

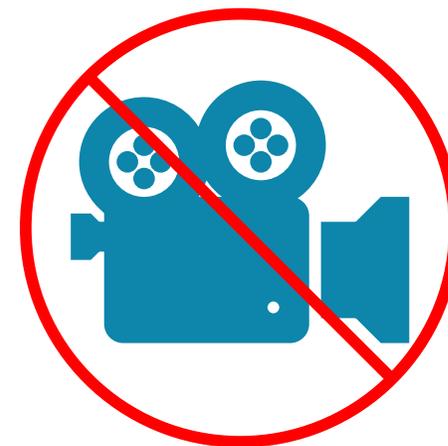
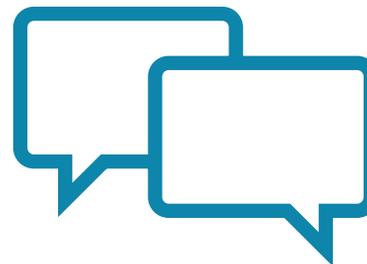


Using Artificial Intelligence (AI) for developing Applied Learning Task (ALT) rubrics

Collaborative

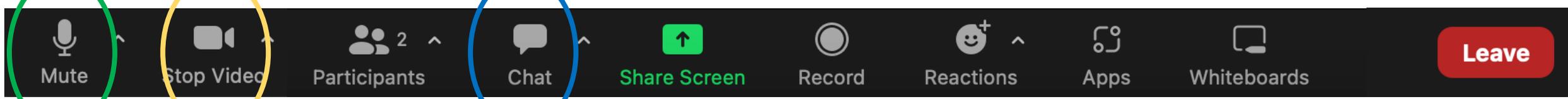
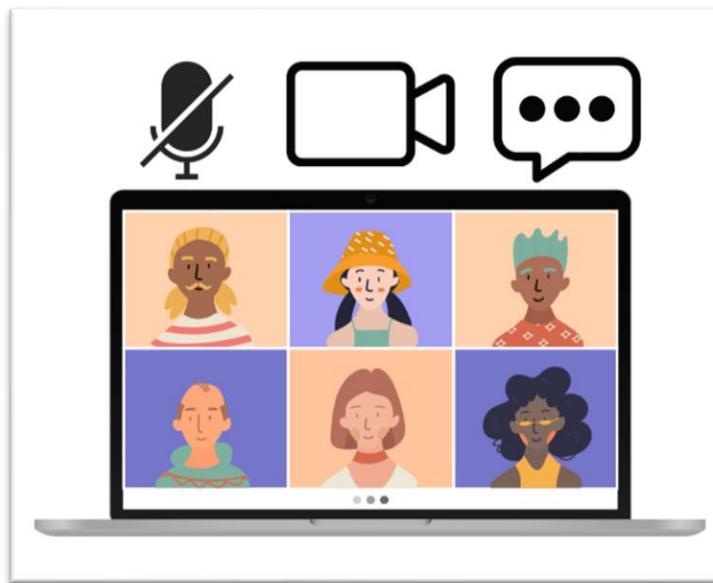


Before we begin...





Zoom Functions/Breakout Rooms





Schedule

<p>6:00 – 6:45</p>	<p>Welcome</p> <p>What is a rubric?</p> <p>Introduction to AI</p>
<p>6:45 – 19:30</p>	<p>Develop ALT rubrics</p>



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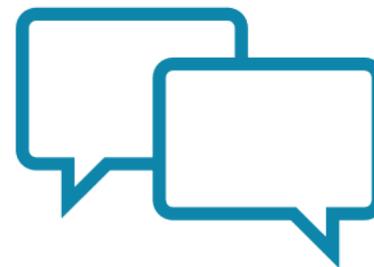
Supporting the Professional
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Rubrics

Developing a shared understanding of a rubric



What is a rubric?





What is a rubric?

A rubric is an assessment tool that includes:

- **criteria**
- **descriptions of performance levels,**

used to evaluate work and provide feedback that is consistent and transparent.





Why use a rubric?

For students:

Rubrics clarify expectations for an assignment, help them understand how their work will be graded, and provide a guide for self-assessment and improvement.

They are **not** designed to compare students against each other, but to compare a student's performance to the criteria.

For teachers:

They promote consistency, fairness, and reliability in grading, making it easier to assess qualitative tasks and provide clear, objective feedback.

Simple rubric for a reflective practice task:

	<i>Novice</i>	<i>Competent</i>	<i>Proficient</i>
Reflection	Little or no reflection on how this relates to your own experience	Some good reflection on how this relates to your own experience	Some real insight into how this has transformed or could transform your own practice
Informed	Little or no mention of research (formal or informal)	Reference to research, online resources or current good practice	In-depth consideration of research, online resources or current good practice
Adds Value	Repeating more-or-less what was discussed in lectures	Adding something new to the discussion	Brings new insight to the topic



Key components of a rubric

Criteria: The specific aspects of the work being evaluated

Performance levels: A scale that indicates the quality of performance for each criterion (e.g., excellent, good, fair, poor)

Descriptors: Detailed descriptions of what constitutes each level of performance for each criterion.

Scoring strategy: A method for calculating the final grade based on the performance levels (though some rubrics are used for non-graded feedback).

Simple rubric for a reflective practice task:

	<i>Novice</i>	<i>Competent</i>	<i>Proficient</i>
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For further information on rubrics

Assessment Rubrics

A rubric is a descriptive tool for determining the level of performance or quality of a piece of work.

A rubric consists of two dimensions, pre-established performance criteria and performance levels (with or without associated grades), in which each level or grade is described to contrast it with the performance of other levels.

	Performance levels, e.g. Poor – adequate – good – excellent
Performance criteria, e.g. Structure Referencing Language	

A rubric is more than just a rating scale, because a rubric will describe the *differences* between performance at each level. Detailed examples are provided below.

Why Use Rubrics?

Rubrics help clarify the expectations you and others have for student performance by providing detailed descriptions of those expectations.

Prior to assessment submission, rubrics can be used as learning aids, informing students in advance how their work or demonstration of learning outcomes will be assessed.

When used without grades, rubrics are an excellent way to provide timely formative feedback.

Well-designed rubrics, when used for grading will help increase validity and reliability.

Guidelines for Developing Rubrics

Ideally, rubrics will be developed at the same time as the assessment.

The main components of a rubric are the criteria by which the task will be judged, the performance levels or available grades, and a description of the expected performance for each criterion in order to achieve a grade (examples with and without grades are provided below).

It can be difficult at first to describe the features of an adequate performance versus a good performance for a given criterion. There are a couple of suggestions for doing this:

1. Describe the ideal piece of work (outstanding), possibly from a model answer;
2. Identify common errors that fall short of ideal ((very) good);
3. Describe the worst case (poor);

4. Identify redeeming factors that make an example better than the worst case (adequate).

Or

1. Use samples of existing work and sort them into piles corresponding to levels of quality;
2. Pick out the key points that cause them to be in a particular pile or the common characteristics of each pile.

The level of detail given for descriptors is a matter for the designer. Considerations will include who the rubric is for, e.g. student, external/independent markers, module owner, etc., and of course, the nature of the assignment or exam. There are arguments for and against both very detailed rubrics and rubrics with little detail.

Try to write descriptors that focus on positives as opposed to negatives – i.e. what's there in the piece of work as opposed to what's missing (see example rubric below)

It is best not to use the titles with the word 'average' in them, example, 'below average'. Rubrics are not designed to compare students against each other, but to compare a student's performance to the criteria.

Consider

It can be useful to co-develop rubrics with students. You may start with a blank rubric or one that is partially developed. Discussing what different levels of achievement might look like in an assessment can be an incredibly enriching experience for both staff and students. For students, they gain a better understanding of how they can demonstrate achievement. For staff, they can better see how students can misinterpret the assessment brief or fail to see what is important in an assessment task.

Rubrics on Canvas

Canvas supports the use of assessment rubrics both for on and offline assignments.

Examples

Levels of performance (labels):

- basic-proficient-advanced;
- needs improvement-meets expectations-exceeds expectations;
- seldom-sometimes-usually-often;
- poor-good-excellent-superior;
- beginning-basic-proficient-advanced-outstanding

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Co-create rubric with students?

Examples:

- Simple rubric for a reflective practice task
- A rubric for communicating criteria to students for a teamwork exercise
- Generic marking scheme for an essay



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Using Artificial Intelligence (AI) to support development of ALTs rubrics



What is AI?

AI refers to machine-based systems that can, given a set of human-defined objectives, make predictions, recommendations, or decisions.

AI systems interact with us and act on our environment, either directly or indirectly. Often, they appear to operate autonomously and can adapt their behaviour by learning about the context.

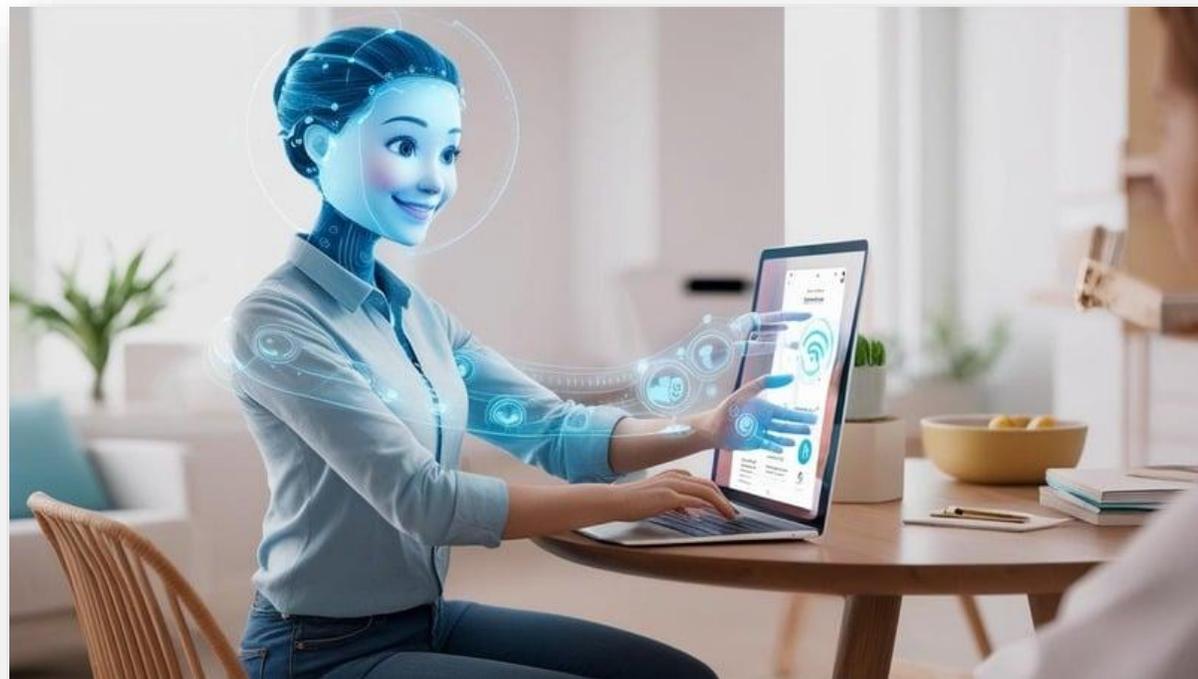
UNICEF, 2021 p. 16





Discussion – AI in our Lives

How does AI support your everyday life?



5 mins





Generative AI

Generative AI creates new original content, including text, images, audio and beyond.

Large Language Models (LLMs) are a type of generative AI that understand and generate human like text





Benefits and Limitations

Benefits

Generating resources

Supporting administrative tasks

Data analysis and insights

Limitations

Bias: computational and human

Hallucinations

Explainability

Inability to think critically

Lack of personal experience

ARTIFICIAL INTELLIGENCE
Five Considerations for Teacher Use

INTLEACHT SHAORGA
Cúig Bhreithniú d'Úsáid an Mhúinteora

- ETHICAL DATA USE**
Is the tool GDPR compliant? Do not use personal or student data.
ÚSÁID SONRAÍ EITICIÚIL
An bhfuil an uirlis comhlíontach le RGCS? Ná roinn sonraí pearsanta nó sonraí dataí.
- EVIDENCE OF IMPACT**
Will the AI tool improve learner outcomes or experiences? Are there examples or case studies?
FIANAISE DE THIONCHAR
An gcuirfidh an uirlis IS le torthaí foghlama nó eispéiris foghlama? An bhfuil samplaí nó cás-staidéir ann?
- ACCURACY OF OUTPUT**
Have you checked the output against other sources before sharing with students?
CRUINNEAS AN ASCHUIR
An ndearna tú comparáid idir an aschur agus foinsí eile sular roinn tú é le dataí?
- POLICIES & GUIDELINES**
Does the tool adhere to the relevant policies and guidelines of your school?
POLASAITHE AGUS TREOIRLINTE
An gclóíonn an uirlis leis na polasaithe agus treoirlinnte cuí i do scoil?
- BIAS AWARENESS**
What steps are you taking to identify and mitigate biases in your AI tools?
FEASACHT AR CHLAONTACHT
Céard iad na céimeanna gur féidir a ghlacadh ar mhaithe le claontaí a aithint a mhaolú le do chuid uirlisí IS?

WEBWISE AI HUB
webwise.ie/ai-hub/

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WEBWISE
webwise.ie/ai-hub/

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Useful resource



What are the benefits for educators?

Time-Saving on Administrative Tasks: AI can automate time-consuming administrative tasks like grading, attendance tracking, and data management.

Generating Educational Resources: AI can assist in generating education materials and resources, helping teachers identify new and relevant content.

Provide Data Analysis and Insights: AI systems can quickly analyse large amounts of data, and provide insights into student performance and progress, enables teachers to identify areas for support and improvement.



AI Tools



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Khanmigo

Can you think of others?



Oide Technology in Education

AI IN SCHOOLS HUB

+ Key Supports

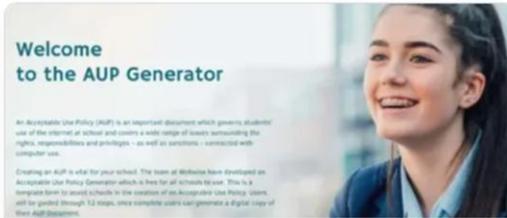
VIEW ALL KEY SUPPORTS ▶



AI for Schools

This short online course provides teachers and school leaders with an understanding of AI.

[AI FOR SCHOOLS COURSE ▶](#)



Welcome to the AUP Generator

An Acceptable Use Policy (AUP) is an important document which governs students' use of the internet at school and covers a wide range of issues surrounding the rights, responsibilities and privileges – as well as sanctions – associated with computer use.

Creating an AUP is what for your school. The team at Webwise have developed an Acceptable Use Policy Generator which is free for all schools to use. This is a template form to assist schools in the creation of an Acceptable Use Policy. Users will be guided through 72 steps, once completed users will generate a digital copy of their AUP document.

Webwise AUP Generator

Update your school's AUP with the newly updated AUP Generator from Webwise, now incorporating the use of AI

[AUP GENERATOR ▶](#)



An Roinn Oideachais agus Oige
Department of Education and Youth

Guidance on Artificial Intelligence in Schools

New! Guidance on AI in Schools

Read the new Guidance on Artificial Intelligence in Schools from the Department of Education and Youth.

[GUIDANCE ON AI IN SCHOOLS ▶](#)





Prompting using the RASE Framework

R ROLE

Give the GenAI/LLM a role and provide a context

A ASK

Clearly define the task that you want it to perform

S SPECIFIC

Be specific about format, length, style etc required

E EXPERIMENT

Refine your prompt. Ask the GenAI/LLM for suggestions



ALWAYS CHECK FOR ACCURACY OF OUTPUT AND SUITABILITY.



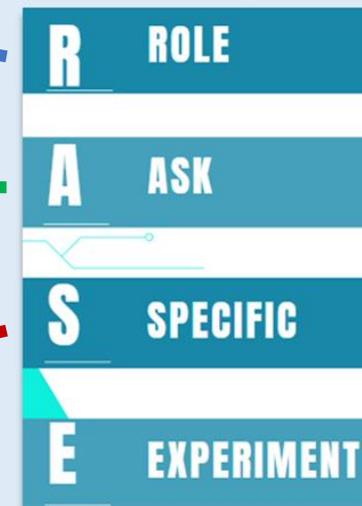
Developing a prompt

I am a teacher of Leaving Certificate Computer Science at post-primary level in the Republic of Ireland.

Can you create a rubric on ALT 4. It should align with the learning outcomes of the Leaving Certificate Computer Science specification.

The rubric should reflect the success criteria (The language should be student-friendly, and the rubric should be in a table format).

Use the RASE approach to frame your prompts



ALWAYS CHECK FOR ACCURACY OF OUTPUT AND SUITABILITY.



The Response

Based on the *Leaving Certificate Computer Science Specification (NCCA, updated edition)*, **Applied Learning Task 4 (ALT 4) — Embedded Systems** — focuses on the design and implementation of computer hardware and software that interact through sensors and digital inputs/outputs.

Below is a **student-friendly rubric** for ALT 4 aligned with the specification's **learning outcomes (3.11–3.14)** and reflecting the **design process** (Investigate, Plan, Design, Create, Evaluate, Document).



ALT 4: Embedded Systems Rubric

Design Process Phase	Learning Outcomes (aligned to 3.11-3.14)	Excellent (High Achievement)	Good (Moderate Achievement)	Emerging (Basic Achievement)
Investigate & Plan	<ul style="list-style-type: none">• Understand how sensors, actuators, and microcontrollers work together.• Identify the purpose and requirements of an embedded system.	Clearly identifies a real-world problem and proposes a relevant embedded system solution; fully explains sensor and actuator functions with justified choices.	Identifies a suitable problem and outlines an appropriate solution; provides some explanation of sensors and actuators used.	Provides a limited or unclear problem statement; minimal understanding of sensors/actuators.
Design	<ul style="list-style-type: none">• 3.14 Design automated applications using embedded systems.• Represent system logic using diagrams or flowcharts.	Produces a clear, detailed design with diagrams or flowcharts; demonstrates logical sequencing and innovation in system design.	Produces a functional design with some supporting diagrams; demonstrates reasonable logic and organisation.	Produces an incomplete or unclear design; limited understanding of logical structure.
Create (Implementation)	<ul style="list-style-type: none">• 3.11 Use and control digital inputs and outputs within an embedded system.• 3.12 Measure and store data returned from analogue inputs.• 3.13 Develop a program that uses digital and analogue inputs.	Successfully programs and integrates digital/analogue components; code is efficient, well-structured, and tested; embedded system performs reliably.	Completes a working embedded system using digital and/or analogue components; minor issues with code structure or testing.	Produces a system that partly works or relies on significant teacher support; code has major errors or gaps.
Evaluate & Refine	<ul style="list-style-type: none">• Test, debug, and refine the system based on data and user feedback.	Systematically tests and refines code using data; identifies strengths and areas for improvement; applies debugging effectively.	Tests and refines code with some evidence of improvement; demonstrates partial understanding of debugging.	Limited evidence of testing or refinement; relies on trial-and-error without analysis.
Document & Present	<ul style="list-style-type: none">• Report on development and link design decisions to learning outcomes.	Produces a clear, concise, and reflective report linking all stages of the process and learning outcomes; communicates technical ideas confidently.	Produces a report covering main stages; some reflection and technical explanation present.	Produces a brief or incomplete report; minimal reflection or unclear technical explanation.



Student Success Criteria (Student-friendly summary)

- ✓ I can explain what problem my embedded system solves and how sensors/actuators help.
- ✓ I can design and draw how my system will work before coding.
- ✓ I can program my system to collect and use data from sensors and outputs.
- ✓ I can test and improve my code based on results or feedback.
- ✓ I can write or present a short report that explains what I made and what I learned.

Would you like me to adapt this rubric for **Ordinary Level**, **Higher Level**, or make a **combined version** showing differentiation across both levels (as per Table 2 of the specification)?



Use the RASE approach to frame your prompts



ALWAYS CHECK FOR ACCURACY OF OUTPUT AND SUITABILITY.

How could we experiment with this response?



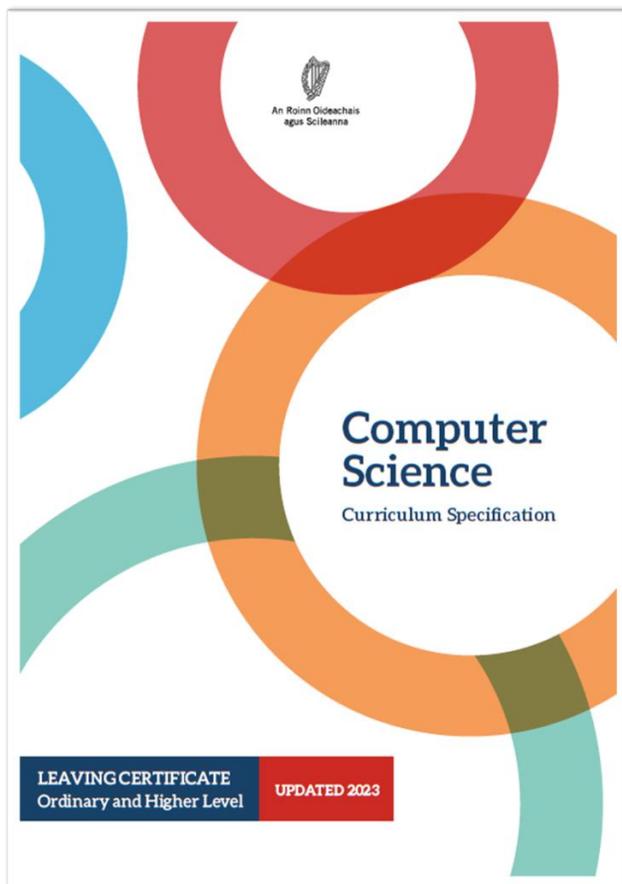
Other Considerations

Do we include:

- Strategies and resources to support students with dyslexia, dyspraxia and MGLD?
- Extending the rubric for a high-performing student?



Helpful resources



Can you suggest others?



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Breakout Rooms

Developing and Sharing our resources



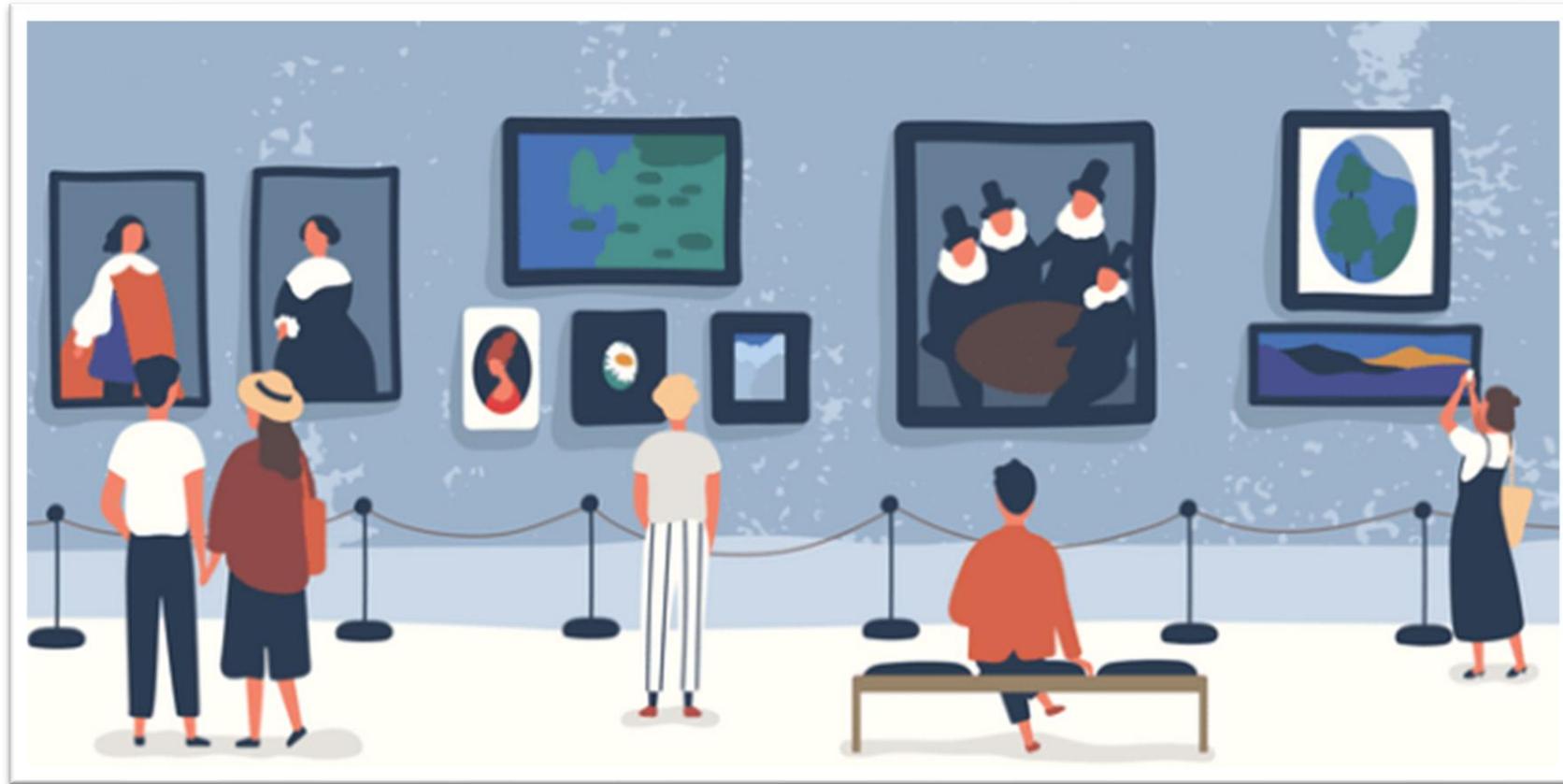
Activities

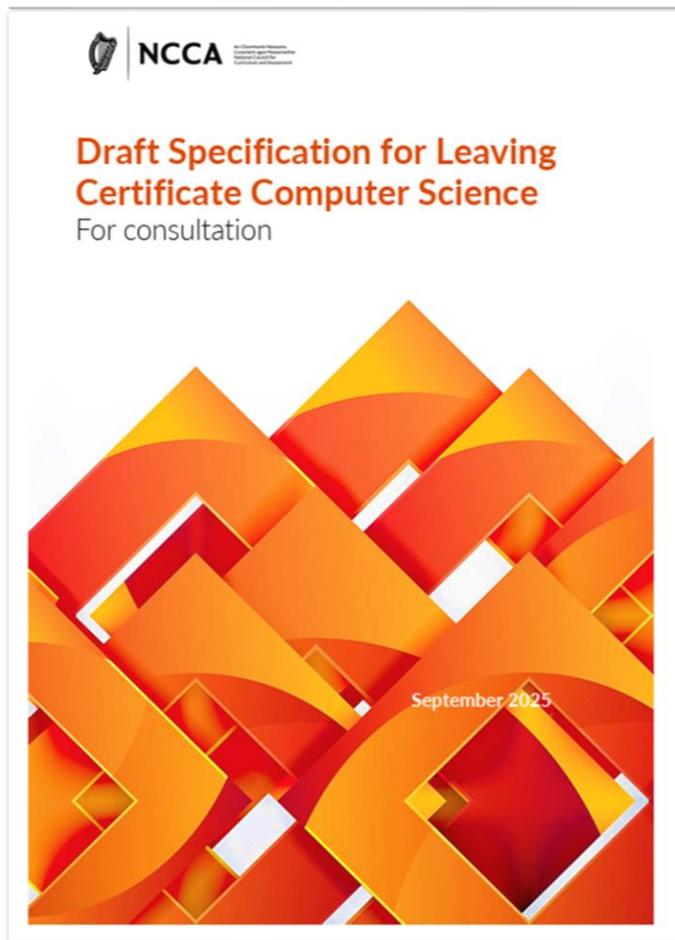
In our breakout rooms:

- If one participant could share their screen
- Choose an ALT
- Develop a rubric for the chosen ALT
- Give feedback on the resource developed to rest of participants



Feedback - Sharing our Resources

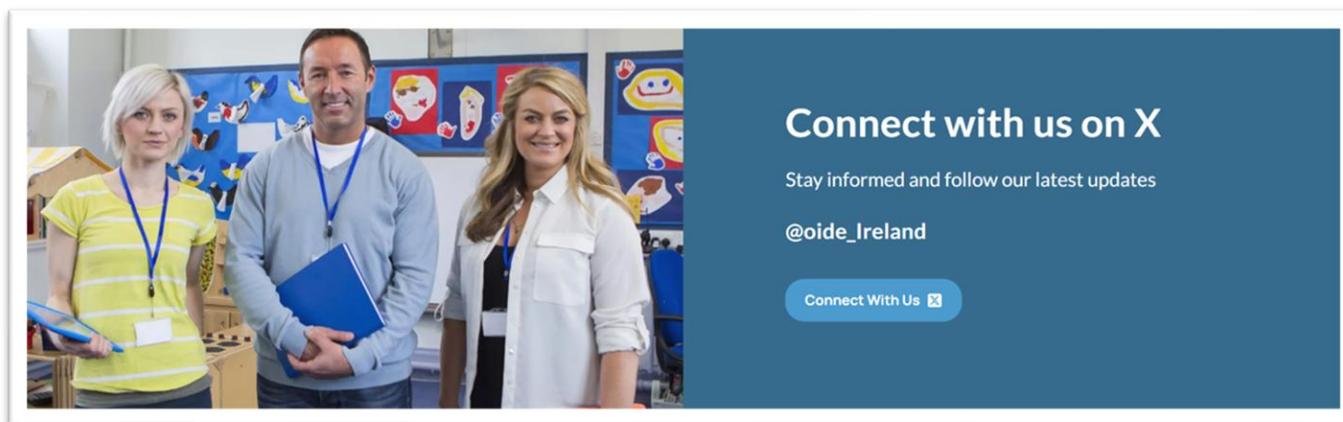






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Sign up to mailing list

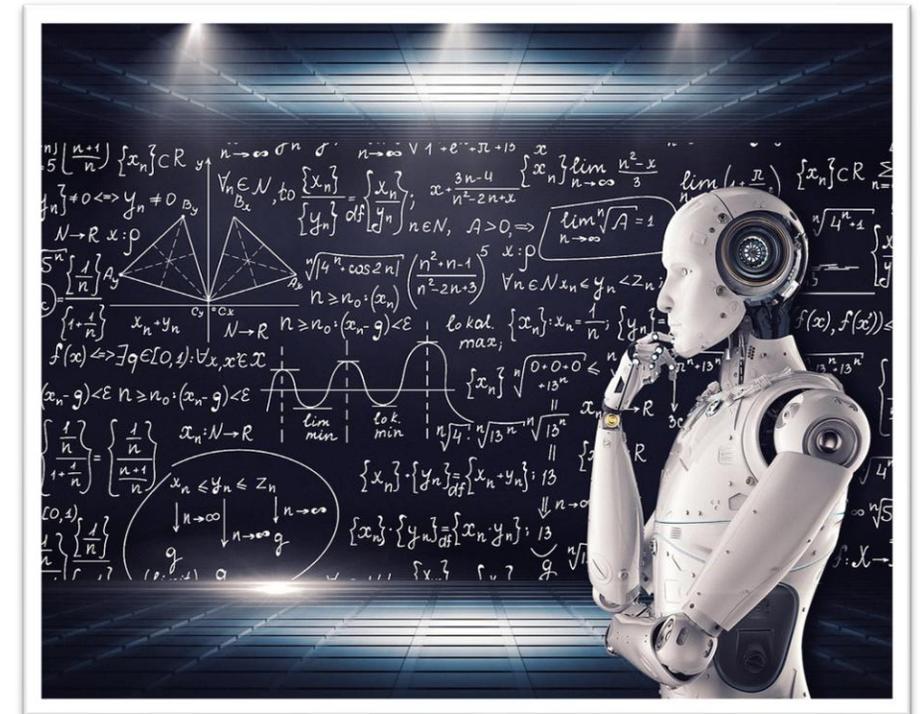




Reflection

In what ways could AI support you in developing LCCS resources?

What limitations or biases did you notice in AI-generated resources, and how would you address them?





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