Earlham Institute

T Level industry placement students have had the opportunity to engage with leading scientists at the Earlham Institute, giving the students valuable hands-on experience and enabling them to grow in confidence.

Supporting early career development

Since 2023 the Earlham Institute has hosted five T Level Science students, providing practical training in genomics and laboratory automation, and exposing students to technician career opportunities.

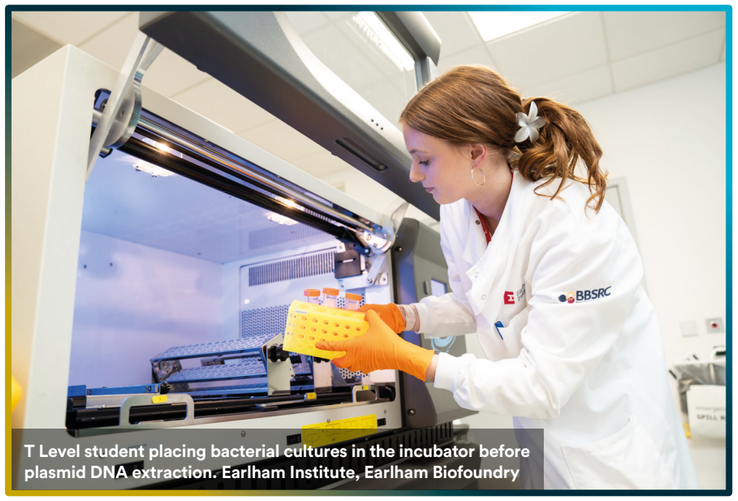
"They probably don't know anyone working in a place like this," says Greg Bowker, former Head of Communications. "To open their eyes and give them that insight at such an early stage into what could be an amazing, fulfilling career is incredibly rewarding."

Experiencing science in action

T Level students were placed in the Technical Genomics Group and the Earlham Biofoundry where they undertook a range of activities such as DNA sequencing, isolating nucleic acids from fish and plants, micro-pipetting with high-throughput automation, and using robotics to process 96 samples simultaneously. Following thorough training, the students worked on active research projects, processing biological samples.

> "Through these T Level placements, we aim to support talented, confident technicians entering the UK workforce."

Head of Technical Genomics, Karim Gharbi, observing a T Level student practicing aliquoting extracted DNA using a micropipette. Earlham Institute, Technical Genomics



T Level student placing bacterial cultures in the incubator before plasmid DNA extraction. Earlham Institute, Earlham Biofoundry

Building student confidence

For Karim Gharbi, Head of Technical Genomics, a highlight was watching students confidently guide their parents on a tour of the laboratory just three weeks into their placement: "It was the first time I realised they had really absorbed all the information and skills that had been shared with them. Seeing these young technicians explain the lab and their work to their parents was a personal highlight."

The students also went on to present their work to the wider institute during a weekly science seminar – an experience that enhanced their communication skills significantly and contributed to their academic progress, as presenting is part of their T Level assessment.

At the NBI Accessible Science event, students interacted with researchers and networked with industry professionals while hosting the Earlham Institute's stand. Fiona Fraser, Senior Research Assistant, recalls how the students showcased their work to both peers and members of the public: "Two students were naturally quite reserved, but by the end they were engaging effortlessly with others. Their confidence truly flourished."

Skills development and mentoring

Hosting industry placements is mutually beneficial. Students gain real-world skills while staff have the opportunity to develop as mentors. "Through these T Level placements, we aim to support talented, confident technicians entering the UK workforce," Greg explains. "It's also a great opportunity for our research technical professionals to take on mentoring roles, helping them build leadership and management skills."

Placement structures

T Level placements at the Earlham Institute are shaped in collaboration with the education providers, allowing for a tailored approach that meets both student and institutional needs. One student experienced a blended structure combining block placements with day release, while two others completed their placements in two blocks of four to five weeks.

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A model for the research sector

The Earlham Institute's positive experience with T Level industry placements provides an impactful model for other higher education and research institutions. The investment in young talent not only inspires future scientists but also strengthens the scientific workforce.

Karim, Fiona and Greg all agree that the most rewarding outcome has been seeing students grow in confidence and ambition while discovering the possibilities of a career in science.

Advice

- Organise a tour to introduce students to your institute and the type of work they will be involved in.
- Encourage student participation in technician events to broaden their exposure and understanding.

Impact

- **Visibility:** showcasing the contribution of technicians within and beyond the institution.
- **TALENT Commission R6:** supporting outreach and public engagement activities in local schools and colleges to increase young people's awareness of technical career opportunities.

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