

Cambridge Maths School

Monitoring visit report

Unique reference number:	149596
Name of lead inspector:	Georgina Ager, His Majesty's Inspector
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Type of provider:	16 to 19 free school
Address:	119 Mill Road Cambridge CB1 2AZ

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.

Cambridge Maths School (CMS) is a 16 to 19 academy in Cambridge. It is part of the Eastern Learning Alliance and opened in 2023. CMS offers specialist mathematics education to students from across the East of England. Staff select students based on their aptitude and interest in studying mathematics. CMS currently has 80 students studying with them. Students study mathematics and further mathematics A-levels. They also study one or two A-levels in biology, chemistry, physics or computer science. In addition, they undertake research-based projects with a mentor from the local community. Fewer than five students are in receipt of high needs funding.

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 and managers have designed a specialist intensive mathematics curriculum. Leaders aim to develop passionate mathematicians who are curious. Staff ensure that they weave mathematics through every element of the curriculum. They place a strong emphasis on students developing the specialist skills and attributes they need for their future careers. Leaders place a high priority on working with disadvantaged young people to improve their life chances. Students plan to move on to university courses in areas such as mathematics or science on completion of their courses.

Leaders and managers have a highly ambitious vision for their mathematics curriculum. It is coherently designed to develop students' problem-solving skills and to foster their curiosity. Teachers pose continual problems for students to solve collaboratively. In A-level and further mathematics courses, students work initially on problems based on concepts that are easily accessible such as mathematical surds. This helps them understand mathematical patterns. They then move on to more complex multi-layered problems. Students quickly develop their reasoning and logical thinking skills. They learn to work highly effectively in groups and academically challenge each other's work in a supportive and professional way.

Governors and trustees provide highly effective scrutiny and oversight of the provision. They are proactive and visit the school frequently to, for example, visit lessons and talk to staff and students. This, and the high-quality information they receive about the provision, gives them a very good insight into the quality of education that students receive.

Leaders have established an effective culture of learning and continuous improvement. The benefits of being part of the trust support leaders' quality assurance very effectively. Managers from the trust regularly complete reviews of the provision, on, for example, attendance, student behaviour and safeguarding. Leaders and managers have developed the wider curriculum successfully to support students' well-being after they identified that this was the most common concern for students.

Leaders and managers make sure that there is a wealth of valuable professional opportunities for teachers and staff. Leaders and managers have used research and professional networking highly effectively to develop and improve teaching practice. Teachers continually reflect on and refine their teaching sessions.

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 and managers have designed an ambitious curriculum that extends well beyond the A-level specifications and prepares students exceptionally well for their next steps. Teachers explore higher level mathematical concepts with students. This provides students with the opportunity to approach problems in different ways. Students relish this problem-solving approach. They quickly learn the reasoning behind mathematical concepts and how to approach and solve complex mathematical problems.

Teachers are highly qualified and experienced. They effectively check students' understanding. Teachers skilfully ask questions to help students move forward when they are stuck during problem-solving activities. They provide enough support to students without giving them the answers. Teachers expertly use group and practical activities to help students remember and recall important concepts. Students, including those from disadvantaged backgrounds and those with special educational needs, flourish at the provider.

Staff know their students very well. Teachers quickly identify students' prior knowledge, strengths and areas for improvement. Teachers seek out problems that will challenge individual students to be better mathematicians. Staff intervene quickly and effectively when students struggle with new concepts or fall behind. Students become more confident mathematicians. They grasp topics that they previously struggling with.

Students take part in stimulating group research tasks with external mentors from prestigious universities and local technology companies. Students value these projects highly and talk with pride, enthusiasm and passion about how these projects develop their wider skills. Students develop an understanding of formal academic research and academic referencing. They know how to convey information simply and clearly.

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

Leaders and managers have established a strong safeguarding culture throughout the school. Students feel safe at the school. It is a safe place to study. Students know who the designated safeguarding lead (DSL) is and who to report any concerns to.

Staff, including the DSL, are appropriately trained and experienced in their roles. The DSL benefits from being part of a community of practice across the wider trust. Staff keep very comprehensive records of safeguarding concerns and incidents. They reflect on previous incidents and carefully consider the future training needs for staff and students.

Students have a good understanding of the risks of radicalisation. They can identify the signs that individuals may be at risk of becoming radicalised, such as changes in behaviour and distancing from friends and peers.

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