional and masterclasses that replicate a university style of teaching and learning. Learners gain considerable communication and study skills such as presentation, coding, academic writing, problem solving and group work skills. The programme prepares learners exceptionally well for their next steps into universities undergraduate courses and degree apprenticeships.

Leaders and subject managers have good oversight of the provision. They frequently and successfully evaluate and review the curriculum content and sequencing. They adapted the order in which they teach mechanics content in mathematics and physics. For example, teachers teach acceleration in one and two dimensions in mathematics in the autumn term. In term 2, teachers revisit the same topic in physics, recapping and developing learners' understanding in a way that applies to physics. This gives learners who study both subjects the underpinning mathematical principles that they need in physics.

How much progress have leaders and managers made to ensure that learners benefit from high-quality education programmes for young people that prepare them well for their intended job role, career aim and/or personal goals? **Significant progress**

Leaders have developed each A-level curriculum in a coherent and ambitious way. They have designed the mathematics and further mathematics curriculums with a well-considered sequence of learning that gives learners the underlying principles and understanding of key terminology. For example, teachers ensure notation is well-understood and used consistently across teaching in mathematics and physics, and highlight where differences occur, before using this notation in more complex contexts.

Teachers identify individual learners' starting points accurately using GCSE results and thorough assessments at the start of courses. Teachers use the results of frequent end-of-topic tests to identify gaps in learners' knowledge and plan further teaching to make sure misconceptions are corrected. Teachers provide comprehensive support should any learners need to catch up if they make less than expected progress. Teachers set learners challenging and ambitious work that mirrors the requirement of undergraduate programmes. Learners produce work that is to a high standard.

Teachers are highly skilled and experts in their subjects. Learners receive exceptionally high-quality teaching and learning. Teachers are adept at explaining complex concepts and tasks, they use highly effective techniques to check learners' understanding and correct misconceptions. Teachers often pre-empt common misunderstandings, such as those around the application of Newton's third law in physics, so learners do not carry these forward into future learning. They give learners very useful feedback which helps them to improve the standard and quality of their work.

How much progress have leaders and managers made in ensuring that effective safeguarding arrangements are in place? **Significant progress**

Leaders have very thorough policies and procedures in place to safeguard learners. Staff demonstrate well their legal duties and responsibilities to protect learners from harm or abuse through a thoughtful, proactive and caring approach. They make sure learners receive highly relevant help and support in a timely way.

Learners feel safe in all areas of the college. They know who to contact and feel confident that issues will be dealt with very effectively. Learners understand well the risks posed by radicalisation and extremism. This is because they are taught a highly effective curriculum by skilled teachers who teach them how to lead healthy and safe lives.

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