Technical Education Networks

Route: Health & Science

Science

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Amy Mark, AoC

Version 1, March 2026

Purpose of the Day & Introductions

- Network and relationship building
- Tangible takeaways
- Celebrate progress made

Spend some time introducing yourself. Please include:

- the name of your provider
- T Level delivery experience.

Morning Reflections

- Any topic(s) pricked your interest?
- What can you apply in your own setting?

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Update on CoP Meetings

- October and January
- Task and Finish Group: Literature Review
- Teams Channel

Looking ahead:

- Generation 2 Preparation
- Practical Guides

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Hot Topic

Effective AI Use in T Level Delivery

Dr. Alison Ackroyd and Lyndsey Jones

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Some example AI tools

Using AI for assessment

Use the mark scheme attached to grade and annotate/give feedback for the student work which is also attached. Attached is the website they were doing their literature review on and the investigation is "you are required to investigate the use of cobalt 60 in the irradiation process of bananas imported from costa rica. You will need to consider the source of radiation, dose, exposure times, and how to test their effectiveness". And the task was "You have been provided with a database containing a range of potentially relevant sources for your research. All the resources are linked to the problem of food waste and / or the irradiation process. Some sources will be more relevant or reliable than others.
The sources are shown in appendix 1 of this assignment brief document. You will need to:
•
carry out a literature review to find out how irradiation, for example, using cobalt-60 as a radioactive source, can be used to extend the shelf-life of bananas
•
justify why you have chosen specific sources and rejected others – your justification should be based on:
o
how reliable you think the source is and why
o
how relevant you think the source is and why
•
use an academic referencing technique when citing or referencing literature, and state which technique is used"

Great — I've read the **student work** and the **official mark scheme** carefully.

I'm going to:

1. **Award marks exactly as an examiner would**
2. **Annotate where marks are gained/lost against the bands**
3. Give **clear, student-friendly feedback** they could act on to move up a band

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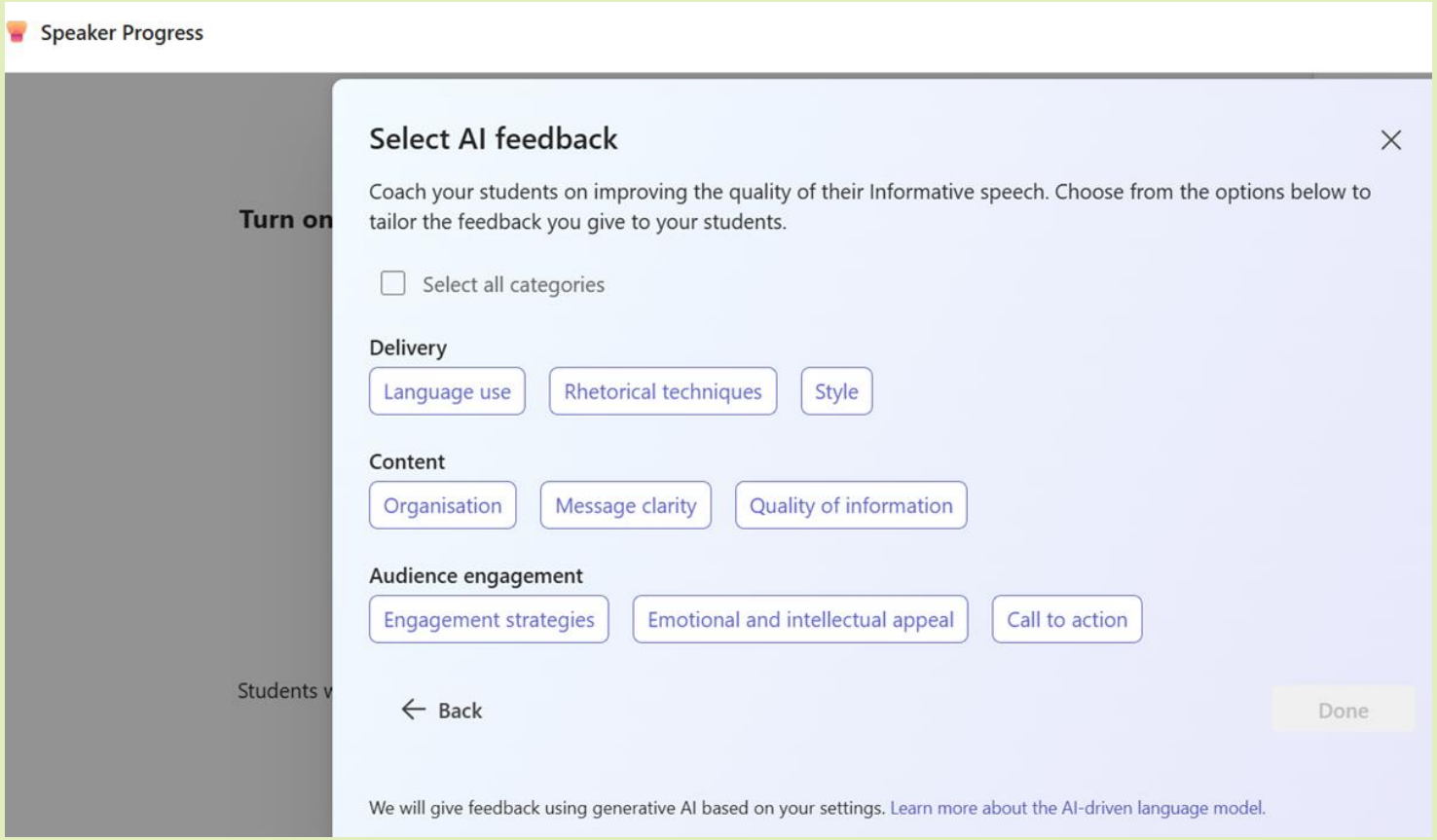
🔍 What the task actually required (very important)

The investigation is specifically about:

> **Use of cobalt-60 to irradiate bananas from Costa Rica**
> Including:
> - **"source of radiation"**
> - **"dose"**
> - **"exposure times"**
> - **"how to test effectiveness"**

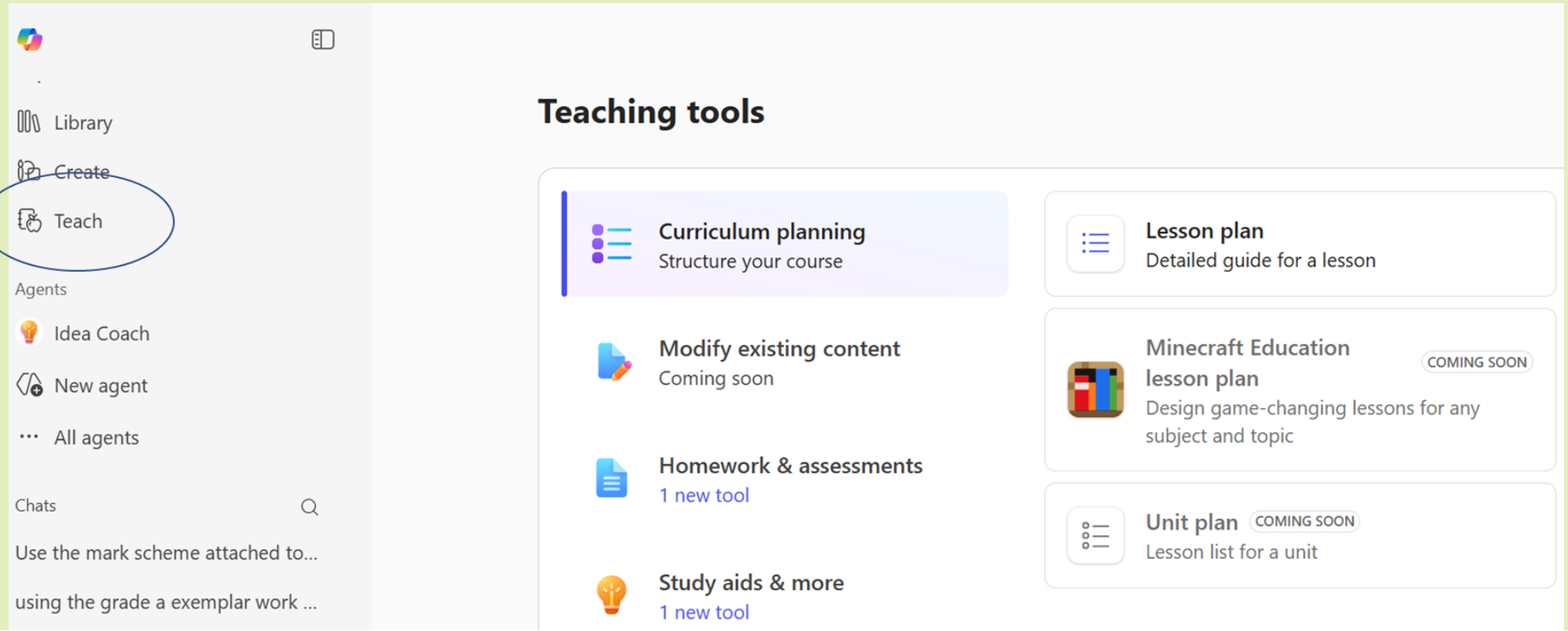
AI with Microsoft

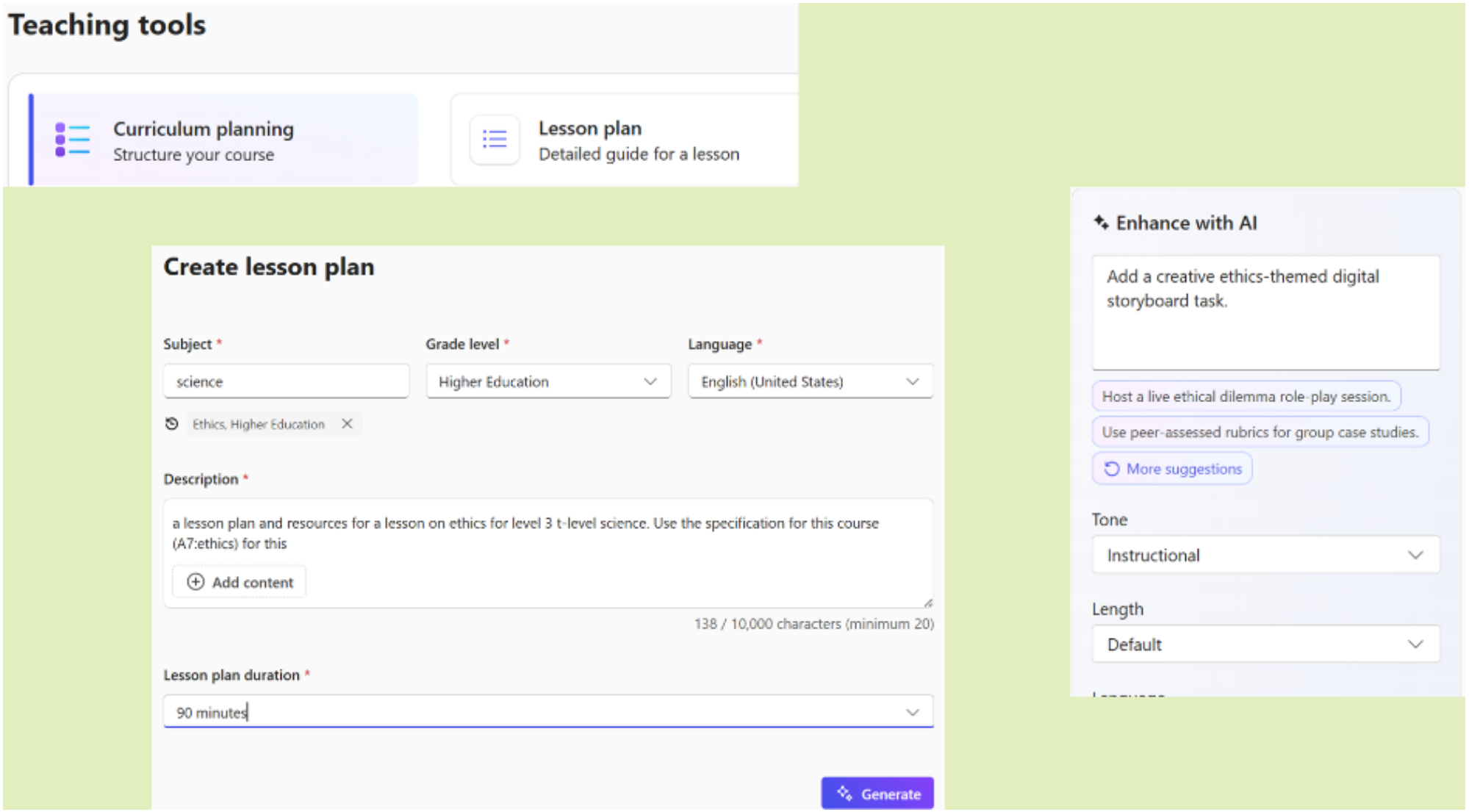
- Learning accelerators



AI with Microsoft

- Copilot

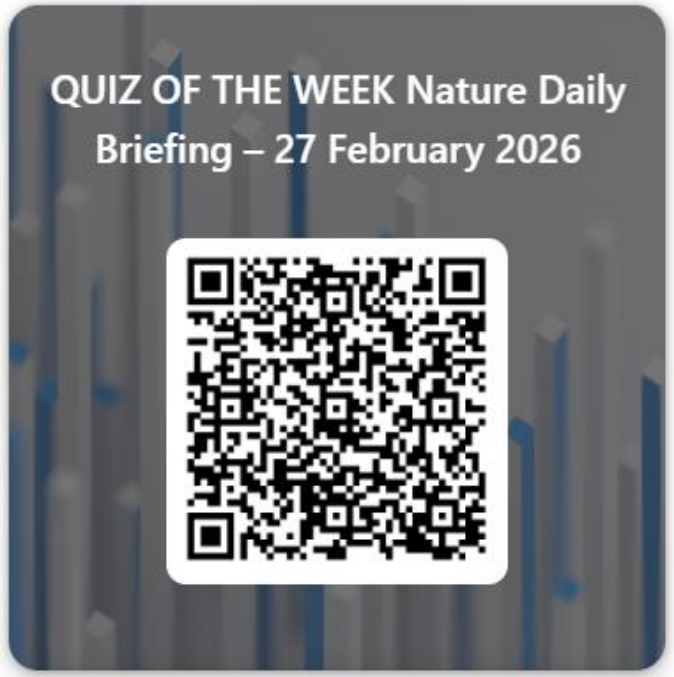




Supporting Metacognition

Challenge in T Level	AI Application	Impact
Jump from GCSE to Level 3	Model paragraph scaffolds	Reduces blank-page anxiety
Dense scientific texts	Simplify then re-extend task	Tiered reading
Exam technique	AO1/AO2/AO3 tagging practice	Visible structure
Revision planning	Personalised revision timetables	Executive function support

Developing Scientific Oracy



nature briefing

Hello *Nature* readers,
Today we explore claims of the first conclusive case of sex 'distortion' in humans, learn that stem cells could treat spina bifida and have fun with the science of Pokémon.

If you enjoy this newsletter, please consider recommending it to a friend or colleague. Click here to forward it by e-mail. Thank you!

Humans' long generation times and low birth rates as well as ethical issues have made 'selfish' genetic elements — which bias their own transmission to future generations whether or not they improve an individual's biological fitness — difficult to spot. (Waltraud Grubitzsch/dpa via Alamy)

[Nature Briefing]

T LEVEL SCIENCE – DISCUSSION WORKSHEET

Evaluative Extended Response Practice

Topic: Stem-Cell Therapies Before Birth

Name: Date: Date:

Teacher:

Learning Objective: To evaluate the poteral benefits and risks of ypp-cell therapies before birth using scientific rezoning and ethical analysis.

PART A – SECURING THE SCIENCE (5 Marks)

Crielc the the fodong tey teme:

Potential Benefit	Why is this advantagous?	Scientific reasoning
Early intervention		
Iintroved reestion		
Retuone plyssse		

Expiain win your anower:

PART B – ANALYSING THE BENEFITS

Compiet the isbic:

- ☑ I have explaned at lest two benefits:
- ☑ I have explaned at lest two risks
- ☑ I have included ethical discssion
- ☑ I have mad balanced judgment

PART A
• Stem
• In ute
• Conge

PART C –
Award
1 mark
1 mark –

T E – I

LEVELS

(5–6)	Clear, balanced evaluation. Detailed benefits and risks. Ethical considerations.
3–4)	Some benefits and risks discused. Limited evaluation.
2)	Basic statements of benefit or risk.

INDICATIVE CONTENT:

Benefits:
Early intervention
Reduced disability
urmas) Tormation
ıume rejection

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Adding Industry Context

- Turn practicals into industry briefs (QC, environmental, pathology roles)
- Simulate employer/inspector feedback panels &questioning
- Create realistic datasets + “messy” data for cleaning /validation
- Generate workplace documentation (SOPs, deviation reports, CAPA, logs)
- Support risk assessment, compliance and multi-audience communication

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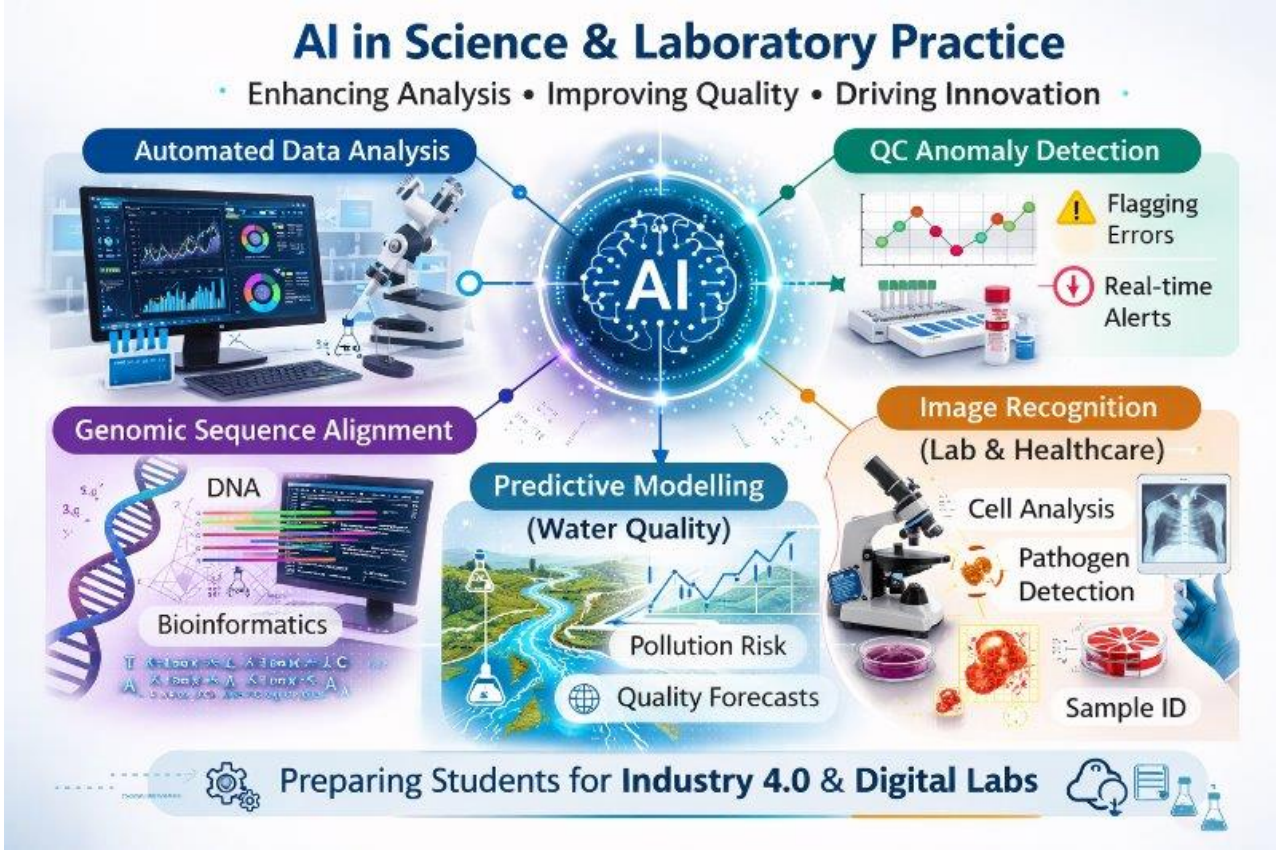
Preparing Students for Industry 4.0



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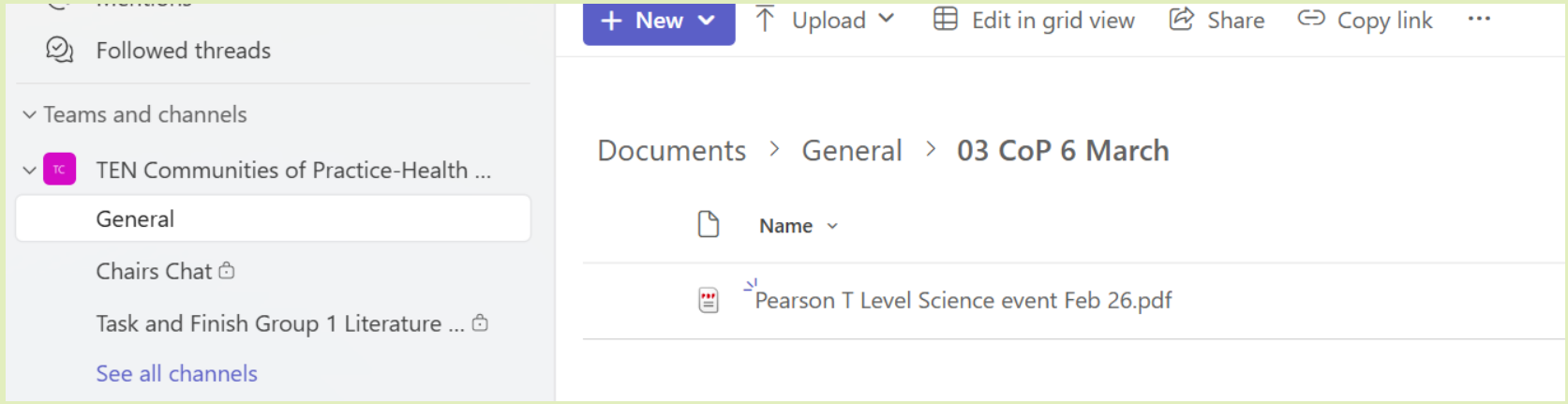
Have a go

- Think of a resource you would like to build/improve on.
- Use this time to create a resource and share with the group and on the CoP *teams: 03 CoP 6 March



*Must be a member of the Teams Channel (email at amy.mark@aoc.co.uk to access)

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Lunch & Networking

Session 2 starts promptly at 13:30pm

Thames Suite

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Welcome Back

Science

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Resources

Stephanie Crane, AoC

Rana ElFarra, North Hertfordshire College

Employer Set Project Literature Review

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Rationale

- Students have not been explicitly taught how to evaluate, synthesise and reference scientific literature, yet the assessment requires these advanced academic skills without prompts or prior structured modelling.
- The assessment creates high cognitive load, requiring time management, critical evaluation of multiple articles, synthesis of evidence and academic writing within strict time constraints.
- Variability in student preparedness, accessibility needs, digital access and teacher confidence highlights the need for clear guidance, scaffolding and worked exemplars to ensure equitable support.

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Resource Introduction & Overview

To support delivery of scientific literature review skills, the following resources will be developed:

- **Teaching notes:** Pedagogical guidance, curriculum links and signposting to supporting external resources.
- **PowerPoint slides:** Student-facing introduction to key skills, with embedded case study and audio tips.
- **Practice worksheet:** Structured framework for guided and independent literature review practice.
- **Answer scaffolding bookmark:** Sentence starters and response structure support (not permitted in assessment).

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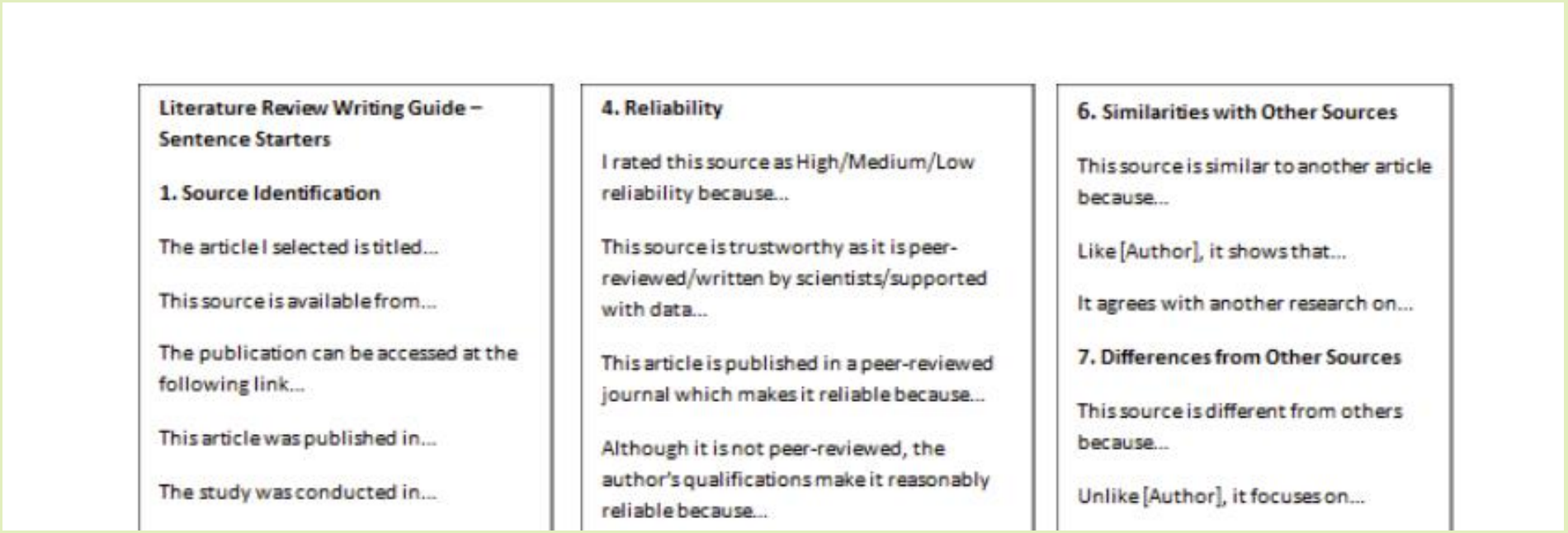
Sentence starter bookmark



Literature Review Writing Guide – Sentence Starters

1. Source Identification

The article I selected is titled...

This source is available from...

The publication can be accessed at the following link...

This article was published in...

The study was conducted in...

4. Reliability

I rated this source as High/Medium/Low reliability because...

This source is trustworthy as it is peer-reviewed/written by scientists/supported with data...

This article is published in a peer-reviewed journal which makes it reliable because...

Although it is not peer-reviewed, the author's qualifications make it reasonably reliable because...

6. Similarities with Other Sources

This source is similar to another article because...

Like [Author], it shows that...

It agrees with another research on...

7. Differences from Other Sources

This source is different from others because...

Unlike [Author], it focuses on...

Please note that these resources are currently in the Editorial and Production stages and are not final or published. Please keep this in mind while reviewing the materials.

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Questions

- **Thinking about your own context, where or how could you see yourself using these resources within your delivery?**
- **What would help you most to successfully embed these resources into your existing practice?**
- **How could these resources support consistency and quality across your route or department?**

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Visual Curriculum Models

Stephanie Crane, AoC

Dr. Alison Ackroyd, Lecturer, MidKent College

Lyndsey Jones, Teacher, Stoke-on-Trent SFC

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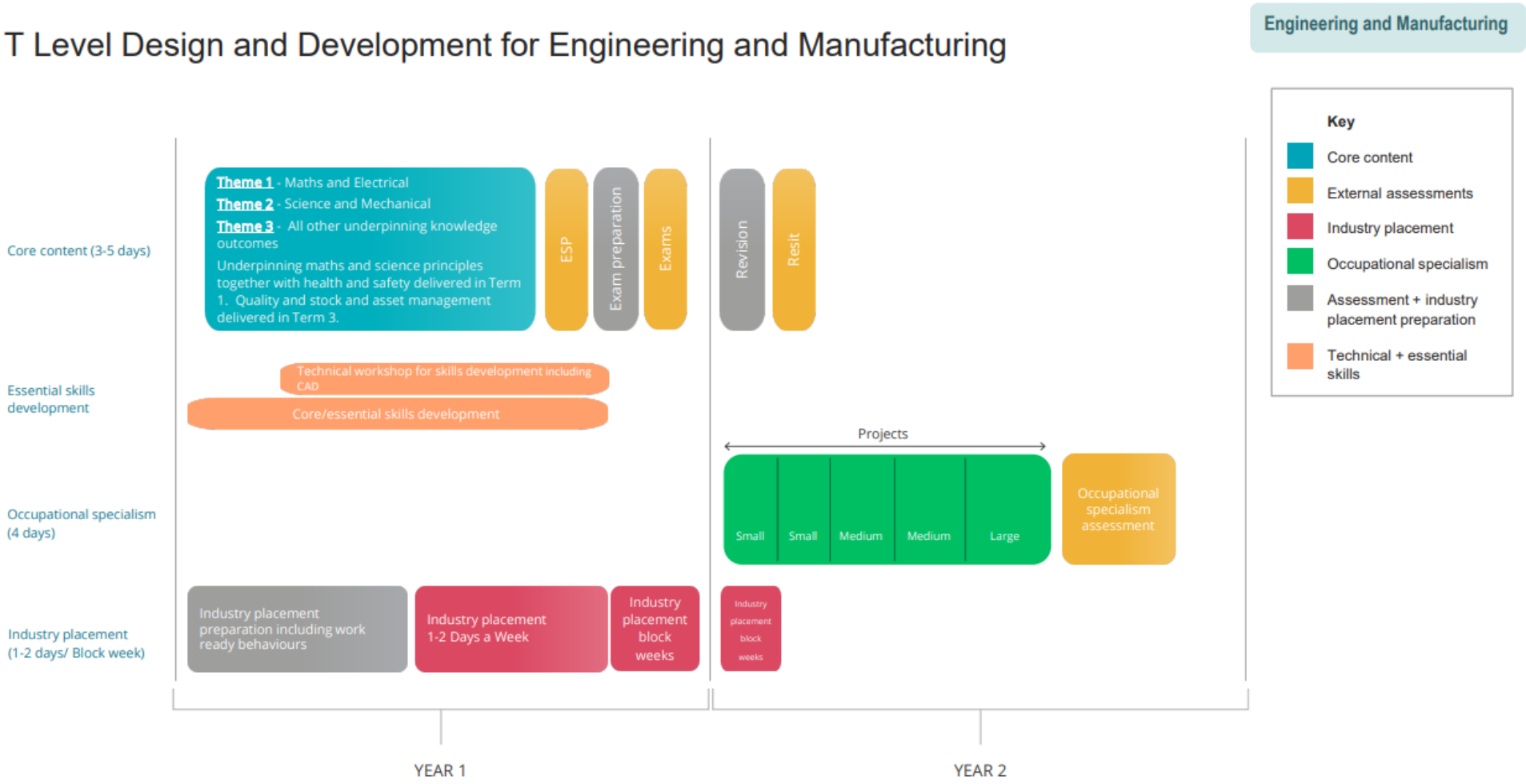
Curriculum Models

Gatsby undertook some work with AoC in 2023/24 to create macro sequencing curriculum models for four T Levels in Construction, Digital, Engineering & Manufacturing, and Health & Science.

For these routes we want to update the models based on changes in delivery and decoupling of core assessments and create an additional document to support the curriculum model.

Curriculum Model Example



Slides to Support Visual Curriculum Plan Activity

- Taken from the Introduction to T Level Science on 17 February. The recording will be available on the Pearson training website soon.

- You can access the full slide deck on Teams: Pearson T Level Science event Feb 26.pdf

  Must be a member of the Teams Channel (email at amy.mark@aoc.co.uk to access)

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Science T Level Components

T-LEVELS

- The weighting between Core and Occupational Specialism (OS) has changed from 40:60 in current Science T Level to 50:50 in Generation 2.

There have been small amendments made to the size:

- Total GLH: 1180 GLH and 1740 TQT.
- Core: 520 GLH and 850 TQT
- OS: Laboratory Sciences 660 GLH and 890 TQT
  Food Sciences 730 GLH and 890 TQT

Pearson

Science T Level Revised Core

T-LEVELS

Core assessment (60%)

- The core assessment design has been changed to reflect three core papers.
- Each paper will have sections that are content based for comparability.
- There will be questions included in each paper to cover the content around working in the science sector.
- The overall assessment time has been decreased.

Component	Minutes	Marks	Percentage of core (%)
Paper 1 Section A B C	105	70	23.4
Paper 2 and 3 Section A, B and C for each paper	80 each (was 5 hours)	55	18.3 18.3
Employer Set Project Externally set and marked	870 (14.5 hours)	108	40

Employer Set Project (40%)

- ESP has been realigned with the OS and reduced to 4 tasks.
- Group task has been changed to reflect practical collaboration which is more representative of science environment.
- Exemplification of skills will be in the specification for Core Skills

T-LEVELS

Key Date Schedule –2026/27 (summer)

Week	Day				
	Monday	Tuesday	Wednesday	Thursday	Friday
1	Spring Holiday 2027				
2		ESP Task 1			
3		ESP Task 2 ESP Task 3			
4	Task 4a (set) Task 4b and 4c				
5	Task 4b and Task 4c				
6			Chemistry core paper		
7	May half term 2027				
8	Biology core paper			Physics core Paper	

Pearson

Key Date Schedule 2027/28 OS/LS T-LEVELS

Week	Day				
	Monday	Tuesday	Wednesday	Thursday	Friday
1	February half term 2028				
2	OS:LS Task 1 & Task 2				
3	OS:LS Task 1 & Task 2			OS:LS Task 3 Set	
4	OS:LS Task 4				
5	OS:LS Task 4				
6	Spring holiday 2028				
7	Spring holiday 2028				
8				OS:LS Task 5 Set	
9		ESP would begin again following same pattern as previously			

Pearson

*Laboratory Science

Curriculum Models

On your tables will be copies of the existing curriculum model and a blank model. Please can colleagues:

- discuss these on your table and update the models as clearly as you can
- add any useful information to the model you think will be helpful, especially for a new teacher wanting to use the model
- include names, emails and provider names on the back of the model(s) identifying who has contributed to these. We'll want to capture this in the information should we need to follow up before publication.

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Supporting Document

On your tables will be an example of the supporting documents for Year 1 and Year 2 of the T Level and a blank version. On the blank versions please can colleagues:

- discuss these on your table and update with the key information as clearly as you can
- add any useful information you think will be helpful, especially for a new teacher wanting to use the documents
- include names, emails and provide names on the back of the model(s) identifying who has contributed to these. We'll want to capture this in the information should we need to follow up before publication.

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Next Steps

The models and documents created today will be given to Gatsby to work with their publishers to create new documents and hopefully published on the Technical Education Networks website.

Please ensure your name, email address and provider are included on the back of the models you have been working on should we need to follow up to clarify any suggestions made.

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Networking & Discussion

Alison Ackroyd and Lindsey Jones

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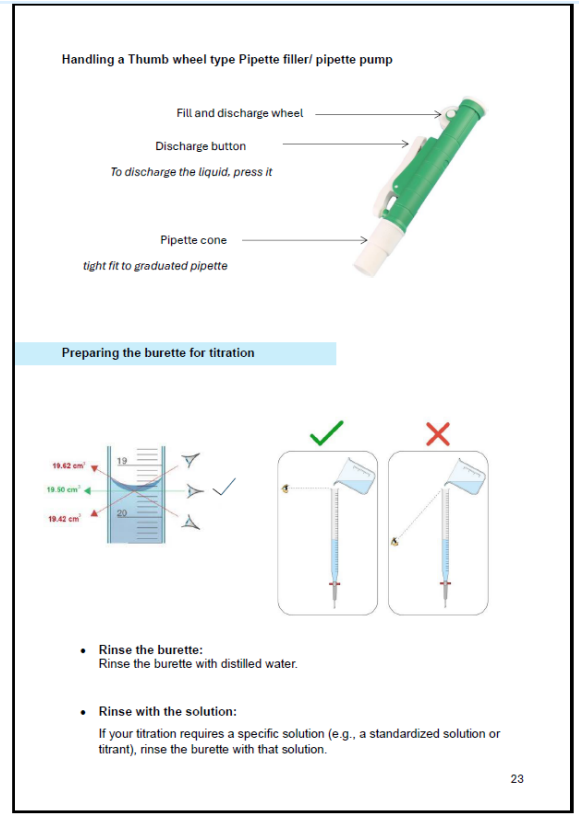
Shared Resource:
Chemistry Practical Guide

Must be a member of the Teams Channel
(email at amy.mark@aoc.co.uk to access)

- A big thank you to Chaminda Bothalage, Reading College (Activate Learning) for agreeing to share this resource which supports practical skills development for both Years 1 and 2 of study.

- **Content includes:**
  - Safety requirements, equipment and PPE
  - Step-by-step practical instructions
  - Supporting colour images and diagrams



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Shared Resource:
Chemistry Practical Guide

Reading College (Activate Learning) are keen to collaborate on a guide for Biology and Physics.

Please email for more details:
amy.mark@aoc.co.uk

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Network/Discussion

- Generation 2
- Preparation timeliness and facilities
- Lab setup and optimisation
- Funding opportunities and allocation
- Timetabling solutions
- Embedding industry practice into teaching
- Innovative and creative approaches

5 minutes on sugar paper:

Add any questions you have about these topics for the community

OR…

Strategies you could share (add your name)

Dates for your diary

Industry Associates Training Programme and Event

29th April 2026

Gatsby have an in-person event in London for FE Leaders/Teaching and Learning leads and stakeholders to share findings and implementation of the Industry Associates training programme pilot

Please contact FEworkforce@gatsby.org.uk for more details or speak to Rory on the Gatsby stand.

Next Community of Practice meeting (online) 25th June 2026 at 1pm:

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Route Reflections & Next Steps

Before you leave today

We would really value your feedback before you head off. It takes just two minutes and helps us improve future events.

Please scan the QR code now to share your feedback.

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Thank you for attending

Teams Channel Support: amy.mark@aoc.co.uk

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