

## School inspection report

27 to 29 February 2024

# **The National Mathematics and Science College**

2 The Oaks,  
Westwood Way,  
Coventry,  
CV4 8JB

The Independent Schools Inspectorate is appointed by the Department for Education to inspect association independent schools in England. Our inspections report on the extent to which the statutory Independent School Standards and other applicable regulatory requirements are met, collectively referred to in this report as 'the Standards'.

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## Summary of inspection findings

1. Leaders, supported by highly qualified teaching staff, are effective in creating a supportive and academically challenging teaching and learning culture, where pupils make good progress and achieve high outcomes in external examinations. Leaders have high expectations for pupils and the quantity and quality of pupils' work reflects this.
2. Leaders foster a passion in pupils for scientific, technological, economic and mathematical (STEM) subjects through a multifaceted approach to teaching and learning. Subject leaders are experts in their fields who communicate effectively with pupils. This enables pupils to have a very clear idea of exactly what they need to do in order to progress and to achieve their ambitious goals.
3. Extracurricular activities, in the form of academic enrichment, and success in national and international competitions stoke pupils' enthusiasm and extend their academic knowledge and skills. The curriculum surpasses A-level specifications, encouraging pupils to apply their knowledge to real-world problems.
4. Leaders have developed an award-winning STEM communication program as part of the curriculum so that pupils' scientific and mathematical knowledge is extended whilst building pupils' confidence in communicating this knowledge to others through a range of media.
5. Leaders imaginatively use social spaces around the school so that pupils' intellectual curiosity and love of learning is stimulated in and out of lesson time.
6. Leaders create a culture of academic excellence within a supportive and collaborative community. Pupils of all ages and backgrounds present as self-confident and have high self-esteem. They are at ease in discussion with adults, reflecting on their experiences thoughtfully and in a balanced way. However, opportunities for pupils to take on leadership opportunities are limited.
7. Pupils fundraise and volunteer for causes often in response to national campaigns, for example, volunteering for a charity combatting loneliness amongst the elderly. However, opportunities for pupils to contribute to the lives of those locally and in the wider community are underdeveloped.
8. Leaders have established effective and well understood routines and procedures for the safeguarding of pupils. Staff are provided with regular training and updates to ensure their safeguarding knowledge is up-to-date and relevant.
9. Leaders ensure safer recruitment checks are carried out. However, in a small number of records there were discrepancies in the recording of the dates of recruitment checks between staff files and the single central record.

## The extent to which the school meets the Standards

- Standards relating to leadership and management, and governance, are met.
- Standards relating to the quality of education, training and recreation are met.
- Standards relating to pupils' physical and mental health and emotional wellbeing are met.
- Standards relating to pupils' social and economic education and contribution to society are met.
- Standards relating to safeguarding are met.

## Recommended next steps

Leaders should:

- ensure closer monitoring of the recording of recruitment checks on the single central record to ensure it accurately reflects when checks were conducted.
- consider opportunities for pupils to further develop leadership skills to prepare them for life beyond school.
- provide a wider range of opportunities for pupils to contribute to the lives of others in the community beyond school in order to increase opportunities for them to develop social responsibility.

## Section 1: Leadership and management, and governance

10. The school academically selects pupils who show particular abilities in mathematics and science, from across the world. Leaders have a clear understanding of their responsibilities to effectively support and nurture the needs of a culturally diverse and highly academic pupil body. Parents are highly satisfied with the school's provision.
11. The curriculum and policies are aligned with the specific demands of pupils who are skilled in STEM subjects. Subject leaders are experts in their fields and this supports pupils to achieve high outcomes.
12. Experienced and knowledgeable leaders invest in staff training and ensure that staff in positions of responsibility have the necessary skills, experience and qualifications in order to discharge their responsibilities well.
13. Governors are actively involved in the life of the school and quality assure provision, for example, by overseeing subcommittees and evaluating policies and their implementation. Governors supportively challenge senior leaders within the school in order to ensure that they are fulfilling their responsibilities effectively.
14. Leaders maintain a strategic approach to risk management. For example, insights from external health and safety consultants are accurately recorded, followed up, and checked. Leaders actively work to reduce risks, especially for higher-risk activities such as practical experiments in science and educational visits. Following visits and activities, leaders review the relevant risk assessments and consider whether further measures to mitigate risks are appropriate.
15. Leaders provide existing and prospective parents with relevant and useful information. Parents receive informative pupil academic progress reports twice a year. Leaders are readily available and swiftly address any concerns or complaints, which are rare.
16. Leaders are also attentive to any pupil concerns and pupil feedback, providing tailored support as necessary. Through a series of forums, regular surveys and comment opportunities, leaders are proactive in seeking the views of pupils and respond to them appropriately.
17. The high-quality provision in boarding supports pupils effectively and promotes a harmonious community. Pupils value the environment, commenting positively on the provision, and appreciate that they are very well looked after.

### The extent to which the school meets Standards relating to leadership and management, and governance

- 18. All the relevant Standards are met.**

## Section 2: Quality of education, training and recreation

19. The school has highly qualified and academically proficient teachers who are adept at stretching and challenging the abilities of pupils. Pupils develop a love for learning, fostered by teachers employing effective teaching methods including skilful use of questioning techniques.
20. The curriculum intentionally focuses on mathematical, scientific, and technological aspects. It is tailored to pupils' ages and needs, yet enhanced to provide appropriate stretch and challenge. Consequently, pupils' knowledge is extended to a notably high level in these areas. Subject leads are experts in their fields, proficient in pedagogy, and effective in communicating high expectations to pupils.
21. Schemes of work and lesson plans are constructed in such a way that there are many opportunities for wider exploration of knowledge and research in areas of individual interest to pupils. Pupil progress is effectively tracked through a programme of regular assessments, including department-specific internal baseline tests and three examinations per year in each subject. Staff implement timely interventions for pupils needing additional support and this helps pupils to make good progress. Pupils' results at A level are significantly above national average.
22. Leaders regularly share their analysis of academic data with governors. This gives governors detailed insight into the data and enables them to support and challenge leaders appropriately.
23. The majority of pupils in the school speak English as an additional language (EAL). Leaders have developed a specialised assessment strategy tailored to accommodate the challenges faced by pupils who speak EAL and teaching is suitably adapted to provide linguistic support for pupils who speak EAL. Pupils who have special educational needs and/or disabilities (SEND) are well supported by their teachers who employ appropriate teaching strategies.
24. The curriculum includes an innovative STEM communication program developed in collaboration with academics and industry professionals. The programme is a bespoke course introduced by leaders to extend pupils' technological communication skills and bridges the gap between school and university. Over the course of the 4-term programme, pupils participate in lectures, seminars and workshops delivered by a combination of school staff and outside speakers. Pupils produce written and spoken content both individually and as part of a group. As a result, pupils acquire the skills required by universities when conducting research projects and develop general and STEM specific communication skills.
25. Well planned facilities and resources contribute to fostering pupils' intellectual curiosity for mathematical and scientific learning. Leaders imaginatively use social spaces around the school to provoke further academic questioning. Large write-on-wipe-off whiteboards, known as 'problem boards', are used by pupils and staff in equal measure to fuel interest and to collaboratively solve academic conundrums. Teachers learn alongside their pupils whilst recognising their pupils' ability to drive forward and make good progress and achieve high academic outcomes.
26. The curriculum and wider academic enrichment opportunities not only lay the foundations for pupils to achieve success in public exams but also to achieve notable outcomes in national and international academic competitions, such as olympiads, the global Desmos maths art competition and a number of prestigious awards in a highly competitive university chemistry challenge.

27. Leaders provide a wide range of weekday and weekend activities for pupils. Pupils enjoy trips to various locations, from Maths Fest in London to go-karting, which provides a holistic educational experience. Recreational activities, including visits to the sports centre and attendance at various societies, contribute to pupils' overall physical and emotional wellbeing. The societies provide avenues for co-curricular exploration, and open-ended homework questions encourage pupils to delve into their areas of interest.
28. Pupils demonstrate a high level of interest, intellectual effort, and responsibility in practical work. Their self-motivation is evident, as witnessed in their commitment to improvement through initiatives like 'the Pledge' which requires pupils to identify an area of comparative weakness in their learning, spend a week addressing that weakness and then undertake a low-stakes test to measure progress.
29. Pupils are well-supported and prepared for academic university entrance tests, for example the Sixth Term Examination Papers (STEP) in mathematics, the STEM communication programme and various technology-based inter-house activities.
30. Pupils value the support afforded to them in boarding, particularly enjoying the opportunity to collaborate with their peers on joint projects. Leaders provide an appropriate programme of activities which develop pupils' non-academic skills. For example, pupils enjoy the opportunity to develop their knitting and crocheting skills in a quiet and purposeful atmosphere which offers a change from more intellectually charged activities. Pupils also enjoy the chance to visit a local sports centre to play badminton with their friends or to visit the fitness suite.

### **The extent to which the school meets Standards relating to the quality of education, training and recreation**

**31. All the relevant Standards are met.**

## Section 3: Pupils' physical and mental health and emotional wellbeing

32. Leaders recognise the importance of supporting pupils' physical, mental, and emotional wellbeing alongside academic excellence. Leaders and staff provide effective support for pupils so that they are self-confident and have high self-esteem. The varied programme of societies develops pupils' teamwork skills and supports positive mental health.
33. There is an embedded culture of mutual respect among both pupils and staff. Pupils highly regard the skills and subject knowledge of staff, while staff equally appreciate the tenacity and academic passion displayed by pupils.
34. Leaders support the well-rounded development of pupils by providing weekly sessions on personal, social, health and economic (PSHE) education and Relationships and Sex Education (RSE). The curriculum is sensitive to the diverse cultural perspectives on personal and social education, covering basic relationships and sex education to equip pupils with appropriate knowledge in preparation for life beyond school.
35. The premises are modern and well maintained. The physical environment of the school is designed to be bright and inspirational, encouraging learning to extend beyond the classroom and permeating all aspects of school life, including the boarding house. Health and safety measures are robustly overseen by leaders who ensure that staff are appropriately trained.
36. There are limited opportunities for pupil leadership, but a small number of pupils lead some of the societies, contributing to a culture of shared responsibility and collaboration. The school has an aim to empower its pupils so that they can change the world for the better and increasing pupil leadership opportunities would align with this aim.
37. Leaders' commitment to pupils' health is evident in the effective provision for physical activity, nutritious and plentiful food, and rigorous adherence to health and safety regulations. Teachers monitor pupils' involvement in physical activity to ensure that pupils are supported to lead a healthy lifestyle.
38. Appropriate arrangements are in place for the evacuation of pupils in the case of fire and regular drills are carried out to ensure that pupils are aware of correct procedures. Each drill is recorded together with an evaluation of its strengths and weaknesses, so that leaders can continue to improve these processes.
39. The majority of pupils are boarders, who enjoy high-quality living arrangements. Single, en-suite rooms, communal kitchens, and breakout spaces create a sense of community. Pupils feel that they can make their views heard and appreciate the support they receive from accessible staff and counsellors.
40. Pupils' medical care and therapy needs are met with access to high quality support and first aid through on-site nurses, boarding staff and online counsellors. An appropriate accessibility plan is in place and this ensures that pupils with disabilities are able to readily access both the school site and the curriculum.



41. Leaders maintain an admission and attendance register in line with statutory guidance and the school's comprehensive attendance and punctuality policy.
42. Pupils' behaviour is exemplary and bullying is extremely rare. Teaching staff are well trained to recognise and deal with bullying as and when it arises. Pupils prioritise their academic pursuits and respectfully celebrate one another's achievements. This supportive culture is developed through tutor periods, boarding activities, charity work, and in-school societies.

### **The extent to which the school meets Standards relating to pupils' physical and mental health and emotional wellbeing**

- 43. All the relevant Standards are met.**

## Section 4: Pupils' social and economic education and contribution to society

44. Leaders foster a collegiate atmosphere of respect and support in the school. The school is proudly multicultural with pupils from 26 different nationalities living and working together in harmony. Pupils celebrate worldwide festivals together and pupils learn about world religions, systems of democracy and laws across the world in the curriculum. Pupils have opportunities for discussion on worldwide perspectives on laws and democracy, enabling pupils to develop an understanding of different cultural attitudes.
45. Pupils have a mutual trust and respect for their peers, emphasising the protection of minorities. This is developed through a culture of openness and an increased knowledge and understanding of protected characteristics, taught through the PSHE programme. Pupils engage in scenario work to explore expressions of sexuality, gender, and beliefs. Discussions amongst pupils prompt reflection on personal beliefs and attitudes, influenced by family, friends, and culture. Pupils have a well-developed moral understanding and actively report any lack of consideration or discrimination among their peers.
46. Pupils appreciate the personalised advice and guidance they receive from the embedded, impartial careers programme. Leaders' support for university applications is robust, covering various aspects such as talks from university academics, one-to-one sessions with mentors, practice interviews, and specialised university application training. The majority of pupils secure places at their first-choice universities.
47. Pupils benefit from appropriate work experience opportunities, especially in the pre-medicine pathway, where pupils can shadow medical practitioners.
48. Teachers use tutor periods to stimulate general knowledge, discussing topics like British law and morality. Pupils develop a sound understanding for the need to be financially literate during a summer term programme in Year 13 which prepares them for university life, including cooking on a budget and managing student finances.
49. Leaders encourage autonomy in decision-making, allowing pupils to choose societies, physical activities, and charitable fundraising opportunities. Pupil councils give opportunities for pupils to express their views and expose them to the democratic process in practice.
50. Pupils contribute to the lives of others through fundraising for charities and a small number of pupils volunteer locally. However, opportunities for pupils to contribute positively to the lives of those in wider society and those living or working in the local community are limited.
51. Boarding pupils appreciate the inclusive, multicultural community within their house, valuing the opportunity to strengthen their friendships through weekend activities, trips, and evening events. Pupils also value the freedom they are given by being allowed to leave the site, and appropriate safeguards are in place to support this. Boarders take responsibility for their behaviour and understand the need for sanctions.

**The extent to which the school meets Standards relating to pupils' social and economic education and contribution to society**

**52. All the relevant Standards are met.**

## Safeguarding

53. The school's leadership maintain a robust commitment to safeguarding, ensuring staff receive regular training on safeguarding, health and safety, and relevant policies. Weekly bulletins present staff with safeguarding scenarios, enhancing their awareness and preparedness. An online system is used to record and complete training, emphasising collective responsibility for health and safety. 'Prevent' training occurs every two years delivered by an external provider. New staff receive a comprehensive three-day induction. The school has clear and effective systems for reporting concerns and giving prompt feedback.
54. Leaders ensure safer recruitment checks are carried out and conduct risk assessments as appropriate. However, there were minor discrepancies in the recording of the dates of recruitment checks between staff files and on the single central record indicating a need for improved accuracy in recording.
55. Leaders implement an effective online filtering and monitoring system which helps pupils to be safe when working online at school. Regular reviews enhance the effectiveness of safeguarding arrangements.
56. The designated safeguarding lead (DSL) receives regular updates from local safeguarding partnerships to maintain an understanding of local safeguarding risks. Effective regimes and procedures are established for safeguarding, allowing both boarders and day pupils to raise concerns through various channels. An anonymous online platform for pupils to record concerns, an independent listener, and a comment box provide avenues for pupils to express worries. Boarding protocols are effective, and pupils feel well-cared for, with accessible routes to voice concerns.
57. Arrangements for the handling of safeguarding allegations against staff or leaders are effective and involve seeking the timely advice of the local authority designated safeguarding officer (LADO) as necessary.
58. Leaders' attention to health and safety and risk management provides effective support for pupil welfare. The approach balances risk mitigation with facilitating activities to prepare pupils effectively for life in wider society.

### The extent to which the school meets Standards relating to safeguarding

- 59. All the relevant Standards are met.**

## School details

<b>School</b>	The National Mathematics and Science College
<b>Department for Education number</b>	331/6004
<b>Address</b>	The National Mathematics and Science College 2 The Oaks, Westwood Way, Coventry, CV4 8JB
<b>Phone number</b>	02475 092950
<b>Email address</b>	Info@natmatsci.ac.uk
<b>Website</b>	www.natmatsci.ac.uk
<b>Proprietor</b>	The Governing Body of The National Mathematics and Science College
<b>Chair</b>	Mr Michael O’Sullivan
<b>Headteacher</b>	Dr Andy Kemp
<b>Age range</b>	15 - 19
<b>Number of pupils</b>	138
<b>Number of boarding pupils</b>	118
<b>Date of previous inspection</b>	No previous ISI inspection 4-6 February 2020 - Ofsted

## Information about the school

60. The National Mathematics and Science College is a co-educational boarding school located on the outskirts of Coventry. The school was opened in July 2016.
61. Boarding, for 118 pupils, is in modern boarding facilities adjacent to the teaching part of the school. It offers independent living for pupils 15 years and older.
62. The school was previously inspected by Ofsted in 2020. Since the previous inspection a new head was appointed in September 2020.
63. The school has identified 6 pupils as having special educational needs and/or disabilities (SEND). No pupils in the school have an education, health and care (EHC) plan.
64. English is an additional language for 127 pupils.
65. The school states its aim is to provide its pupils with the opportunity to pursue their mathematical and scientific potential within a caring and supportive pre-university type environment. It does this through instilling mutual respect where individuality is valued and poor behaviour is not tolerated.

## Inspection details

### Inspection dates

27 to 29 February 2024

66. A team of 4 inspectors visited the school for two and a half days.

67. Inspection activities included:

- Observation of lessons, some in conjunction with school leaders
- Observation of registration periods
- Observation of a sample of extra-curricular activities that occurred during the inspection
- Discussions with the chair and other governors
- Discussions with the head, school leaders, managers and other members of staff
- Discussions with pupils
- Visits to facilities for physical education
- Visits to the boarding house accompanied by pupils and staff
- Scrutiny of samples of pupils' work
- Scrutiny of a range of policies, documentation and records provided by the school.

68. The inspection team considered the views of pupils, members of staff and parents who responded to ISI's pre-inspection surveys.

**How are association independent schools in England inspected?**

- The Department for Education is the regulator for independent schools in England.
- ISI is approved by the Secretary of State for Education to inspect independent schools in England, which are members of associations in membership of the Independent Schools Council.
- ISI inspections report to the Department for Education on the extent to which the statutory Independent School Standards, the EYFS statutory framework requirements, the National Minimum Standards for boarding schools and any other relevant standards are met.
- For more information, please visit **[www.isi.net](http://www.isi.net)**.

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For more information, please visit [isi.net](http://isi.net)