

Science

The National T Level Conference 26th June 2024

Agenda

- Introduction and context setting
- Keynote 1- Curriculum (Milton Keynes College) followed by discussion
- Awarding Body Update- NCFE
- Keynote 2- Employer insights and professional registration
- Plenary
- Close



Key Note 1- Curriculum Milton Keynes College

The National T Level Conference 26th June 2024





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About Us

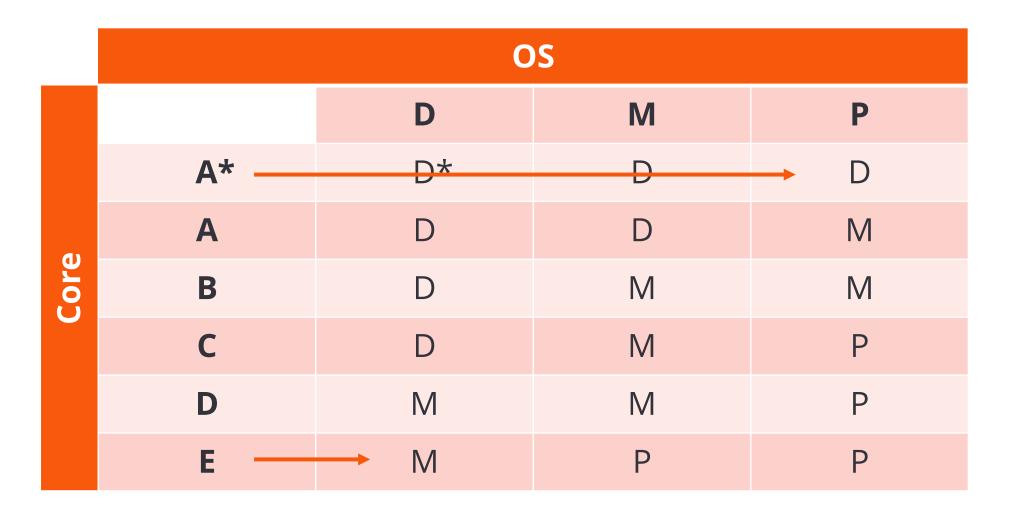
- Two campuses (Bletchley and Chaffron Way)
- 8000 learners across 16-18 year olds, HNC/HNDs,
 Access to HE and adult courses

- Three science teachers and one technician
- Currently offering Level 2 Applied Science, Level 3
 Forensics and T Level Laboratory Science



Total: 40% Total: 60%







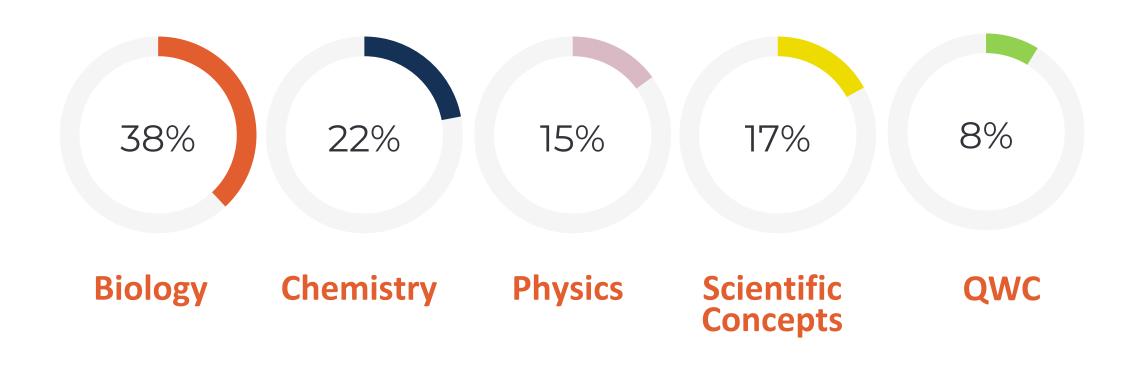
Core A

Integrate in Chemistry: A3 and A4 (Health and Safety) Integrate in Physics: A5 and A6 (Data)

Teach in Core A lessons: A1, A2 and A8 (Working within the Science Sector); A7 (Ethics); A9 and A10 (Science Methodology)



Core B





Occupational Specialism

AS2 requires students to carry out two practicals whilst being recorded and staff examining them. Start this in year one!

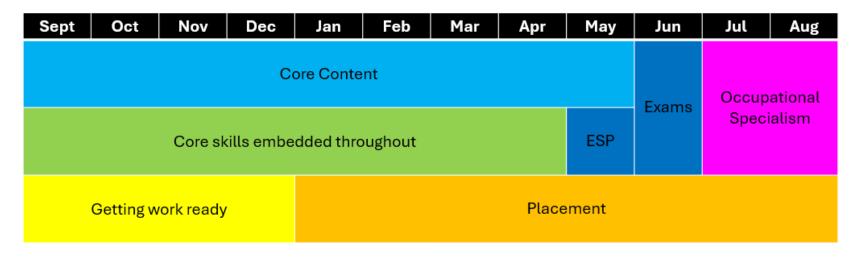


Who?

| Responsibilities | Role |
|----------------------------|-----------------------------|
| Placement Paperwork | Work Placement Co-ordinator |
| Booking ESP Computer Rooms | Exams |
| | |



When?



Year One

| Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug |
|-------------------------|-----|--------------|----------------|-----|-----|-----|-----|--------------|----------------|-----|-----|
| Occupational Specialism | | | | AS1 | AS2 | AS3 | | | | | |
| | | ESP Resit | Exams Resit | | | | | ESP Resit | Exams Resit | | |
| Placement | | | | | | | | | | | |

Year Two



Why?



"FE is nothing if it isn't at the heart of our communities."

Sally Alexander
CEO & Group Principal



To celebrate #TLevelThursday as part of National Apprenticeship Week, meet Terry.

Our very first Science T Level student who joined us in January 2024.



The T Level for 16-18-year-olds combines 80% in the classroom at college with 20% work placement in a real work environment in their chosen field of study.

Terry is focusing on his studies at MK College, and for his work placement, he's joined us in our Environmental Analytical facility. Here, he's gaining hands-on experience in a variety of lab tasks that will support his learning and future career.

We're excited about Terry's pilot placement with our Science Technician, Hannah Charlotte, and the potential for future laboratory science apprenticeships at Cranfield.

Learn more about our apprenticeship offering: https://bit.ly/3AQzobV

#NAW2024 #TLevelThursday #SkillsForLife





'I am a T-level Laboratory Science Student and my placement is with a company called StarLab.

With 94 hours completed so far of my placement, my experience has truly been amazing and my favourite part of the course so far, to use my academic knowledge and apply it into an actual workplace industry feels **very rewarding**, and I tend to find personally that the practical work I do and the knowledge I gain at placement sticks in my head way more then just sitting down in a classroom learning from a board or a book.

They even recognised my hard work and offered me a **temporary PAID part-time position** for the holidays, which I am so grateful and honoured to receive.

I really recommend taking a T-level course, because not only do you get the academic side that is equivalent to 3 A-Levels, but you also get industry experience in your respectable T-level, which doesn't just let you apply your knowledge and gain more knowledge which really sticks to your head, but it also gives you a **taste of what work really is like** and it helps you build work and life skill at a young age.'

Oliver Crakanthorp

T Level Student at Milton Keynes College (and latest employee at StarLab)





Do you know the content for Core A? Can you utilise other staff within the college?

Could you do an ESP?

Could you answer ERQs?





















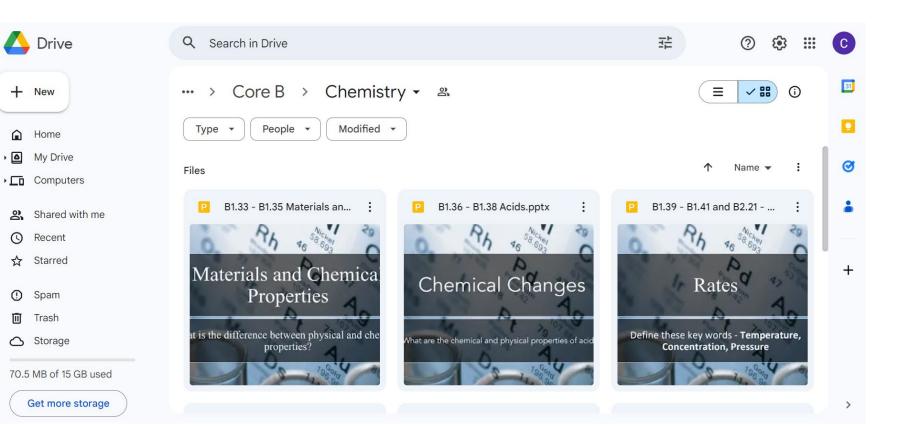




+ New

Recent ☆ Starred

Spam Trash









**BARCLAYS | LifeSkills





Top Two Takeaways

- 1. Plan your logistics
- 2. Check your knowledge







Awarding Body Update- NCFE

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Supporting Excellence in Science T Level Education

Joe Neame (NCFE)

Sector Manager – Healthcare Science and Science National T Level Conference Wednesday 26th June 2024 Leeds



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Provider Support Offer

Dedicated Provider Development Officer

Tailored Support:

Provide customised guidance and resources to meet the unique needs of each provider.

Assist in aligning the provider's curriculum with T Level standards.

Initial Onboarding:

Facilitate a smooth transition into delivering T Level qualifications.

Provide comprehensive onboarding sessions covering all aspects of T Level implementation.



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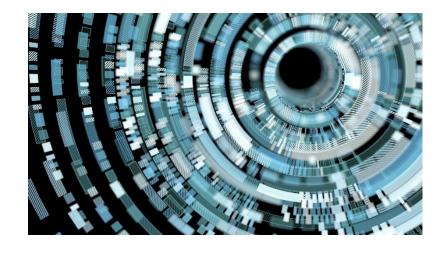
Support in the First Two Years



Year 1: Foundation Building

Conduct thorough onboarding sessions to familiarise providers with T Level requirements and best practices.

Provide initial training on curriculum development, assessment strategies, and student engagement techniques.



Year 2: Deepening Practice

Offer advanced training sessions to enhance teaching strategies and curriculum delivery.

Provide specialised support for assessment preparation and execution

Best Practice Network & Drop-ins

Support and Consultations

One to one consultations

Offer one-to-one consultations to address specific challenges and questions.

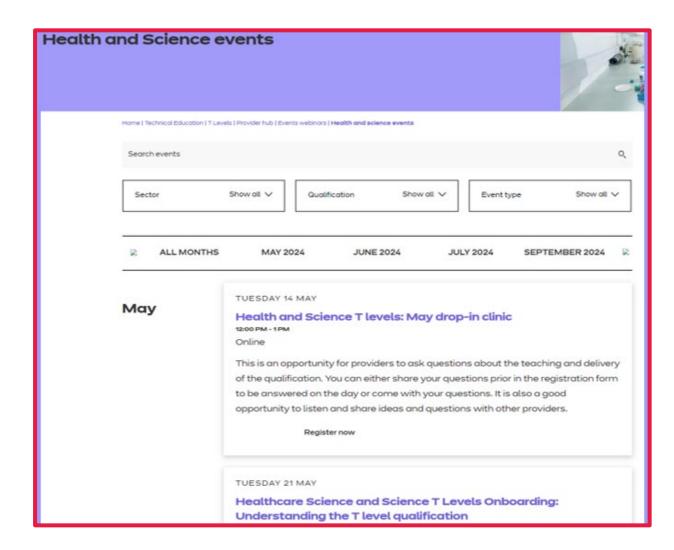
Drop-in clinics

Conduct regular check-ins to ensure continuous improvement and support.

Best Practice Networks

Best Practice Networks facilitate the sharing of successful strategies and resources among T Level educators to enhance teaching and learning.

These networks will provide regular meetings, workshops, and a resource repository, fostering collaboration and continuous professional development.



Sessions and Workshops

Continuous Professional Development (CPD):

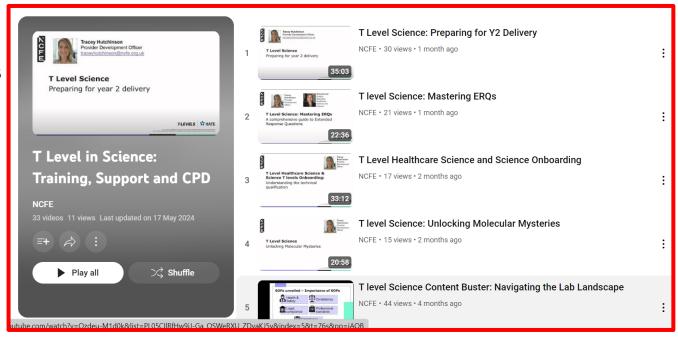
Deliver live CPD sessions tailored to emerging needs and feedback from providers.

Provide access to recorded on-demand sessions for flexible learning opportunities.

Assessment Preparation:

Offer dedicated support for assessment planning and execution.

Provide resources and training materials to help providers prepare students for assessments.



(3) T Level in Science: Training, Support and CPD - YouTube

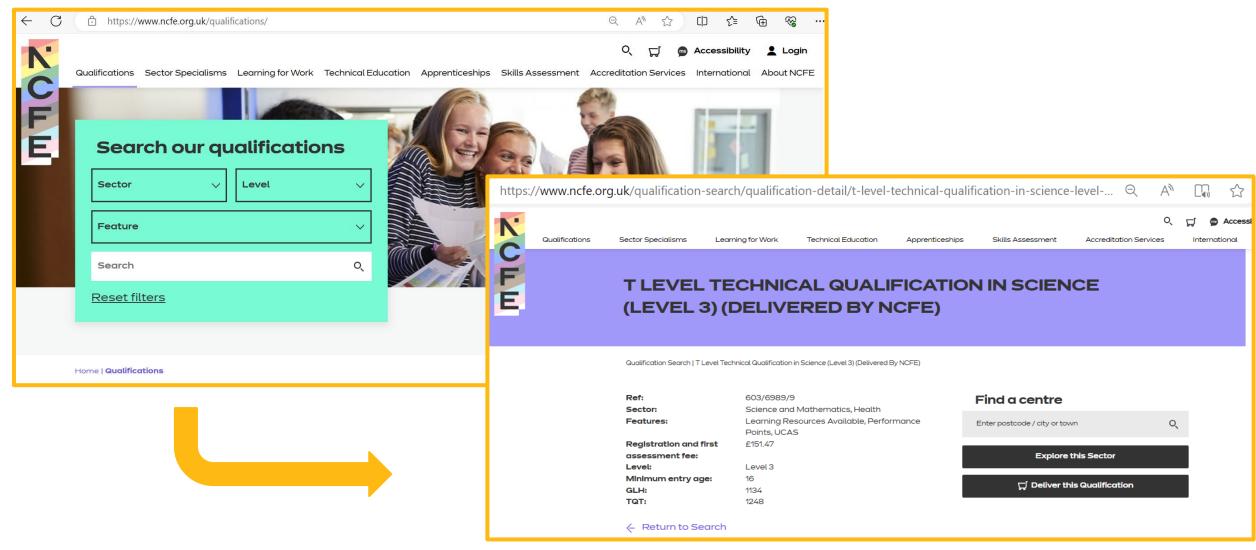
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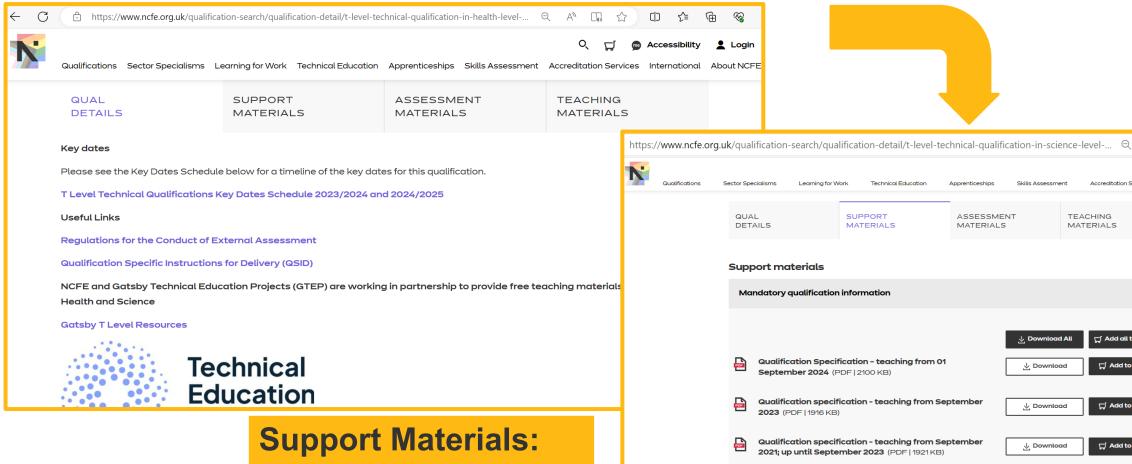
Website Navigation

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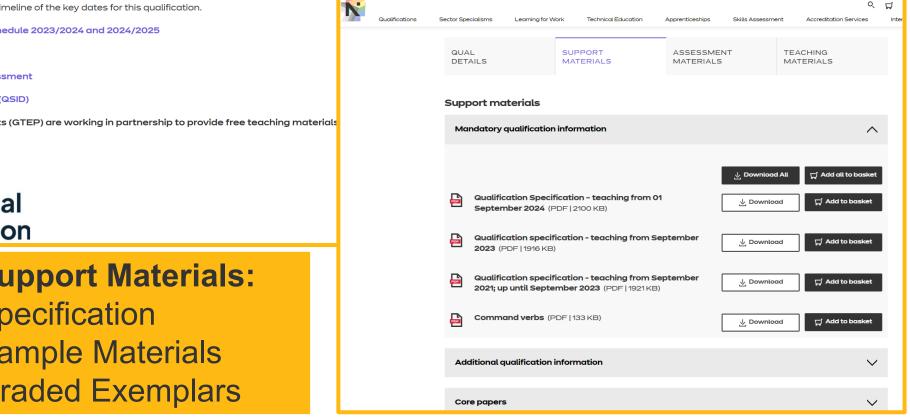


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Website Navigation

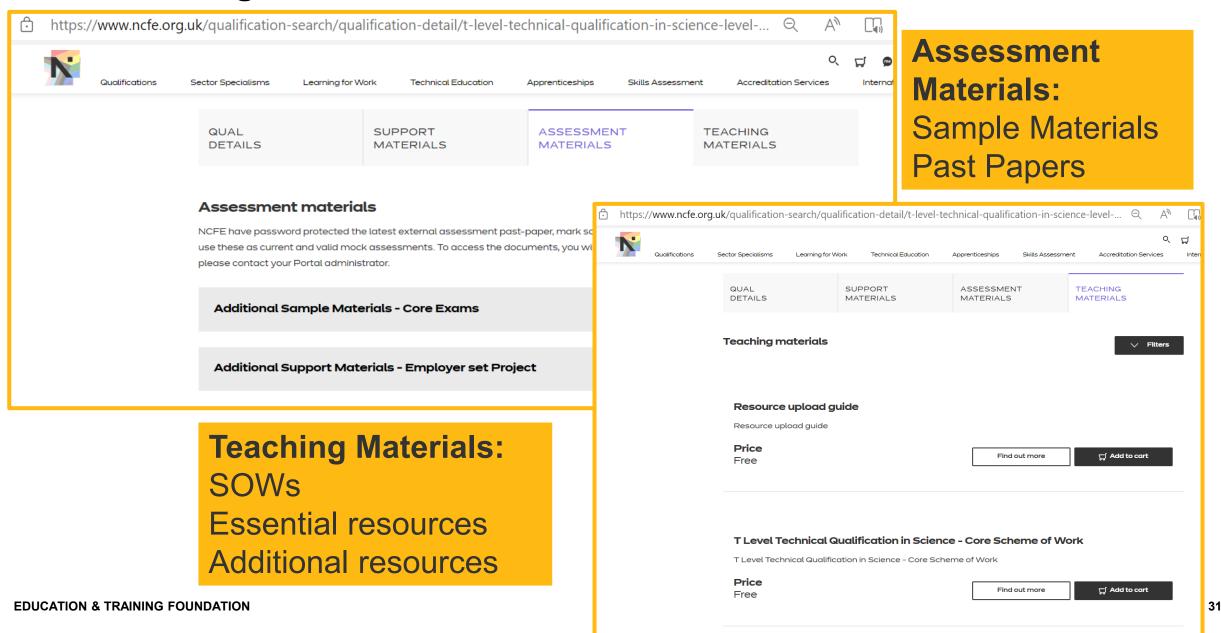


Specification Sample Materials **Graded Exemplars**



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Website Navigation



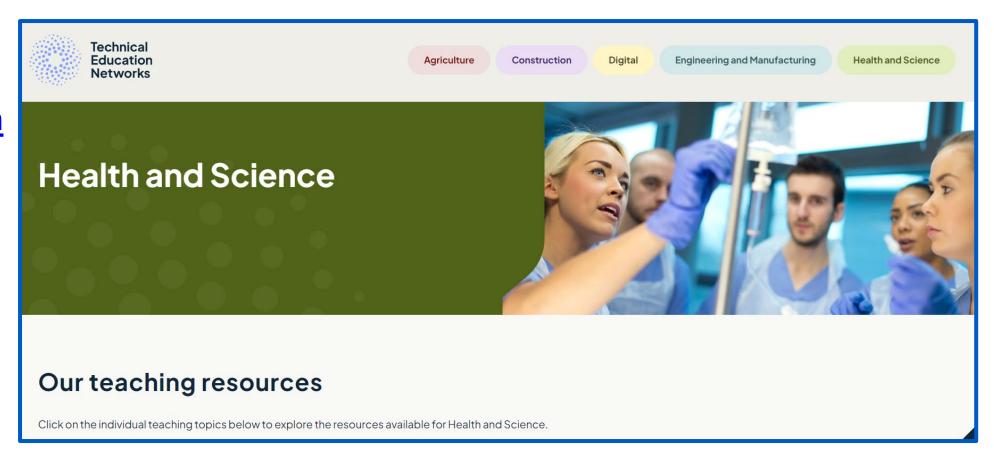
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03

Key Updates

Key Updates

- Updated version of specification
- New version
 of Key Date
 Schedule
- Technical Education Network resources



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Joe Neame

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ETFOUNDATION.CO.UK

Thank you Any Questions?



Comfort Break

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Industry insight and professional registration- Science Council and David Swinscoe

The National T Level Conference

26th June 2024



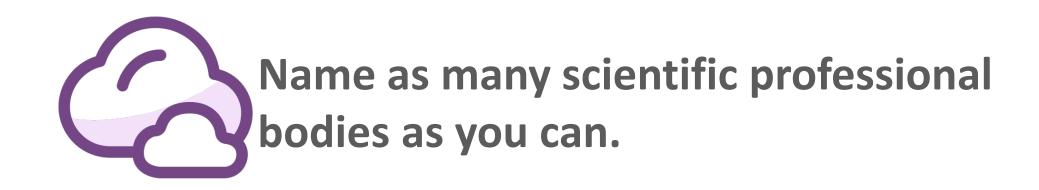


Professional Body Membership and Registration:

Expanding Pathways for Success

Definition of a Professional Body: An organisation with individual members practicing a profession or occupation in which the organisation maintains an oversight of the knowledge, skills, conduct and practice of that profession or occupation.

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Nuclear Institute









Royal

Society

Astronomical















The British Association of

Sport and Exercise Sciences















- To raise awareness and understanding of professional bodies and professional registration with T Level learners and education providers
- To improve understanding of T Levels within professional bodies and the sciences community







www.technicaleducation.sciencecouncil.org

- **Guidance materials for learners:** Understanding professional bodies and RSciTech. Available now
- Session plans for education providers:
 - What is a professional body and a professional register? In development
- Promotional materials for schools: What is the Science T Level? Live in September

Guidance resource 1: T Level Science Professional Competence Log



- Supports learners to identify professional competence within their assignments and industry placements.
- Available in hardcopy and digital formats.
- Designed to provide a head start to UCAS applications or job/ apprenticeship interviews with an early understanding of RSciTech competence.



T LEVEL SCIENCE PROFESSIONAL COMPETENCE LOG

By choosing to study T Level Science you are on your way to developing the knowledge, skills and behaviours required for a career in science.

WHAT IS PROFESSIONAL REGISTRATION?

The Science Council recognises excellence in the practice of science by awarding Registered Science Technician (RSciTech) to

WHAT ARE THE BENEFITS OF PROFESSIONAL REGISTRATION?

- Recognise your experience, expertise, and commitment in your chosen scientific field of practice.
- ✓ Provide connections to a broad community and network of scientists,

HOW WILL THE T LEVEL PROFESSIONAL COMPETENCE LOG HELP YOU?

Completing this document as you

| Competence (examples of evidence below table) | | Task/Activity lexperience from lessons/Industry Work Placement) | Role played (personal contribution made to the task or activity) | |
|--|---|--|---|--|
| Application of knowledge and | A1: Apply knowledge of underlying concepts and principles associated with area of work. | | | |
| understanding | A2: Review and select appropriate scientific techniques, procedures and methods to undertake tasks. | | | |
| | A3: Interpret and evaluate data and make sound judgements in relation to scientific concepts. | | | |
| В | B1: Work consistently and effectively with minimal supervision to | | | |

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How might you engage your learners with the Competence Log?

Guidance resource 2: How Professional Bodies can help you succeed





A leaflet created for students, which highlights:

- The role a professional body can have in supporting career development.
- The benefits membership can offer an individual throughout their career.
- The professional bodies that offer independent recognition of an individual's achievements and practice in the pursuit of excellence as a Registered Science Technician (RSciTech).

Post T Level career progression: advice and support



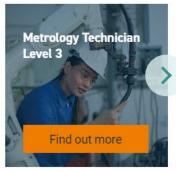
Extensive signposting to apprenticeships that align to Registered Science Technician on the Science Council's Technical Education website, including these profiles:









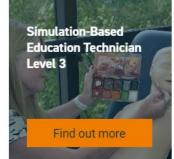
















Promoting the benefits of Professional Registration: Setting the standards for professional scientists





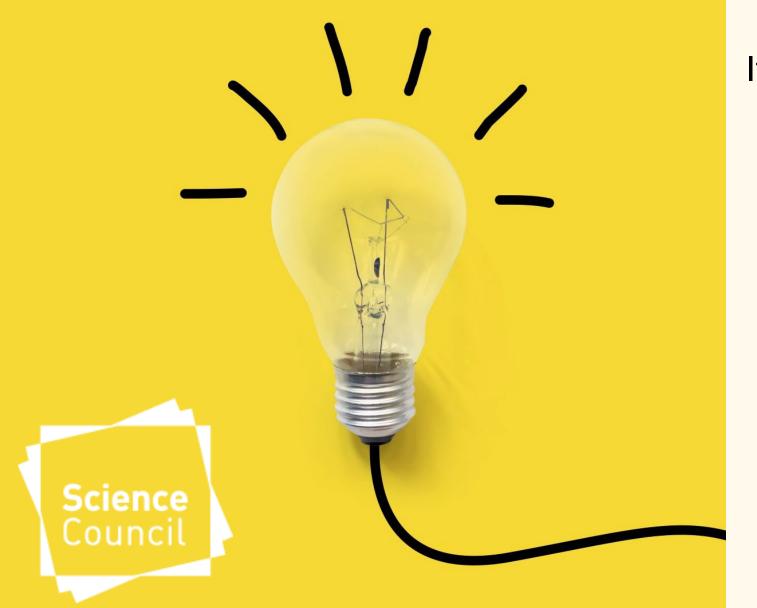
"It's like height, you don't see yourself grow. The process of registration allows you to reflect and observe this."

Read and share case studies about young people in science apprenticeships, and their education journeys to date, to inspire your T Level learners.

Next steps: How you can engag with the Science Council



- Use and share the guidance resources created with your learners.
- Access our website (<u>www.technicaleducation.sciencecouncil.org</u>) to use and download Padlet training session plans and professionally created promotional resources, available for September delivery.
- Book an 'I'm a Scientist, Get Me Out of Here' professional membership chat for your students, or request a professional body representative to speak to your group directly.
- Learn from established providers, connect with other T Level Science Leads to ask questions and access resources recommended by other providers.



If you would like to be involved in any aspect of this project, please contact Emma:

e.smith@sciencecouncil.org

07468 538199

T Level Science Industry Placements – What employers are telling us















T Level Science employer resource project

More placements needed to support increasing T Level Science numbers

Develop resource pack to help employers consider offering industry placements

Collected views from employers and providers to inform approach

Autumn 2024: Launch resource

Employer surveys and interviews

- Online survey of employers
- Individual interviews and discussions with employers
- Attended meetings and events with groups of employers

 Employers with no experience of placements have different views and concerns from those who have hosted placements

What do you see as the main benefits of hosting a T Level Science industry placement student? (Tick as many or as you few as you wish.)

| Talent spotting for future roles | 80% | | | |
|---|-----|--|--|--|
| Helping to create a broader pool of talent for the science sector | | | | |
| Demonstrating commitment to the local community | 63% | | | |
| Recruitment into employer's apprenticeship programme at the end of the T level* | 53% | | | |
| Developing staff in managing a young person | 40% | | | |
| Another pair of hands to complete some tasks | 30% | | | |
| Benefiting from the specific skills, knowledge and competences that T Level Science | | | | |
| students can bring | 25% | | | |
| Recruitment into other work roles at the end of the T Level | 20% | | | |
| Gaining a deeper understanding of the education system | 18% | | | |
| Other (please specify) | | | | |

^{*}Joint second most important for those who have hosted placements (71%)

Employer benefits from industry placements

- "Don't think of it as your CSR activity...if you're struggling to recruit...then this is a way
 of plugging that gap." Thames Water
- One of the hosted students has already applied for a suitable role. Recruitment is a key motivation for the Trust's support of T Level Science placement students.
 County Durham and Darlington NHS Foundation Trust
- "We wanted some younger blood in the section... and we thought it fitted in nicely with our apprenticeship schemes. We could give the T level students some experience in our labs and also it might be a kind of feeder into our apprentice scheme if we found any suitable candidates." Innospec

Not just recruitment

- "He's bringing in a bit of new life and a bit of the new generation into the team. So I think they're learning from that as much as he's learning from them....he's just so enthusiastic about it. I think he's is bringing the eyes and ears of the future in and I think it is pulling the demographic down to have some more younger views and younger skills coming in." Cranfield University
- There have been benefits for existing staff too, who have enjoyed mentoring students and sharing scientific knowledge. **Kent Scientific Services**
- "I think they feel as if they were doing something that actually has some value because they were doing a piece of work that we had struggled to resource in the past." Innospec

Employer concerns

- Concerns about age generally or for some procedures and chemicals
- A few concerns about insurance
- Some comments about the need for supervision and ability of student to work unsupervised and the impact on staff time
- Some concerned that they need to cover particular concepts or skills or piece of work that will be assessed later in the course.

The experience of hosting

- Those already hosting students not concerned about H&S with many comments about H&S being a priority in their organisation and some comments about using existing procedures for new staff and apprentices.
 Some pleasantly surprised about student prior knowledge.
- Supervision of student provides useful management experience for staff
- Early visits to school or college and interviewing student very helpful in understanding the students and the requirements and forming relationship with provider
- Need a plan of what to do with the student

"The main concern was that under eighteens can't go into certain areas due to Health & Safety restrictions, which included the laboratory. After discussions and completing Trust risk assessments, insurance checks and all other necessary paperwork, it was agreed they could."

"Staff initially had some concerns around behaviour and maturity, but it was quite the opposite. They were fantastic students, a proper asset to the team and they really got on with everybody. They were hard working, punctual and polite."



Universities T Level Support Manager



Jo Hartley-Metcalfe

Universities T Level Support Manager

UK Institute for Technical Skills and Strategy

Jo.Hartley-Metcalfe@ITSS.org.uk

- A suite of digital resources to support hosting T Level Industry Placements including:
 - T Level industry placement key considerations
 - Starter kit for coordinators
 - Starter kit for line managers
 - Benefits to universities
 - Plus more



- A series of webinars from our L&D Team
 - Managing young people in the workplace
 - Deconstructing your duties into work placement activities (for line managers)
 - Understanding how you can link the T Level curriculum, to work placement activities (for line managers)



Consult with a specialist:

- Regular meetings with Jo (as required and requested by you)
- Direct access to via email for all staff



- Webpage
- Socials
- Face to face events
- HE networks









SCIENCE T LEVEL PLACEMENTS AT THE UNIVERSITY OF MANCHESTER

The Manchester College has held an outstanding partnership with The University of Manchester for five years across our Engineering and Healthcare learners.

Science T Level students are currently undertaking their placement within the Manchester Institute of Biotechnology (MIB) carrying out the role of a Laboratory Technician. Learners have the opportunity to enhance and develop not only their employability skills but technical skills too, ensuring they are industry ready!

- ✓ Knowledge of working in a scientific research institute and the different support roles and research careers.
- ✓ Understanding of Health & Safety, COSHH forms, risk assessments and safe laboratory working practices.
- ✓ An insight into scientific research conducted in the MIB and the underlying aims of the institute.
- ✓ Knowledge of biotechnological solutions for bio-based manufacture of chemicals/materials production. Including how these may provide solutions that help the world transition from its reliance on petrochemicals and move towards a more sustainable manufacture and recycling.





Above all, I feel that I have developed into an enthusiastic individual that has the self-drive and focus to commit to projects. The T Level and my placement has given me a distinct advantage over others.

Mair Gort, Science T Level Student













Plenary

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| Teaching topic available | Teaching topics in production | |
|---|---|--|
| Working within the health and science sectors | Calibration | |
| Good scientific and clinical practice | Refluxing | |
| Health, safety and environmental regulations and practice | Radiative count rate using a Geiger counter | |
| | Pressure using a U- tube manometer | |
| | Conductivity meter | |

Research - Technical Education Networks

Any questions please contact kelly.butterworth@gatsby.org.uk

Additional Gatsby Support for T Levels

- Destinations- If you would like to see your students featured in future videos, please contact sarah.herdan@gatsby.org.uk [https://www.technic aleducationnetworks.org.uk/destination-case-study-construction/]
- Gatsby is funding a project to support new collaborative curriculum planning networks, each working with a small group of colleges and facilitated by experienced FE curriculum professionals. The focus for each group will be shaped by the network members to support practical next steps for curriculum reform implementation.

Additional Gatsby Support for T Levels



- The National Apprenticeship and Skills Awards will be celebrating its 21st anniversary in 2024 and for the very first time will include awards to recognise T Level students and employers.
- The awards are designed to recognise and reward the achievements of exceptional apprentices and T Level students, skills champions and apprenticeship and T Level employers.
- Applications are now open. Visit the website for more information and to nominate your students and employer partners: <u>appawards.co.uk</u>



Thank you for attending

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