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Mr I MacNaughton
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Dear Mr MacNaughton

**Ofsted 2010–11 good practice survey inspection programme:
improving science in colleges**

Thank you for your hospitality and cooperation, and that of your staff and students, during my visit on 8 and 9 March 2011 as part of our science survey.

The visit provided valuable information which will contribute to a national report. Published reports are likely to list the names of the contributors or contributing institutions but individuals and institutions will not be identified in the main text without your agreement.

The evidence base included: observation of seven lessons; meetings with managers, teachers and students; review of students' work and relevant departmental documents.

Features of good practice

- Success and achievement rates on science courses are very high. In 2009/10, International Baccalaureate (IB) and GCE A-level science, achievements were well above national averages. In addition, high-grade pass rates were also good.
- Success rates for AS-level applied science, electronics and physics and GCSE science were lower than the standards set by other science subjects.
- Science students achieve good outcomes in a range of national subject Olympiads and other competitions.
- The standard of work in science lessons and investigations is good and, in some courses, outstanding. For example, in a GCE A-level chemistry lesson, the students made very good progress in relating bonding

patterns, physical properties such as melting point and electrical conductance and atomic structure of a range of chemicals to their gross physical properties.

- Progression rates to higher education are high. In 2009/10, over 950 students at the college successfully made applications through UCAS for undergraduate study. Of these, 165 (around 17%) progressed to science courses such as medicine, biomedical sciences, chemistry, physics and environmental sciences.
- Teaching and learning are good with some outstanding features. Teachers are well qualified and experienced and plan their lessons to include a good variety of interesting and challenging small-group work. IB students successfully used an interesting exercise to illustrate the way in which random assortment of chromosomes during sexual reproduction can produce considerable variation in the offspring resulting from one male and one female.
- Practical work and individual investigations are safely carried out and are well planned so that students see the relevance of the techniques that they are learning. Students complete individual investigations in chemistry to a very high standard and enjoy a good range of interesting and relevant investigations and fieldwork in the other sciences.
- Recruitment to science courses is buoyant and has increased over the past few years. This is in no small measure due to the college policy to make sure that all advance level students take five subjects in the first year and four in the second. Many students take science subjects as their main programmes as they aspire to careers in science and technology. However, a good number of students take science courses each year in order to supplement and broaden their studies.
- The range of science courses at advanced level is very good. The IB programme offers physics, chemistry, biology and environmental systems courses. AS- and A-level biology, chemistry, physics, electronics, geology and environmental science are offered along with applied science and AS science in society. At intermediate level, GCSE science is also offered.
- Enrichment activities are well organised and successfully broaden and develop students' appreciation of the wider implications of science and technology.
- Individual support for students is comprehensive. All subject teams provide additional support sessions for students who are at risk of underperforming or who are making less progress than their peers. This early identification of support needs, together with the range of college-wide learning support, is an important part of the way in which students are encouraged to achieve to their potential.
- Senior leaders provide full support for the sciences and have developed a highly supportive ethos in the college. The science teams are confident

and are not afraid of innovation. They are well led and self-assessment reports are detailed and evaluative.

- Good numbers of students take science courses and this had led to strong departmental teams and well-resourced laboratories. Science teachers actively pursue professional development and regularly contribute to the rapidly developing and widely appreciated pool of online resources on the college virtual learning environment.

Areas for improvement, which we discussed, include:

- ensuring that lessons in AS applied science and GCSE science are planned to meet the needs and abilities of all the students.

I hope that these observations are useful as you continue to develop science provision.

As I explained previously, a copy of this letter will be sent to the relevant funding bodies and will be published on the Ofsted website. It may be used to inform decisions about any future inspection.

Yours sincerely

Alex Falconer
Her Majesty's Inspector