

## Maths in Science Days – Programme

**2 April 2022 – Cheshire College South & West**

**3 April 2022 – Xaverian College**

The Maths in Science workshop is for **Year 12** students from the North West of England, who are considering a career in science, particularly those thinking of studying a science degree in higher education. Hands-on exercises will be used to show how important maths is across the whole spectrum of science, with the exercises covering topics in biology, chemistry and physics. There will also be a chance for students, and their parents/carers, to meet with the workshop leaders to discuss careers in science and transitions to higher education.

The requirement for students is a grade 6 in GCSE maths. Students should also be studying mainly science A-levels.

### Schedule:

10.30 – 11.00	Arrival/refreshments for all attendees.
11.00 – 11.10	Welcome and Introduction.
11.15 – 12.45	Workshop 1: Calculus methods. <i>Design of a radiochemistry labelling molecule synthesis for cancer treatment.</i>
12.45- 13.00	Early career researcher presentation: Alex Sheader – <i>“Why I chose research.”</i>
13.00 – 14.00	<b>Lunch</b> [bring a packed lunch]
14.00 – 15.30	Workshop 2: Statistical methods. <i>Planning a clinical trial for a testing a new pharmaceutical.</i> <i>Calculating the design stress for a ceramic component for a jet engine.</i>
15.30 – 16.00	Break/refreshments and parent/carer/teacher arrival.
16.00 – 16.30	Martin Christlieb / Pete Nellist / Alex Sheader: <i>“A career in science.”</i> [This talk is open to parents, carers and teachers; an opportunity to meet and learn about careers in research science.]
16.30 – 17.00	Final discussion and departure.

### Presenters:

- Dr. Martin Christlieb (Department of Oncology, University of Oxford). *Martin has worked in the fields of Chemistry and Oncology, including at the Universities of Cambridge and Oxford.*
- Prof. Pete Nellist (Department of Materials, University of Oxford). *Pete is an electron microscopist and has worked at the Universities of Cambridge, Birmingham, Trinity College Dublin and Oxford.*
- Ms. Alex Sheader (Department of Materials, University of Oxford). *Alex has recently completed her D Phil (PhD) at Oxford and did her undergraduate degree at St Andrew’s University.*

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**Deadline extended: Monday 28<sup>th</sup> March, 11pm.**