



UNIVERSITY OF AMSTERDAM

Teaching &
Learning
Centre

Card set

Active Learning in the Classroom

Part two

About this card set

This card set offers teaching techniques to use in higher education. It is the follow up to the card set 'Active Learning in the Classroom' issued in 2023 by UvA Teaching & Learning Centres (TLC).

Following the first card set, this new edition includes fresh chapters and teaching techniques aligned with relevant themes in 2026 and diverse expertise across the University of Amsterdam (UvA).

This set was developed and published by UvA Teaching & Learning Centres (TLC), a network of seven faculty teams and one central team within the UvA. Our mission is to inspire excellence in teaching at the UvA by supporting educators in educational innovation and professional development.

TLC encourages the use of these activities to promote engagement and foster an enjoyable learning environment. This updated collection is the result of a university-wide collaboration with various Special Interest Groups (SIGs), the GenAI Living Lab team, and The Transition Makers Toolbox, bringing together diverse expertise from across the UvA. It offers a range of activities designed for both experienced and new instructors working in a variety of educational contexts.

For more information about the TLC, SIGs, and teaching resources:
tlc.uva.nl | tlc.uva.nl/activelearning

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Card set goals

The aim of this card set is to inspire you to use new activities in your course or class.

The goal is not to prescribe a one-size-fits-all solution, but rather to provide a wide-ranging overview of activities so you can choose the ones that best suit your teaching.

The activities fall into 6 categories, based on your didactic goal:

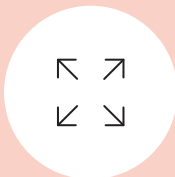
- 1. AI in education**
- 2. Reflection**
- 3. Affective learning**
- 4. Teaching large groups**
- 5. Quantitative education (STEM)**
- 6. Intercultural classroom**

The bottom of each card shows how long it takes to prepare the activity, how many students it is suitable for, and the cognitive level it is aimed at (Bloom's taxonomy).

**Preparation
time**



**Group
size**



**Cognitive
level**





Card set

Contents

1

AI in education

2

Reflection

3

Affective learning

4

Teaching large groups

5

Quantitative education (STEM)

6

Intercultural classroom

AI in education

This category develops students' understanding and critical use of AI within a subject-specific context. Students learn to evaluate AI outputs, recognize strengths and limitations, and apply their own reasoning. They practice spotting errors, refining AI-generated work, and reflecting on ethical and responsible use. The focus is on active, collaborative learning that builds both subject expertise and AI literacy.

These activities have been carefully selected by the Living Lab AI team. If you are interested in more support on this topic, you can check out the TLC webpage for more pedagogical tools:



1

AI in education

- A** Fake or fact? AI detectives
- B** AI manifesto
- C** Argue with AI:
Debate or socratic conversation
- D** AI scenario builder: What If...?
- E** The human touch
- F** AI & alternative reasoning

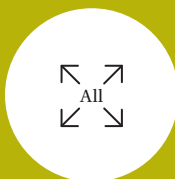
Fake or fact? AI detectives



**Preparation
time**



**Group
size**



**Cognitive
level**



1A

Fake or fact? AI detectives

Materials

Pre-generated AI texts &
Authentic texts, Worksheet or digital
scoring form, Access to UvA AI tool

Time

60 minutes

Activity Type / Goal

To build students' AI literacy by engaging them in critical evaluation of AI-generated texts, fostering awareness of how AI produces information and how to question its reliability.

Description

Working in teams, students analyse a set of short texts related to the course content. Some texts are written by humans, while others are generated by an AI tool. Their task is to determine which texts are authentic and which are AI-generated.

To support their decisions, students use reasoning, fact-checking strategies, and source verification. Throughout the activity, they reflect on how AI constructs language, which patterns or weaknesses may appear, and how their own subject knowledge helps them identify inconsistencies, errors, or superficial reasoning. The focus is not only on identifying AI-generated texts, but on articulating why they believe a text was produced by AI.

Why does this activity work?

It uses curiosity, collaboration, and competition to engage students. Connecting texts to course content highlights AI limitations, fostering critical thinking and AI literacy in an authentic, practice-oriented, and discipline-relevant way.

Tips

Have students generate AI texts, justify their choices, and focus on reasoning. Use recent or slightly flawed AI-generated texts to increase realism and challenge in the activity.

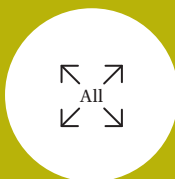
AI manifesto



**Preparation
time**



**Group
size**



**Cognitive
level**



1B

AI manifesto

Materials

Access to UvA AI tool, Optional preparation for students:
Complete the e-learning on responsible use of GenAI

Time

45 minutes.

Activity Type / Goal

Creating a joint GenAI Manifesto that captures how students and lecturers of a course work with GenAI technologies, including guidelines for applications and ethical use.

Description

Co-create a shared manifesto for ethical GenAI course use.

The activity begins with a brief introduction explaining the purpose of the session and the importance of a GenAI manifesto. Students work in small groups (3–4) to discuss issues such as ethics, privacy, data use, transparency, and responsibility, and identify unacceptable uses of GenAI while proposing concrete guidelines.

Groups share their ideas plenary. The lecturer and students then jointly draft a course-specific manifesto, written live on screen using clear statements (e.g., “We believe...”). The manifesto is posted on Canvas, and plans are made for revisiting it. Coordination with programme colleagues is recommended.

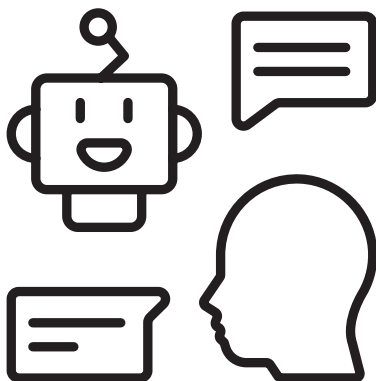
Why does this activity work?

By co-creating shared guidelines, students actively reflect on the implications of GenAI use and develop a sense of ownership over agreed norms. This collaborative process increases transparency, motivation, and adherence, while supporting ethical awareness and responsible decision-making.

Tips

Coordinate with colleagues to align GenAI expectations across courses or within a programme

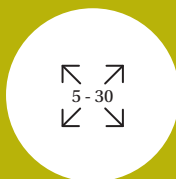
Argue with AI



**Preparation
time**



**Group
size**



**Cognitive
level**



1C

Argue with AI

Materials

Access to UvA AI tool and debate statements

Time

45 - 60 minutes.

Activity Type / Goal

To strengthen critical argumentation skills by having students debate with AI and then reflect on the quality, strengths and weaknesses of AI-generated arguments.

Description

Students receive a controversial or open-ended statement related to the course content. First, they independently formulate arguments either in favour of or against the statement, drawing on their subject knowledge. Next, they ask the AI tool to generate counterarguments.

In small groups, students analyse the AI-generated arguments and discuss their quality: Are the arguments well-reasoned? Are they superficial, biased, incomplete, or factually incorrect? Based on this analysis, students revise and strengthen their own arguments, explicitly addressing weaknesses revealed by the AI output. The activity can conclude with a short plenary discussion comparing human and AI reasoning.

Why does this activity work?

Comparing their arguments with AI-generated ones helps students recognize strong reasoning. The activity highlights AI's strengths and limitations while reinforcing the value of subject knowledge, critical judgment, and careful, evidence-based argumentation.

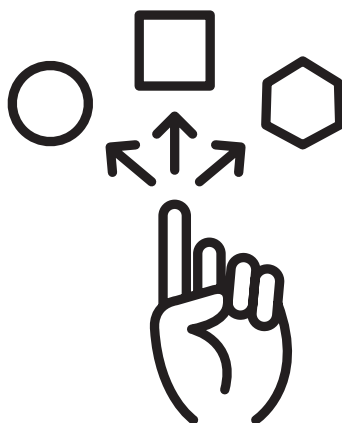
Tips

Rotate AI roles to support or oppose students.

Use a fixed Socratic prompt.

Students exchange position statements and evaluate which argument is stronger and why.

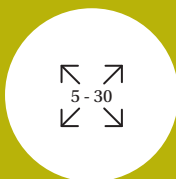
AI Scenario Builder



**Preparation
time**



**Group
size**



**Cognitive
level**



1D

AI Scenario Builder

Materials

Prompts with “What if” questions connected to the course content

Time

30 - 45 minutes.

Activity Type / Goal

Students learn to think critically by exploring alternative scenarios generated by AI.

Description

Students use an AI tool to generate provocative “what if” scenarios related to the course content (for example: *What if privacy laws did not exist?* or *What if exams were entirely graded by AI?*). Working in small groups, students first identify the key changes and assumptions implied by the scenario.

They then analyse the short- and long-term consequences, mapping potential risks and opportunities from multiple perspectives. Based on this analysis, groups develop possible responses, strategies, or policy choices to deal with the situation. Each group presents its reasoning and conclusions to the class, followed by a brief discussion comparing different approaches.

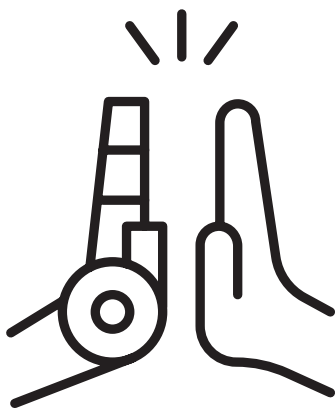
Why does this activity work?

This activity sparks imagination and makes abstract theory tangible. Applying knowledge to extreme or unexpected scenarios deepens conceptual understanding and enhances students’ critical reasoning about uncertainty, complexity, and novel situations.

Tips

Let students generate their own “what if” scenarios using AI to increase ownership and relevance

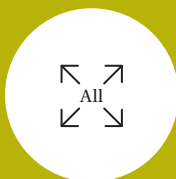
The human touch



**Preparation
time**



**Group
size**



**Cognitive
level**



1E

The human touch

Materials

Access to the UvA AI tool,
A set of AI-generated texts

Time

40 - 60 minutes.

Activity Type / Goal

To help students see how AI writes by deconstructing, improving, and rewriting AI-generated texts. Students learn to recognize typical AI patterns (such as repetition, false certainty, or lack of nuance) and practice how to refine AI output into academic or professional-quality writing.

Description

Phase 1: Analysis

Students critique a short AI-generated text, highlighting:
Vague or overly general statements. Factual errors or unsupported claims.
Repetitive, cliché, or predictable phrasing. Weak reasoning or missing counterarguments.

Phase 2: Editing

Students rewrite the text to improve clarity and precision. They strengthen arguments by adding nuance, concrete examples, and evidence where needed.

Phase 3: Reflection

Students compare the original and revised versions to discuss: Defining characteristics of AI writing. AI strengths and limitations. The specific human judgment and subject expertise required to improve the content.

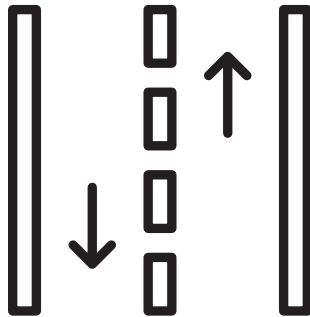
Why does this activity work?

By working “from the inside out” to improve AI-generated texts, students strengthen academic writing, recognize AI patterns, and appreciate human judgment. The activity combines analysis, creativity, and reflection, supporting core AI literacy skills.

Tips

Use AI texts with subtle flaws. Students improve them, re-evaluate with AI prompts, and write an Editor’s Note highlighting human decisions the AI missed.

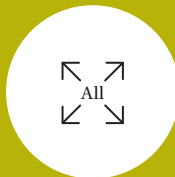
AI & alternative reasoning



Preparation
time



Group
size



Cognitive
level



1F

AI & alternative reasoning

Materials

A specific statement/case study

Time

40 - 60 minutes.

Activity Type / Goal

To sharpen students' critical thinking by using AI to identify and challenge their own confirmation bias, forcing them to engage with alternative perspectives and counter-arguments.

Description

Students start by taking a clear stance on a controversial or complex topic within their field of study. They write down their initial reasoning and the arguments they find most convincing.

Next, they use an AI tool to act as a 'Professional Contrarian.'

They input their arguments and prompt the AI to:

- Identify potential biases or "blind spots" in their reasoning.
- Provide three strong, evidence-based counter-arguments.
- Suggest a perspective from a completely different stakeholder.

Students must then evaluate these AI-generated alternatives. They categorize the AI's response: *Was it a valid point they hadn't considered, or was it a logical fallacy?* The goal is not necessarily to change their mind, but to strengthen their final conclusion by addressing the "alternative reasoning" provided by the AI.

Why does this activity work?

We naturally seek out information that confirms what we already believe. By explicitly prompting an AI to be "disagreeable," students are forced to confront the weaknesses in their own logic.

Tips

The reflection should focus on why they initially ignored certain perspectives and how the AI helped (or failed) to broaden their view.

Reflection

This category supports students in developing self-awareness and connecting course content to their own learning. By reflecting on experiences, collaboration, or personal growth, they critically consider what they learned, why it matters, and how to apply it. Reflection fosters metacognition, encourages self-regulation, and enhances both understanding and engagement.





Reflection

A

3-2-1/2-Glow 1-Grow/ Lecture Log
(Reflection on lectures/tutorials)

B

What? So What? Now What? Journals
(Reflection on an activity)

C

Blob Tree
(Reflection on collaboration)

D

Letter from the future
(Reflection on development)

E

Gibbs Reflection Cycle
(Reflection on an experience)

F

Mosaic of Learning

Reflection

2A

3-2-1/2-Glow-1-Grow / Lecture log

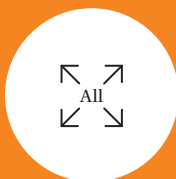


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**Preparation
time**



**Group
size**



**Cognitive
level**



2A

3-2-1 1/2-Glow-1-Grow / Lecture log

Materials

Paper or online document

Time

10 - 15 minutes.

Activity Type / Goal

These strategies are useful to help students reflect on a lecture or tutorial.

Description

3-2-1 Reflection: Students note 3 things they learned, 2 things they found interesting, and 1 question they still have.

2-Glow 1-Grow: At the start of the session, students are shown the intended learning outcomes. At the end of the session, students reflect on their learning by identifying two things they did well (glows) and one area to improve (grow).

Lecture Engagement Log: Students track their activities before, during, and after lectures (e.g., preparation, note-taking strategies) to build awareness of their study habits. Students note challenges, effective strategies, and areas for improvement and submit logs as instructed (weekly, per unit, or mid/endpoint).

Lecture Wrapper: Students list the 3 most important points of the lecture and immediately compare their list with the instructor's list to check alignment.

Why does this activity work?

3-2-1 Reflection: Consolidates learning, reveals gaps, encourages metacognition.

2-Glow 1-Grow: Supports self-assessment, highlights strengths and improvements.

Lecture Engagement Log: Tracks learning, builds awareness.

Lecture Wrapper: Encourages self-monitoring and critical evaluation.

Tips

Compare reflections in small groups. Follow up by sharing themes, connecting insights to learning goals, and prompting students to turn reflections into future actions or habits.

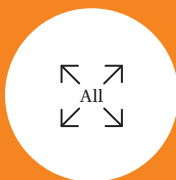
What? So what? Now what? Journals



**Preparation
time**



**Group
size**



**Cognitive
level**



2B

What? So what? Now what?

Materials

Reflection handout or digital journal

Time

15 - 30 minutes.

Activity Type / Goal

Analyze experiences to develop critical thinking and future learning.

Description

Students use structured journal entries to reflect on recent course activities, guided by three questions that foster critical thinking and link experiences to learning outcomes.

Guiding Questions

- **What?** What happened? Did it meet expectations?
How did you respond?
- **So What?** What did you learn and why does it matter?
How does it relate to peers, stakeholders, or course materials?
- **Now What?** How can you apply this learning?
What would you explore further? What can you share with others?

Implementation Steps

Distribute handouts and explain the purpose. Allow writing time. Share common themes, discuss “Now What?” actions, and encourage revisiting journals to report on applied or adapted actions.

Why does this activity work?

The reflection helps students connect experiences to theory, recognize meaning in their learning process, and plan for future application, building deeper understanding and critical thinking.

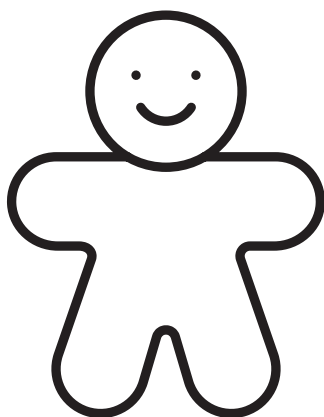
Tips

Have students discuss their “Now What?” action plan in pairs for 5 minutes before the whole-group wrap-up.

Reflection

2C

Blob Tree

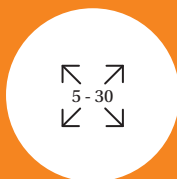


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**Preparation
time**



**Group
size**



**Cognitive
level**



2C

Blob Tree

Materials

Blob Tree image (available online)

Time

10 - 20 minutes.

Activity Type / Goal

Reflection on collaboration
using a visual tool

1



Description

Search for a suitable blob tree on Google and print it if necessary. Then each student is first asked to reflect silently on the collaboration within their group. They select the figure that best represents how they currently experience the collaboration and briefly note the reasons for their choice.

Next, students share their selected figures within the group and explain their reasoning. Together, the group identifies what is already working well in their collaboration and discusses what could be improved to strengthen group dynamics going forward.

Why does this activity work?

The Blob Tree helps students express difficult feelings visually. Discussing them promotes reflection on collaboration, expectations, shared responsibility, and highlights that group members may experience the same activity differently.

Tips

Students select one figure for their current experience and one for their desired state, noting what's needed to bridge the gap.

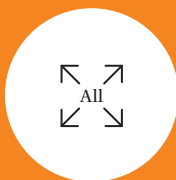
Letter from the future



**Preparation
time**



**Group
size**



**Cognitive
level**



2D

Letter from the future

Materials

Pen and paper, or a digital writing tool. Optional: printable template with guiding questions. Optional: calming background music to enhance focus

Time

40 - 60 minutes.

Activity Type / Goal

Narrative reflection connecting course content to future application.

Description

Students write a letter from their future self (e.g., one year later, during an internship, in a job, or in advanced study), reflecting on how they have used the knowledge, skills, and perspectives gained in this course. Guiding questions may include:

- How did this course shape the way I think or work?
- Which concepts, methods, or tools do I now use regularly?
- What was difficult to learn but turned out to be important?
- What advice would I give my past self while taking this course?

This narrative helps students connect course content to personal development and future goals. As a follow-up, invite voluntary sharing of excerpts, identify recurring themes, or have students turn one “advice to my past self” insight into a concrete action. You can also briefly explain how insights will inform course adjustments.

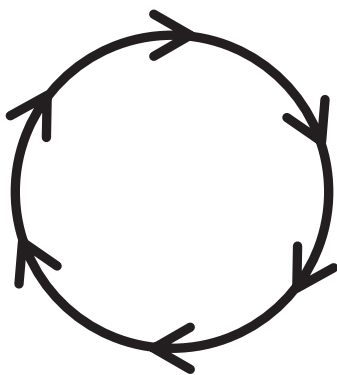
Why does this activity work?

Framing reflection as a message from their future self encourages students to see long-term relevance, fostering **intrinsic motivation**, **metacognition**, and deeper understanding by **connecting subject knowledge to personal identity and future practice**.

Tips

Adapt the “future self” to your discipline (e.g., lawyer, lecturer, engineer) to reflect on relevant skills, strengthening the link between course content and students’ professional identity.

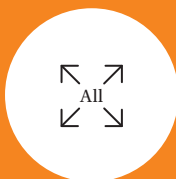
Gibbs reflection cycle



**Preparation
time**



**Group
size**



**Cognitive
level**



2E

Gibbs

reflection cycle

Materials

Printed or projected version of the Gibbs Reflective Cycle, Reflection worksheet with space for all six stages. *Optional: prompt cards or example questions for each stage*

Time

40 - 60 minutes.

Activity Type / Goal

Personal reflection / Self-regulated learning / Learning from experience based on an educational model

Description

Students select a meaningful learning experience, such as a group assignment, presentation, or personal challenge. Using structured prompts, they work through the six stages of Gibbs' Reflective Cycle:

1. **Description** – What happened?
2. **Feelings** – What were you thinking and feeling?
3. **Evaluation** – What was good and bad?
4. **Analysis** – What sense can you make?
5. **Conclusion** – What else could you have done?
6. **Action plan** – If it happens again, what would you do?

Reflections can be completed individually, discussed in pairs, or shared in a group. As follow-up, invite voluntary sharing of insights, identify recurring themes, and discuss them in a plenary debrief. Encourage students to revisit their action plan later to reflect on application or adaptation.

Why does this activity work?

Gibbs' model offers a clear and structured framework that helps students move beyond surface-level reflection. By integrating emotions, analysis, and future-oriented planning, it supports deeper learning, self-awareness, and continuous improvement.

Tips

Display or hand out the Gibbs Cycle diagram. The visual reminder helps students follow the stages and track how their thinking develops throughout the reflection process.

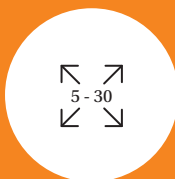
Mosaic of learning



**Preparation
time**



**Group
size**



**Cognitive
level**



2F

Mosaic of learning

Materials

Index cards or A4 paper, Pens or markers. *Optional: stickers, colored paper, or a digital whiteboard*

Time

20 - 30 minutes.

Activity Type / Goal

Help students reflect on a course, lecture, or project by creating personal reflection “tiles” that together form a collective visual mosaic of the group’s learning journey.

Description

Each student creates a small “tile” representing a meaningful learning insight, this could be drawn, written, or symbolized. Examples include a concept that clicked, a shift in understanding, or a key takeaway.

All tiles are then combined on a wall, board, or digital canvas to create a shared mosaic. Students view the mosaic and reflect together: What patterns do we see? What surprised us? The result is a visual synthesis of diverse learning paths.

As a follow-up, facilitate a brief whole-class discussion about patterns and gaps visible in the mosaic. Use recurring or missing themes to decide what to review, extend, or connect in upcoming sessions.

Why does this activity work?

Creating something concrete encourages deeper reflection. The mosaic makes learning visible and personal, while reinforcing content and building a sense of community. Students don’t just recall facts, they reinterpret knowledge through their own lens, increasing ownership and retention.

Tips

Use in the final session of a course or module. In large classes, students can work in groups to create one tile per group.

Affective Learning

This category engages students' emotions, values, and intrinsic motivations to deepen learning and support personal growth. By linking feelings, identity, and values to course content, students enhance motivation, perspective-taking, and collaboration. These techniques help students understand what matters to them, how they relate to others, and how they can act meaningfully in complex contexts.

These activities have been carefully selected from the Transition Makers Toolbox in collaboration with the SIG Affective Learning. If you are interested in more support on this topic, you can check out their webpage for more step-by-step learning activities, structured around the Inner Development Goals (IDG's). Here you will also find the complete descriptions of the selected activities.





Affective Learning

A**Poetic Motivations***(IDG Dimension 'Being')***B****Travelling Concepts***(IDG Dimension 'Thinking')***C****Inviting non-human stakeholders***(IDG Dimension 'Relating')***D****Soft Shoe Shuffle***(IDG Dimension 'Collaborating')***E****Embracing Uncertainty***(IDG Dimension 'Acting')*

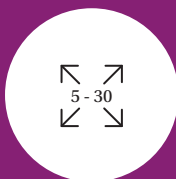
Poetic motivations



Preparation
time



Group
size



Cognitive
level



3A

Poetic motivations

Materials

'I poem' template (QR1) & reflective questions (QR2)

Time

60 - 90 minutes.

Amount:

10 - 25 people

Activity Type / Goal

Help students identify and express their inner values and intrinsic motivation for change.

1



2



Description

Students write a personal poem based on the **I poem template (QR1)**, a structured template that invites them to explore their values, emotions, and motivations for change. They begin with drafting short sentences about their identity, values, feelings, and desires (for example starting lines like "I am...", "I care about...", "I cannot ignore..."), and then refine these lines into a coherent and meaningful poem. Scan the QR-code to download the 'I poem template'.

Once the drafts are complete, students are invited to share their poem with the group, focusing on safety, trust, support and recognition amongst their peers. The session closes with **guided questions (QR2)** in pairs or as a group—for example: "What did you discover about what matters to you?" and "How does this connect to change you want to see?" This process helps students recognize and articulate how their personal motivations relate to broader societal or educational change.

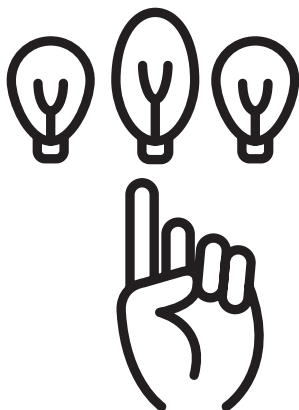
Why does this activity work?

It uses creativity and purpose to help students articulate their intrinsic motivations in a safe and reflective way.

Tips

Choose a course-related theme or provide alternative ways of sharing the poems.

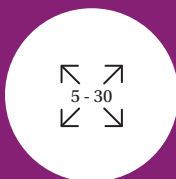
Travelling Concepts



Preparation
time



Group
size



Cognitive
level



3B

Travelling Concepts

Materials

Reflective assignment (QR1)
& assessment rubric (QR2)

Time

90 - 120 minutes.

Activity Type / Goal

Recognizing how concepts converge between disciplines, identifying emerging patterns, and articulating these insights in an interdisciplinary conversation.

1



Description

Travelling concepts are concepts that take on different meanings as they move between disciplines. In this activity, students work in pairs or small groups with one shared concept (for example: time, sustainability, justice or resilience). Using short texts or examples from their own disciplines, they look at how the concept is defined, what questions it is linked to, and which methods or assumptions are used. Students can use the **disciplinary self-reflection (QR1)** exercise to structure this exploration.

The groups then list concrete similarities and differences: what stays the same, what changes, and where tensions or new questions appear when the concept “travels” to another context. Finally, they turn their notes into a short explanation or visual overview and present this to the class, so that the whole group can compare concepts and discuss what this reveals about how different disciplines build knowledge.

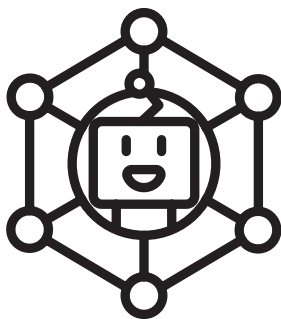
Why does this activity work?

Drawing on existing scientific theories on interdisciplinary and cognitive development, it sharpens students’ conceptual thinking by making them analyse how meanings shift across contexts and disciplines.

Tips

Provide sample texts per discipline or create a visual map showing how a *travelling concept* evolves.

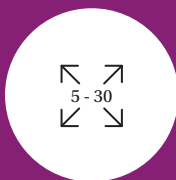
Inviting non-human stakeholders



Preparation
time



Group
size



Cognitive
level



3C

Inviting non-human stakeholders

Materials

Cards (tips in QR1) & reflective questions (QR2)

Time

90 minutes.

Activity Type / Goal

Empathically connecting to non-human perspectives.

1



2



Description

This exercise invites students to explore non-human viewpoints to analyze societal or environmental challenges. They select a card representing a species or natural entity, detailing its ecological role and needs (tips via QR1).

Students “step into” their character’s perspective, reflecting on sensory impressions and experiences. Insights are captured through free writing, keywords, or drawings (guiding questions via QR2). Students then formulate an opening question to engage their character.

Next, students form triplets for short dialogues. Members question one another as the non-human beings, linking emotions and needs back to the original challenge.

To close, students share insights and write a statement summarizing their wishes for their character’s future.

Why does this activity work?

It activates empathy, imagination, and ecological awareness, allowing students to connect emotionally with non-human viewpoints and broaden their perspective on the challenge.

Tips

Provide questions to guide students’ embodiment, for example “What are your thoughts and feelings about recent changes in this ecosystem?” or “What are the benefits and challenges of living in this ecosystem, and how do you balance them?”

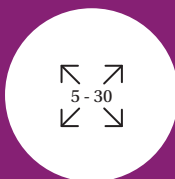
Soft shoe shuffle



Preparation
time



Group
size



Cognitive
level



3D

Soft shoe shuffle

Materials

Open space for participants to move around

Time

15 - 30 minutes.

Activity Type / Goal

Students engage in an attentive dialogue in which active and empathic listening reveals diverse perspectives.

Description

Participants explore different viewpoints by physically positioning themselves in a room. The group starts in an open space. One participant steps in and provides a statement about the topic. Others position themselves in the room: closer to show agreement, farther away to show disagreement, or anywhere else to express nuance. Participants who prefer not to express a fixed opinion, keep moving or blend in.

Participants may reposition themselves at any moment if something they hear shifts their view. When someone stands in a noticeably different place, they are invited to share their perspective or to introduce a new (contrasting) statement, allowing additional angles to the surface. Participants do not respond directly to the previous speaker; each contribution stands on its own. The facilitator encourages participants to contribute either verbally or by shifting their place in the room. The exercise is ended when repeated themes show consensus or clear opposing views that require attention.

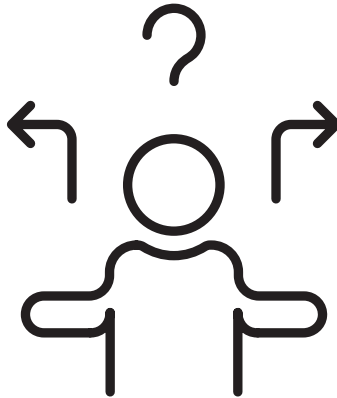
Why does this activity work?

It slows down, makes shifts in perspective visible, and supports active and empathic listening by allowing participants to express and adjust their viewpoints without entering a debate.

Tips

As facilitator, you may briefly summarize or paraphrase a statement when needed, checking with the contributor to ensure the summary accurately reflects their intended meaning.

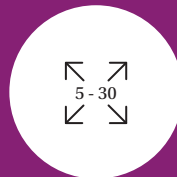
Embracing uncertainty



Preparation
time



Group
size



3E

Embracing uncertainty

Materials

Sticky notes, QR 1 and 2

Time

90 minutes.

Activity Type / Goal

Identify types of uncertainty, express what triggers uncertainty and propose concrete action to address it.

1



2



Description

Begin with a check-in where students visualize or describe what uncertainty feels like using words or images. They then map their uncertainties by noting what they don't yet know, unpredictable project areas, and conflicting perspectives. These notes are placed on the Uncertainty Map (QR1) to identify the types of uncertainty involved.

Next, students create a metaphor—such as a sketch, symbol, or sentence—that captures their relationship with uncertainty. The activity ends with a “step forward”: each student selects one uncertainty and designs a small, manageable action to explore or reduce it during the week. Students then use the assignment (QR2) to reflect on their map, metaphor, and experiment.

Why does this activity work?

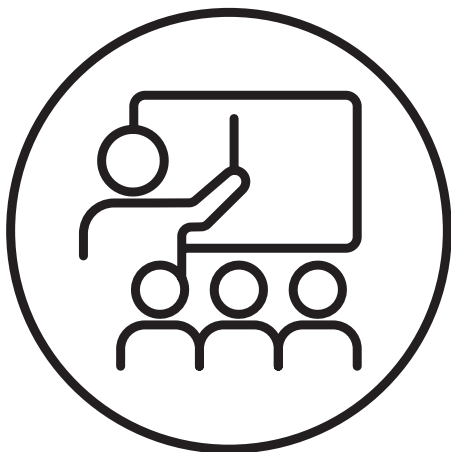
Students recognise different types of uncertainty and practise taking small, workable steps.

Tips

Invite small groups to review each other's maps, as explaining one's uncertainties and receiving feedback can help normalize uncertainty, strengthen a sense of shared vulnerability, and offer concrete suggestions that may reduce or clarify specific uncertainties.

Teaching large groups

This category focuses on actively engaging students in large lectures or lecture halls, transforming passive listening into participation and critical thinking. Techniques encourage students to process information, identify misconceptions, and apply concepts in real time. They also foster inquiry, dialogue, and student ownership of knowledge, even in big groups. By integrating structured reflection and interactive elements, these approaches maintain attention, promote understanding, and make large-scale teaching more dynamic and effective.





Teaching large groups

- A Skeleton notes
- B Pause procedure
- C Wrong example: Error analysis
- D Quescussion
- E Lecturer as curious student (Q&A)
- F Demonstrations (*predict-observe-explain*)

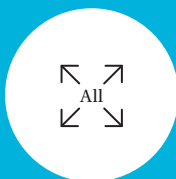
Skeleton notes



**Preparation
time**



**Group
size**



**Cognitive
level**



4A

Skeleton notes

Materials

Handouts with blanks for students to complete

Time

During the lecture

Activity Type / Goal

Engaging students in big lectures

Description

Although many lecturers now provide PowerPoint slides before lectures, these do not need to include everything covered in class and are not a substitute for attending. Handouts that students complete during the lecture encourage them to actively create individualized notes that are meaningful to them.

Leave spaces in handouts for students to write definitions in their own words or note their own examples for key concepts. You can also have them complete diagrams, add missing labels, work through a proof, plot a graph, fill in a flow chart, or enter values in a table. Providing the correct answers afterward ensures that students leave with a complete set of notes while having actively participated in making their own, rather than just copying everything or relying on the handout alone.

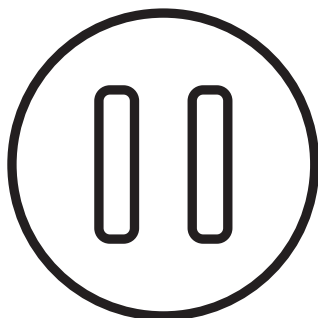
Why does this activity work?

Students actively engage with the material instead of passively copying slides. Completing the handouts helps them process information, think critically, and retain knowledge better, while still leaving them with a full set of notes.

Tips

Can be combined with peer discussion for added engagement or used to prepare for quizzes and exercises.

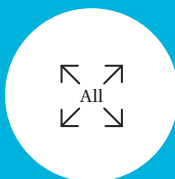
Pause procedure



**Preparation
time**



**Group
size**



**Cognitive
level**



4B

Pause procedure

Materials

No specific materials needed

Time

Integrated into lecture
(every 15–20 minutes)

Activity Type / Goal
Active Learning / Reflecting

Description

A teaching technique where the lecturer pauses at planned intervals (every 15–20 minutes) during a lecture to engage students in short reflective or interactive activities. These pauses help students self-monitor their learning, consolidate understanding, and stay actively engaged.

Lecture Segment: Deliver the first 15–20 minute portion of your lecture.

Pause and Prompt: Stop and ask students to reflect or respond to a question about the content or their learning process. Examples: “What is the key idea we just discussed?”, “How would you explain this concept in your own words?”, “What questions do you still have?”

Student Engagement: Students can respond:

- Individually (write in a journal or on a piece of paper)
- Pair-share with a neighbor
- Small group discussion

Resume Lecture:

Continue with the next segment, repeating the pause every 15–20 minutes.

Why does this activity work?

Short reflective breaks improve focus, promote metacognitive engagement, and help students connect new information to existing knowledge.

Tips

Ask a few students to respond after discussing in pairs or gather responses via Wooclap so you can quickly gauge comprehension and correct misunderstandings on the spot.

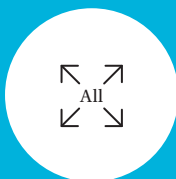
Wrong example: Error analysis



Preparation
time



Group
size



Cognitive
level



4C

Wrong example: Error analysis

Materials

A deliberately incorrect or sub-optimal example.

Time

Flexible / adaptable
(5–15 minutes)

Activity Type / Goal

Develop critical thinking, apply subject knowledge, and identify misconceptions.

Description

The lecturer presents a deliberately incorrect or sub-optimal example, such as faulty reasoning, a flawed solution, or a violated principle.

Students first examine it individually and formulate a precise diagnosis: what exactly is wrong, where does it go wrong, and what should have happened instead. They then compare their analysis with a neighbor, refining their reasoning through discussion. The lecturer invites a few students to share their diagnosis with the group, allowing different interpretations to surface before offering any conclusion.

Finally, the lecturer wraps up in plenary, systematically addressing the identified errors and connecting them back to the underlying concepts and principles.

Why does this activity work?

Identifying errors requires students to actively apply concepts and rules rather than recognize them passively, promoting deeper understanding and revealing common misconceptions. It allows students to learn from mistakes in a low-risk way and breaks the passive rhythm of a traditional lecture.

Tips

Reverse the process: ask students to deliberately create an incorrect example based on a specific principle, which peers then analyze and critique.

Quescussion

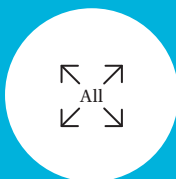
(discussion in question form)



**Preparation
time**



**Group
size**



**Cognitive
level**



4D

Quescussion

(discussion in question form)

Materials

Optional: board or shared document to collect questions

Time

Flexible / adaptable
(5–20 minutes)

Activity Type / Goal

Inquiry-based learning · Critical thinking · Activating prior knowledge

Description

Quescussion is a discussion format in which participants contribute exclusively by asking questions. The lecturer starts with a provocative statement or question related to the content (e.g., “The human mind is not rational”). Students respond only with follow-up questions, never statements.

Rules:

1. Every contribution must be a question.
2. No “disguised statements” phrased as questions.
3. Turn-taking applies: students wait several turns before speaking again.
4. If someone makes a statement, the group playfully calls out “Statement!”

Why does this activity work?

Quescussion lowers the threshold for participation, as questions feel safer than opinions and cannot easily be “wrong.” Students must listen carefully to each other to formulate meaningful follow-up questions. This creates an investigative atmosphere and stimulates curiosity, even in very large groups.

Tips

Use at the start of a new topic to explore prior knowledge and assumptions. Collect the questions to create a structure or “roadmap” for the rest of the lecture. Use a tool (e.g., Woodclap) to collect questions digitally.

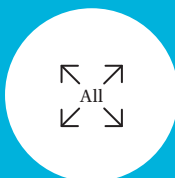
Teaching as curious student



**Preparation
time**



**Group
size**



**Cognitive
level**



4E

Teaching as curious student

Materials

None required

Time

Flexible / adaptable
(5-60 minutes)

Activity Type / Goal

Active recall · Articulating knowledge ·
Consolidating understanding · Engagement

Description

Roles are reversed: the lecturer adopts the role of an “uninformed” student, while the students collectively act as experts. The lecturer may sit among the students or at the edge of the stage and say, for example:

“I don’t really understand [Concept X]. Can someone explain it to me?”

Students respond by explaining the concept. The lecturer maintains the role by asking critical or deliberately simple follow-up questions (“Why does that happen?” “Can you explain that more simply?”), prompting students to refine and clarify their explanations. Think-pair time can be built in to avoid putting students on the spot and allow them to formulate stronger responses.

Why does this activity work?

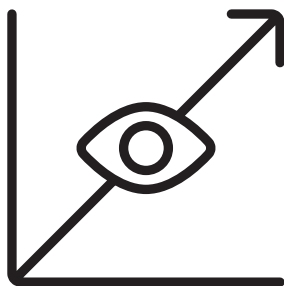
The role reversal breaks traditional hierarchy and adds humour, increasing energy levels in the group. Students enjoy taking on the expert role and often build on each other’s explanations. This approach strongly activates recall and forces students to verbalize their understanding, helping consolidate learning.

Tips

Press conference: Turn the activity into a press conference, with the “expert” answering questions from the audience. Safety & closure: Keep the tone light and supportive, and always end with a brief lecturer-led summary to correct or confirm key points.

Demonstrations

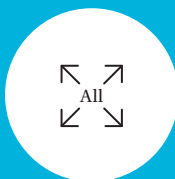
(predict-observe-explain)



**Preparation
time**



**Group
size**



**Cognitive
level**



4F

Demonstrations

(predict-observe-explain)

Materials

Props for the specific demonstration or digital simulation tools

Time

10 - 20 minutes.

Activity Type / Goal

The main goals of this activity are to check conceptual understanding, stimulate critical thinking, identify misconceptions, and increase student engagement.

Description

Begin by introducing the demonstration without revealing its outcome. Ask students to individually predict what they think will happen, and write down or mentally commit to their prediction along with a brief reasoning.

They then share and discuss their prediction with a neighbor, comparing assumptions and underlying logic.

Next, perform the demonstration, slowly and visibly, drawing attention to key moments. Encourage students to observe carefully and note anything that surprises or confirms their expectations.

Afterward, give students a moment to reflect: did the outcome match their prediction? Where did their reasoning hold up, and where did it fall short? Pairs or small groups briefly discuss their observations before sharing with the class.

Why does this activity work?

By committing to a prediction, students actively test their understanding. If the prediction is incorrect, observing the actual result creates a “cognitive conflict,” helping them identify misconceptions and restructure their mental model.

Tips

Use voting tools (e.g., Wooclap) to visualize class predictions before the demonstration, increasing engagement and stakes.

AI variation: Before the demo, ask students to prompt an AI for a prediction and compare the AI’s reasoning with the actual result.

Quantitative Teaching

This category helps students actively engage with numbers, logic, and problem-solving, making abstract concepts tangible and understandable. Techniques promote hands-on practice, experimentation, and collaboration, while also encouraging deep conceptual understanding and clear communication. By combining interactive, playful methods with structured reasoning, students strengthen analytical skills, spot misconceptions, and gain confidence in applying quantitative concepts, making learning both dynamic and memorable. These activities have been carefully selected by the Faculty of Science's TLC.





Quantitative Teaching

A

Conveyor belt problem solving

B

Explain it to a child -
The Feynman technique

C

Tomato throwing: what's wrong with
the statistics? (*student - presented*)

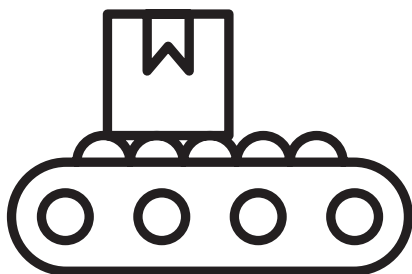
D

Start with a puzzle

E

Solve - design - present

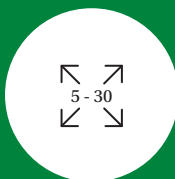
Conveyor Belt Problem Solving



Preparation
time



Group
size



Cognitive
level



5A

Conveyor Belt Problem Solving

Materials

Assignments or problems divided into consecutive steps

Time

Flexible / adaptable

Activity Type / Goal

Collaboratively solve multi-step problems through peer-to-peer rotation.

Description

Start by dividing a complex assignment into clearly defined consecutive steps, each step should be self-contained enough that a student can pick it up mid-process and continue meaningfully.

Students begin by individually solving Step 1 of their own problem.

Once completed, they pass their work to the neighbor on one side, while simultaneously receiving a partially solved problem from the neighbor on the other side. They now continue where that peer left off, completing the next step without redoing previous work.

This rotation continues until the problem has moved through all steps and is fully solved.

At the end, students receive back a completed solution, and compare it against an answer model. Students trace each step, identify where choices were made, spot errors and reflect on how their own contribution fits into the whole.

Why does this activity work?

This approach practices technical skills while teaching students to analyze others' logic. It combines individual work with collective responsibility.

Misconceptions become visible because students must evaluate and correct peer work to proceed to the next step.

Tips

Use timers for momentum. If a student gets stuck due to a peer's error, allow them to redo that step. Arrange the room in a circle for smooth rotation.

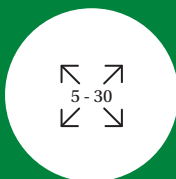
Explain it to a child



Preparation
time



Group
size



Cognitive
level



5B

Explain it to a child

Materials

Optional whiteboard, slides, or paper.

Time

5 - 15 minutes.

Activity Type / Goal

Simplifying complex concepts into jargon-free language for laypeople.

Description

Based on the approach of Richard Feynman, Nobel Prize-winning physicist, who famously said: “If you cannot explain something in simple terms, you do not understand it” Students are tasked with explaining a complex concept, phenomenon, or solution in plain, everyday language.

5-Step Plan:

- 1. Assign:** Divide students into small groups (2–4) and assign different topics or concepts.
- 2. Instruct:** Explain the goal (explain to a layperson) and set a strict time limit.
- 3. Prepare:** Students research the topic to fill knowledge gaps and draft a simplified explanation using analogies.
- 4. Visualize:** Groups create a visual aid (whiteboard, slide, or paper) to support their explanation.
- 5. Present:** Groups present briefly. The audience acts as the layperson and gives feedback on clarity and use of jargon.

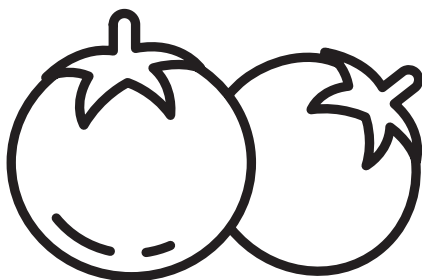
Why does this activity work?

Translating a complex concept into simple language requires deep understanding. It prevents students from hiding behind jargon, stimulates metacognition as they review their reasoning steps, and quickly exposes gaps in knowledge.

Tips

AI as a child: Use an AI tool (e.g., ChatGPT) in a “layperson” persona to test explanations.

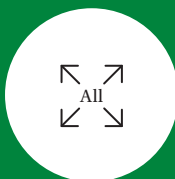
Tomato throwing



Preparation
time



Group
size



Cognitive
level



5C

Tomato throwing

Materials

Material with specific errors.

Time

45 - 90 minutes.

Activity Type / Goal

Gamified peer presentations where students identify intentionally embedded errors.

Description

Students work in small teams to create a presentation of a fictional experiment. Each team is secretly assigned a specific statistical error or misconception (e.g., “p-hacking” or “correlation vs. causation”) that they must subtly embed into their slides. The challenge is to make the error realistic enough that it could pass as genuine, encouraging teams to think carefully about how mistakes actually appear in practice.

During presentations, the rest of the class acts as “detectives.” When a student spots an error, they call out “Tomato!” (or throw a soft object) and explain what is wrong. The lecturer then facilitates a brief discussion on how to correct the error.

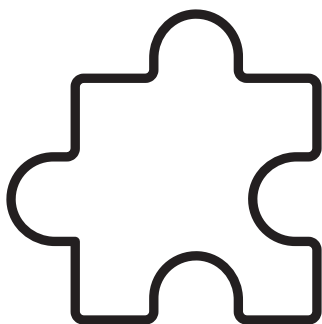
Why does this activity work?

Intentional errors create a safe learning environment. The gamified “tomato” element keeps the audience actively focused on details. Both presenters and detectives must use deep processing and critical thinking to hide or spot technical mistakes.

Tips

Award prizes for “Best Hidden Mistake” or “Sharpest Detective.”
This format easily adapts to other procedural subjects like lab safety, coding, or legal argumentation.

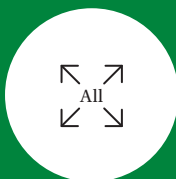
Start with a Puzzle



Preparation
time



Group
size



Cognitive
level



5D

Start with a Puzzle

Materials

A puzzle and its solution.

Time

0 - 10 minutes.

Activity Type / Goal

Activating students through a short, playful opening group challenge.

Description

This activity uses a short, playful puzzle to kick off a tutorial or lecture and immediately activate students.

5-Step Plan:

- 1. Prepare:** Select or design a small puzzle related to the topic (e.g., logic, math, or escape-room style)
- 2. Group:** At the start of class, form small groups of 2–4 students.
- 3. Solve:** Set a strict time limit (e.g., 5–10 minutes).
Students work independently from the lecturer.
- 4. Reveal:** Share the solution immediately or save it for the end of the session.
- 5. Check:** Briefly and playfully discuss the solutions (e.g., “Who cracked it?”)

Why does this activity work?

This activity creates immediate social interaction and sets an energetic tone. It breaks the ice, signals that active participation is expected, and can become a familiar, enjoyable ritual that fosters collaboration from the very start.

Tips

Project puzzles during breaks for think-pair solving with neighbors. Invite advanced students to design puzzles for first-year tutorials to strengthen the link between different cohorts and deepen student ownership.

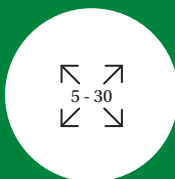
Solve – design – present



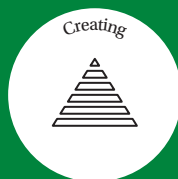
Preparation
time



Group
size



Cognitive
level



5E

Solve – design – present

Materials

List of topics or assignments.

Time

60 - 90 minutes.

Activity Type / Goal

Integrating problem solving, visual design, and peer feedback sessions.

Description

This workflow integrates problem solving, explanation design, and peer feedback. Students work in pairs to solve a problem and then translate their solution into a clear, visual explanation for others.

5-Step Plan:

- 1. Select:** Pairs choose a lecturer-provided topic. *(5–10 min)*
- 2. Solve & design:** Pairs solve the problem and design a visual explanation (slides or whiteboard) using provided guidelines. *(30–45 min)*
- 3. Cluster:** Divide the class into small clusters of 2–3 pairs.
- 4. Present:** Each pair presents their solution to their cluster rather than the whole class.
- 5. Feedback:** Peers ask questions and provide brief feedback using a mini-rubric or a “tips & traps” format.

Why does this activity work?

Presenting in small groups lowers social pressure and creates a safe practice space. Peers stay engaged through clear feedback roles, and explaining solutions reinforces understanding via the protégé effect, bridging the gap between solving and communicating.

Tips

Provide pre-set templates to speed up the design phase. This allows students to focus strictly on content rather than formatting during the session.

Intercultural Classroom

This category supports teaching in culturally and linguistically diverse classrooms by making differences in perspectives, communication styles, and learning norms explicit and discussable. The tools foster intercultural awareness, inclusive participation, and respectful dialogue, positioning diversity as a resource for deeper learning, collaboration, and critical reflection.

These activities have been carefully selected by the SIG International Classroom. If you are interested in further support on this topic, please consult the booklet with additional pedagogical tools, scan the QR-code

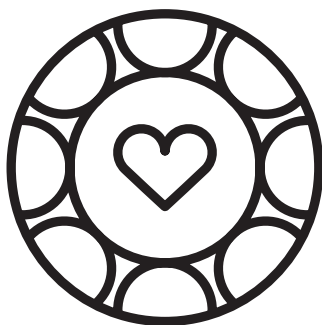


A photograph of a classroom with several students. In the foreground, a woman with short blonde hair, wearing a blue and black jacket, is smiling and looking towards the right. Other students are visible in the background, some looking at laptops. The title 'Intercultural Classroom' is overlaid in a red box.

Intercultural Classroom

- A Social identity wheel
- B Lost in translation (Code switching)
- C Creating a group culture map
- D Throwing arrows
- E Inquiry circles for deep reflection

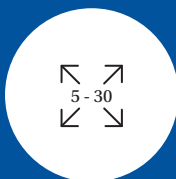
Social Identity Wheel



Preparation
time



Group
size



Cognitive
level



6A

Social Identity wheel

Materials

Social Identity Wheel Handouts

Time

40 - 60 minutes.

Activity Type / Goal

Students explore social identities to build empathy and understand experiences of inclusion and exclusion.

1



Description

The Social Identity Wheel is a reflective exercise that invites students to consider how various aspects of their identity, such as ethnicity, gender, nationality, sexual orientation, ability, shape their self-perception and how they are treated by others.

The activity follows three phases:

- **Individual Reflection:** Students fill out the wheel (QR1) individually, identifying which identities they are most/least aware of, which were important growing up, and which have the strongest effect on self-perception vs. perception by others.
- **Small Group Reflection:** Students discuss in small groups the process of filling out the wheel: what was difficult to complete and what makes them aware of specific identities.
- **Class Debrief:** A facilitator-led discussion on how reflecting on social identities contributes to individual self-awareness and shapes group dynamics

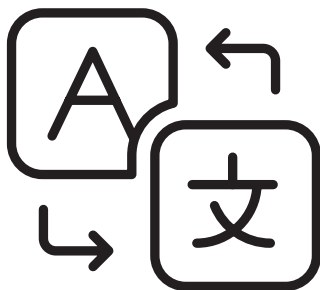
Why does this activity work?

By fostering personal connections, it creates a safe climate for students to explore intersecting diversities. It reveals how privilege normalizes some identities while marginalizing others, prompting deeper reflection on one's own perspective.

Tips

Share aspects of your own social identity wheel at the start. This helps to set a safe environment, and demonstrates the value of engaging with intersectional identities

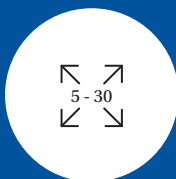
Lost in translation



Preparation
time



Group
size



Cognitive
level



6B

Lost in translation

Materials

Course content (concepts, readings, or media forms)

Time

10 - 20 minutes.

Activity Type / Goal

Developing intercultural competences by analyzing nuances of translation and adaptation across languages, cultures, and media forms.

Description

Students utilize their multilingual proficiencies to examine course concepts. They discuss what is “lost” or “gained” when a concept is translated from the course language into their native language (and vice versa).

The activity can be conducted in two ways:

- Reflect on the origins of specific terms (e.g., democracy, beauty, algorithm) and how their meaning shifts when translated. If the course material is already a translation, native speakers of the original language can highlight nuances that translations might miss.
- Explore how meaning changes when material is adapted for different audiences or media. For example:
 - How does a work of critical theory change when discussed on TikTok?
 - How does a French TV show change when it is adapted into a Mexican telenovela?
 - How does the presentation of a specific historical event change when it is adapted into a graphic novel?

Why does this activity work?

It introduces students to cultural diversity and encourages reflection and students to look past surface definitions and understand the cultural context of specific terms and media forms.

Tips

Take an inventory of the languages spoken by your students to identify which students might have unique insights into specific terms or materials

6C

Creating a group culture map

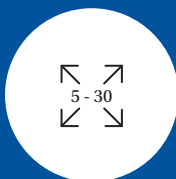


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**Preparation
time**



**Group
size**



**Cognitive
level**



6C

Creating a group culture map

Materials

Handouts of Erin Meyer's 8 cultural dimensions

Time

25 - 30 minutes.

Activity Type / Goal

Students analyze cultural diversity in classroom communication and interaction, and collaboratively develop shared norms that support inclusive group work and learning

1



Description

Students collaboratively explore and define their group culture using Erin Meyer's eight cultural dimensions. This activity focuses on individual preferences within the context of the international classroom.

The activity proceeds through five steps:

- **Warm-up:** Discuss visible vs. invisible culture (e.g., greeting styles vs. trust-building).
- **Individual Reflection:** Students position themselves on a scale for each of the 8 dimensions based on their personal preferences for classroom interaction.
- **Small Group Discussion:** Groups compare results to see where they align or diverge.
- **Identifying Challenges:** Groups select the 3 dimensions most likely to cause friction in their team.
- **Rule-Making:** Groups co-create a classroom rule to address that friction

Why does this activity work?

- It avoids stereotypes by focusing on individual preferences in the context of the classroom/team, rather than "national character."
- It proactively neutralizes friction before they become conflicts.
- It validates different working styles and boosts rule compliance through co-creation.

Tips

Ask students to physically position themselves along a spectrum in the room.

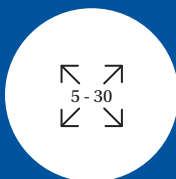
Throwing arrows



Preparation
time



Group
size



Cognitive
level



6D

Throwing arrows

Materials
Open space

Time
30 minutes.

Activity Type / Goal

Students switch perspectives on a given topic, reflect on their own assumptions, and integrate multiple viewpoints into a balanced decision.

Description

Students physically embody and argue for both positions of a conflict. By making sharp, impactful statements (arrows) for one side and then the other, they explore contrasting views before integrating insights.

Follows these steps:

- Identify a conflict (e.g., free will vs. Determinism, flexibility vs. structure) and form small groups.
- In their group, students stand on a line and express everything they can about Side A, going beyond facts to surface underlying values. Encourage statements that are sharp and impactful.
- Students turn around and express everything they can about Side B.
- Students gather in a circle and share what “hit” them (an arrow they heard, received, or delivered), and what they learned from this.
- Students make a democratic decision (choosing a side) and “enrich” it by integrating insights gained from the other side.

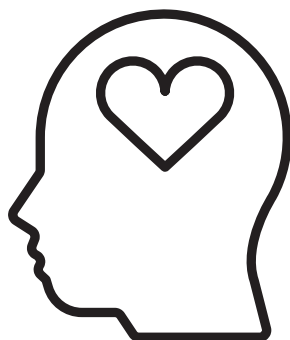
Why does this activity work?

- Students understand the value of the opposing view.
- It recognizes that opposing perspectives often contain partial truths.

Tips

You can encourage students to throw “golden arrows,” articulating everything positive about a position, rather than sharp impactful statements. This activity benefits from a demonstration. Act out a round with a volunteer to show that it is safe to be sharp and honest, and that there are no morally superior statements.

Inquiry circles for deep reflection

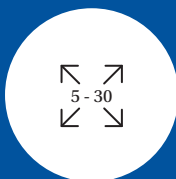


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Preparation
time



Group
size



Cognitive
level



6E

Inquiry circles

deep reflection

Materials

List of inquiry prompts
and a timer

Time

15 - 20 minutes.

Activity Type / Goal

To practice deep listening and reflective expression, fostering empathy, understanding, and emotional awareness when engaging with sensitive topics.

Description

Inquiry Circles create a structured space for students to express their thoughts, emotions, and bodily sensations related to a sensitive topic discussed in class.

Students form pairs or triads in which one person speaks for a set time (e.g., 5 minutes) while others listen with full presence, offering no advice, commentary, or judgment.

Using a specific prompt, the first speaker shares their experience. After their time is up, there is a 10-second pause before the next person speaks.

Sample Prompts: “What emotions arose during today’s discussion?” “What assumptions did you notice yourself holding?” “What part of the topic felt most challenging?”

After everyone has spoken, the small group discusses common themes or shared emotions that emerged.

Why does this activity work?

- It allows students to speak without fear of immediate judgment or having their experience “fixed” by others.
- It trains students to listen with the intention to understand, rather than to respond.

Tips

Emphasize confidentiality: Instruct students that it is okay to sit in silence.

More info about TLC and active learning?

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