

# Sir Isaac Newton Sixth Form

16-19 academy

<b>Inspection dates</b>		<b>3–6 March 2015</b>
<b>Overall effectiveness</b>	<b>This inspection:</b>	<b>Good-2</b>
	Previous inspection:	Not previously inspected
Outcomes for learners		Good-2
Quality of teaching, learning and assessment		Good-2
Effectiveness of leadership and management		Good-2

## Summary of key findings for students

### This sixth form is good because:

- most students are making good progress and developing a wide range of study skills very well
- in 2013/14, students' achievement of high grades in AS-level qualifications was high
- teaching is good and promotes students' self-confidence, independence, resilience and communication skills particularly effectively
- managers and teachers use exciting and innovative ways to develop successfully the science and mathematics curriculum and ethos, including close liaison with industry, higher education institutions and other local and regional providers
- students' attitudes to learning and ability to work collaboratively are excellent; students' attendance rates are very high
- managers are identifying areas for improvement accurately and taking rapid and successful action to tackle these with some early signs of success
- specialist resources and the accommodation are of a very high standard.

### This is not yet an outstanding sixth form because:

- in 2013/14, the proportion of students who successfully completed AS-level qualifications was not high enough
- female students have not achieved as well as males and, in 2013/14, the achievement gap was too wide
- too little teaching and assessment are outstanding
- personal tutors and subject teachers do not work closely enough together to help students to make the very best progress
- recording by tutors of students' short term improvement actions is not consistently thorough enough and subject teachers' feedback following assessment is not consistently of a high standard
- the impact of managers' actions to ensure that the quality and effectiveness of provision are of a consistently high standard is not fully evident.

## Full report

### What does the sixth form need to do to improve further?

- Further develop the expertise and capacity within teaching teams by sharing the best practice, increasing the quality of assessment feedback and ensuring that students of all abilities have their knowledge and skills extended fully so that more teaching and assessment are outstanding.
- Review and strengthen the link between the work of tutors and subject teachers so that they support and challenge students to make the best possible progress. Ensure teachers and tutors record and check actions to improve students' performance following reviews of their progress so that students know precisely what they need to do to improve.
- Ensure that the revisions to quality assurance arrangements that managers have made are fully successful in reducing variations in the quality of provision so that all provision is of a high standard. Continue to monitor the progress of female students frequently to ensure that the gap in achievement reduces in 2014/15.

### Inspection judgements

<b>Outcomes for learners</b>	Good
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- All students are on 16– 19 study programmes and take A- and AS-level qualifications, mainly in mathematics and science subjects. Almost all students join the sixth form with good GCSE results, including in English and mathematics.
- In 2013/14, the first year of the new sixth form, the large majority of students achieved their AS-level qualifications and the proportion who achieved high grades was high. However, the proportion of students who did not complete one or more of their qualifications was higher than the national rate and the relatively small number of students who failed an AS-level was too high when compared to students' prior attainment.
- The attainment gap between male and the smaller group of female students was wide in 2013/14 as male students outperformed their female peers markedly.
- In 2013/14, based on managers' data on students' progress compared to their prior attainment, in most subjects, male students exceeded expectations. They made very good progress in a few subjects including biology and computing. However, female students underperformed in a number of subjects including physics and geography and the very few students of lower ability underperformed in all subjects.
- Managers' monitoring records of Year 12 students in 2014/15 indicate that students' progress is mostly good and that female students' progress is notably better than in 2013/14. However, in Year 13, students' current progress is in line with expectations and female students' progress remains below expected levels.
- Currently across both year groups, more students have remained on their qualifications than in the previous year. Managers predict that students' progress will improve further and that most, including female students, will exceed expectations. However, inspectors could not confirm the likelihood of this position.
- Students' attendance is high and they are consistently punctual to subject lessons. Most have well developed communication skills and they learn a wide range of other skills that will support their future study and potential for employment particularly effectively. For example, the majority of students benefit from learning study skills as part of the extended project

qualification and an increasing number learn very useful industry-specific skills such as working in teams or solving problems through work experience or work-related projects.

- Students' standard of work is high because teachers have high expectations of them and, in part, reflecting their mostly high ability level and prior attainment. Most students have good or better mathematical and English skills, although a minority of their written work, including structure and neatness, is not consistently of a very high standard.
- Fewer than three-quarters of students from 2013/14 continued their studies in 2014/15. Of those who did not make progress to A-level courses, just under half started their AS-level year again at the sixth form and are making better progress than previously; most others went on to courses at other colleges.
- Of the Year 13 students due to complete in 2015, the large majority have received offers from their first choice of university and, of these, more than a third of offers are from Russell Group universities. All other students have secured a progression route in line with their discussed and agreed career aim. For example, one student is going on to an apprenticeship in either engineering or business.

### The quality of teaching, learning and assessment

Good

- The two subject areas of mathematics and science, which inspectors are covering in this report, represent the large majority of the curriculum. All students take a mathematics qualification. In 2014/15, more students are taking qualifications in other subjects including computing, economics, the arts and languages.
- The impact of good teaching, learning and assessment is clear in current students' good progress, their high levels of motivation and their developing self-confidence.
- Teachers are well qualified and use their specialist knowledge very well to help students understand the subject they are studying and to appreciate the relevance of what they are learning. Teachers and students use information and learning technology well.
- Teachers' skilled use of questions and choice of learning activities helps to extend students' knowledge and develop their skills well. Teachers encourage students to work together productively, such as paired practical work in laboratories and by taking part in peer assessment.
- In the best lessons, teachers match the demands of their work closely to students' abilities. For example, in an AS chemistry lesson the teacher used past examination questions of differing difficulty on Hess's law matched to individual students' capability to provide demanding work for all and this allowed the teacher to intervene with additional support most effectively.
- In the few less effective lessons, teachers do not check learning effectively or answer their own questions. They restrict students' participation and make few demands of them, often leading to their slow progress. In a minority of lessons, teachers adopt a narrow focus on teaching to match examination content, which limits the breadth of students' learning.
- Teachers' monitoring of students' progress has improved and is more thorough than previously. Teachers use rigorous half-termly assessments to identify students' areas of underperformance and provide them with precise improvement actions.
- Students receive good pastoral support. However, the quality of tutors' record keeping varies too much with insufficient focus on reviewing students' response to identified improvement actions.
- Assessment of students' work is good. Through prompt and accurate marking, most teachers provide students with clear guidance on how to improve their work. However, not all teachers make sufficient checks on students' successful completion of the improvement points provided in feedback sheets.

- Additional sessions provided in subjects to support underperforming students are very effective and make a significant contribution to ensuring students' good progress. The use of student peer mentors provides additional and very effective help.
- The sixth form has an attractive, vibrant learning environment. Governors, managers and staff have carefully thought out an innovative adaptation of the building from its previous role as Norwich's fire station. Classrooms and other learning areas are very well equipped with modern technology and specialist resources of a high standard.
- Staff and students make good use of the good facilities in the open access areas. The virtual learning environment contains a range of subject learning material, for example, video extracts of lessons which students can use for revision purposes. However, its use to aid research and extend learning is underdeveloped.
- Advice and guidance for students are good both at the start and during their courses. Staff help students to clarify their career aspirations at an early stage in their application to ensure that they make the right choice of subjects, including drawing on independent careers guidance. Tutorials focus strongly on career development, particularly, but not exclusively, on university applications as well as valuable topics relating to students' personal and social development.
- Teachers use work-related activities well to improve students' learning. For example, they arrange work experience with a variety of local industries or give students the opportunity to shadow researchers at the University of East Anglia and the Norwich Research Park. A number of prominent scientists and mathematicians, and industry representatives, provide students with topical and stimulating talks.
- Teachers encourage students' use of specialist subject terminology very well in lessons and most students become adept in oral communication quickly.
- Staff and students work together respectfully; teachers promote fairness and make sure students understand the importance of tackling discrimination. Initiatives such as their involvement in naming each teaching room after renowned scientists and mathematicians, such as Lynn Conway and Alan Turing who received unfair treatment because of cultural stereotyping, support students' understanding of diversity. However, teachers do not always explore diversity themes that arise in lessons well enough.

## Science and psychology

### 16-19 study programmes

Good

### Teaching, learning and assessment in science and psychology are good because:

- in 2013/14, students' successful completion of their qualifications and their attainment of high grades was high in the sciences, except for psychology where it was low; male students made good progress compared to their prior attainment
- teachers are closing the achievement gap between female and male students, which was too wide in 2013/14, because of the targeted support and confidence-building strategies they are using to support female students to achieve
- changes to course organisation and teaching methods have meant that many more current students have remained on the AS-level psychology course compared to 2013/14
- teachers make very good use of their strong subject knowledge and wide experience, for example as research scientists, to make learning interesting and particularly to encourage students to become self-motivated and independent
- teachers often use questions very effectively to check students' understanding of scientific concepts such as structure and function

- in chemistry, experienced Year 13 and a minority of high-performing Year 12 students act as particularly good mentors for other students
- teachers use seating plans carefully and constructively to place students in groups so that they can work productively together and give peer support
- teachers use their good knowledge of students well to provide challenging work and to ensure that students work quickly to reach and exceed their ability level
- teachers' use of the assessment feedback sheets works well in chemistry and biology to create a good dialogue with students and a strong focus on areas that they need to improve
- participation in enrichment activities such as the 'Small World Initiative' working with scientists to discover new antibiotics provides a valuable opportunity for a small number of students to gain research experience
- teachers provide helpful extra learning resources through students' frequent use of the virtual learning environment and students make successful use of the chance to sit in lessons outside their individual timetable to help consolidate their learning.

**Teaching, learning and assessment in science and psychology are not yet outstanding because:**

- a few students are not making good progress because teachers do not always identify early enough their underachievement and take action
- teachers do not use assessment feedback forms effectively in all lessons, particularly in physics, which results in a minority of students not knowing precisely what they need to do to improve
- teachers do not always match precisely the demands of the subject to students' abilities or support them closely enough in order to ensure that students have the very best chance to achieve their target grade.

**Mathematics and statistics**

**16-19 study programmes**

Good

**Teaching, learning and assessment in mathematics and statistics are good because:**

- in 2013/14, students' successful completion of their qualifications and their attainment of high grades was high in mathematics; most male students made good progress compared to the prior attainment, but a minority of female students underperformed in AS-level mathematics
- teachers know which students are underperforming and are providing extensive and very effective support including through additional sessions during the day and during the holiday breaks; this intervention is helping students to get back on track
- teachers use their good subject knowledge well to plan learning successfully so that students' thorough understanding of mathematical concepts and theories, such as Newton's Law, underpins their work; in a small minority of lessons, teachers do not provide the more able students with enough challenge at the start of tasks leading to some unproductive time
- teachers provide a wide range of good interactive resources mainly through the virtual learning environment to reinforce learning in lessons; for example, they often post examples of calculations on-line which most students use very effectively
- teachers set realistic and challenging targets for students and give them homework frequently to consolidate and extend their learning

- students receive plenty of good information, advice and guidance relevant to mathematical and scientific careers; most students intend to progress onto a mathematical or science-related degree course
- students develop good mathematical skills; teachers make frequent use of and display technical language in classrooms to ensure students learn quickly to be accurate in their communication about mathematics topics
- teachers make good use of extensive references to mathematicians from the present and past to explore diversity within and outside the sixth form community.

### **Teaching, learning and assessment in mathematics and statistics are not yet outstanding because:**

- extra support for the minority of current students who are not making enough progress, including a few female students, is only just starting to happen fully effectively
- teachers' written feedback is not of a consistently high standard and a minority of students do not receive clear and timely guidance on what they need to do to improve
- in a few learning activities, teachers allow a minority of students to rely on them too much and accept too readily their limited participation in tasks
- a few students do not always use full sentences when providing written answers to questions.

## **The effectiveness of leadership and management**

Good

- The headteacher and governors have successfully established an ambitious vision to become a science and mathematics centre of excellence, but progress towards meeting this vision was not fast enough in the sixth form's first year. Managers have made improvements rapidly and effectively to resolve the concerns they and governors identified, although they have not fully implemented a few improvements.
- Senior managers have developed a well-founded, specialist range of courses to meet the regional and national priorities for highly skilled and qualified science, technology, engineering and mathematics (STEM) professionals. For example, managers and teachers have considered fully the needs of the east coast renewable energy industry in designing the curriculum and the sixth form is the lead provider in the 'Norfolk and Suffolk Maths Hub'. Collaboration with a nearby partner secondary school works well to allow students to take qualifications in other subjects to complement their specialist curriculum.
- Managers ensure that the sixth form meets the requirements of 16– 19 study programmes through each student having an individual curriculum that takes full account of their progression aim, which in most cases is to higher education. Managers use well-established links with universities and local employers to provide work-related learning of a high standard. For example, biology students conduct field research with staff from the University of East Anglia. However, managers have not ensured that every student benefits fully from good external work-related learning.
- The sixth form's specialism in mathematics is leading to all students improving their skills in this subject. Managers have increased the focus on developing students' English skills to better than good. They have just implemented an action plan to increase students' literacy and this is starting to improve students' use of technical language.
- Managers identified successfully the factors underlying the achievement gap between male and female students in 2013/14 and they have introduced sensitive and proportionate measures which are beginning to reduce this gap. Managers have increased the support for the very few students of lower ability in recognition of their needs.

- Management of staff performance is robust leading to rapid improvements where provision is not yet of high quality. Revised and more frequent quality assurance activities mean that managers use comprehensive evidence to evaluate teaching standards and deal with areas for improvement. Managers have either eliminated or substantially reduced the amount of teaching and learning that is less than good.
- Teachers are beginning to share good practice very effectively, for example through weekly sessions to discuss the very best ways to teach each key scientific or mathematical concept. Staff development links closely to individual teachers' development needs and is good.
- Managers use accurate self-assessment to establish strengths and weaknesses across the sixth form and devise precise actions to tackle areas for improvement including uneven quality of provision or underperformance. They take full account of views of students and parents or carers to assess the quality of the students' experience.
- Subject self-assessment reports contain insufficient precise detail to link closely enough with the overall improvement plan. Success criteria in subject improvement plans are not always easily measurable.
- Staff do much to encourage and celebrate students' understanding of diversity, for example through informative tutorials. The impact of this is evident in students' sensitive recognition of individual differences and needs. Staff support those students who are anxious or who have mental health concerns particularly well, which helps them with their studies and they often make better progress than expected.
- Good safeguarding arrangements are in place, supported by strong links with external specialist agencies. As the number of students has increased, additional staff have recently taken on safeguarding responsibilities. Staff make students fully aware of how to get immediate help when they need it. Staff training is thorough and places priority on prevention of radicalisation, awareness of community-based risk factors and risks associated with the abuse of vulnerable young people. Governors are well informed and meet their safeguarding responsibilities. Recruitment checks, and recording of these, are thorough. Senior managers have ensured completion has taken place of the fire and site risk assessments for the sixth form's new building.

## Record of Main Findings (RMF)

### Sir Isaac Newton Sixth Form Free School

<p>Inspection grades are based on a provider's performance:</p> <p>1: Outstanding                  2: Good                  3: Requires improvement                  4: Inadequate</p>	Overall	14-16 part-time provision	14-16 full-time provision	16-19 study programmes	Traineeships	19+ learning programmes	Apprenticeships	Employability	Community learning
Overall effectiveness	2			2					
Outcomes for learners	2			2					
The quality of teaching, learning and assessment	2			2					
The effectiveness of leadership and management	2			2					

Subject areas graded for the quality of teaching, learning and assessment	Grade
<b>Science</b>	<b>2</b>
<b>Psychology</b>	<b>2</b>
<b>Mathematics and Statistics</b>	<b>2</b>



## Provider details

<b>Type of provider</b>	16-19 academy							
<b>Age range of learners</b>	16-18							
<b>Approximate number of all students over the previous full contract year</b>	69							
<b>Principal</b>	Mark Neild							
<b>Date of previous inspection</b>	Not previously inspected							
<b>Website address</b>	www.inspirationtrust.org/our_schools/sir_isaac_newton_sixth_form							
<b>Provider information at the time of the inspection</b>								
<b>Main course or learning programme level</b>	<b>Level 1 or below</b>		<b>Level 2</b>		<b>Level 3</b>		<b>Level 4 and above</b>	
<b>Total number of learners (excluding apprenticeships)</b>	16-18	19+	16-18	19+	16-18	19+	16-18	19+
	0	0	0	0	172	0	0	0
<b>Number of apprentices by Apprenticeship level and age</b>	<b>Intermediate</b>		<b>Advanced</b>		<b>Higher</b>			
	16-18	19+	16-18	19+	16-18	19+		
	0	0	0	0	0	0		
<b>Number of traineeships</b>	16-19		19+		Total			
	N/A		N/A		N/A			
<b>Number of learners aged 14-16</b>	N/A							
<b>Full-time</b>	N/A							
<b>Part-time</b>	N/A							
<b>Number of community learners</b>	N/A							
<b>Number of employability learners</b>	N/A							
<b>Funding received from</b>	Education Funding Agency (EFA)							
<b>At the time of inspection the provider contracts with the following main subcontractors:</b>	The sixth form does not work with any subcontractors							

## Contextual information

Sir Isaac Newton Sixth Form Free School (the sixth form) opened in September 2013. The sixth form is in the centre of Norwich and moved to its permanent base in the renovated Norwich Fire Station in September 2014 from its temporary base in an office block nearby. The sixth form is part of the Norwich-based Inspiration Trust, which is an academy sponsor of a number of schools in East Anglia. The sixth form works in partnership with the Jane Austen College, a new 11-18 secondary school, which is part of the Trust. An executive principal oversees both the sixth form and the college. An acting headteacher leads and manages the sixth form. Students attend the sixth form from Norwich and the local area.

## Information about this inspection

**Lead inspector**

Philippa Francis HMI

One of Her Majesty's Inspectors and four additional inspectors, assisted by the acting Headteacher as nominee, carried out the inspection with short notice. Inspectors took account of the sixth form's most recent self-assessment report and development plans. Inspectors used data on students' achievements in the last year to help them make judgements. Inspectors used group and individual interviews, telephone calls and online questionnaires to gather the views of students, parents and carers; these views are reflected within the report. Inspectors observed lessons and assessments. The inspection took into account all relevant provision at the sixth form. Inspectors looked at the quality of teaching, learning and assessment across the sixth form and graded the sector subject areas listed in the report above.

## What inspection judgements mean

Grade	Judgement
Grade 1	Outstanding
Grade 2	Good
Grade 3	Requires improvement
Grade 4	Inadequate

Detailed grade characteristics can be viewed in the *Handbook for the inspection of further education and skills 2012*, Part 2:

[www.gov.uk/government/publications/handbook-for-the-inspection-of-further-education-and-skills-from-september-2012](http://www.gov.uk/government/publications/handbook-for-the-inspection-of-further-education-and-skills-from-september-2012)

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