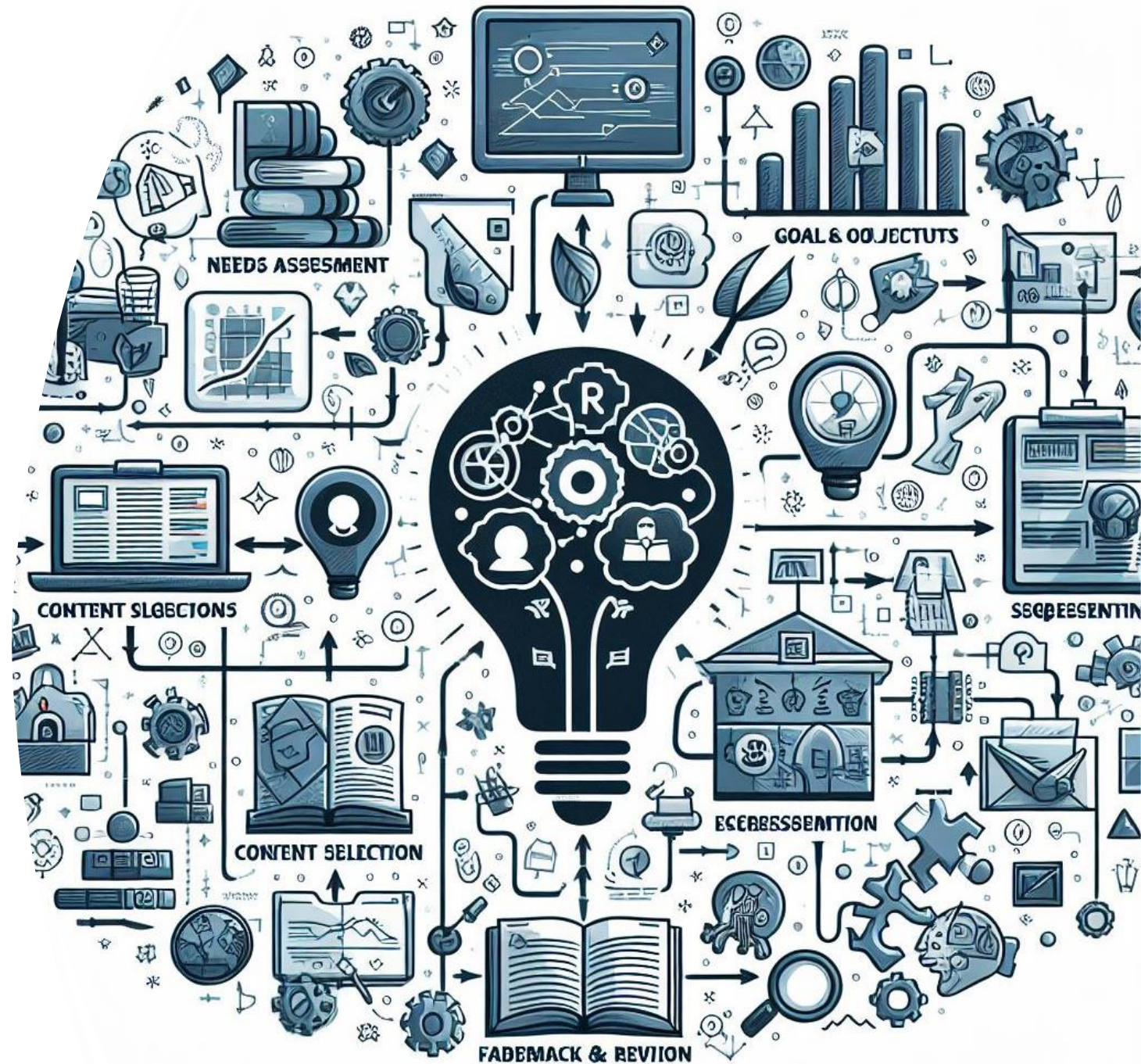


# An introduction to Generative AI (in a UHI context)

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# Definition

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“At its most basic, AI is a data machine: it can consume, analyse and synthesise huge quantities of data and help us to make more powerful, data-informed, decisions than we could ever make alone” ([Hardman](#) 2024).

# Potential

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[Bill Gates speaking to Forbes] “Generative AI has the potential to change the world in ways that we can’t even imagine... to solve some of the world’s biggest problems, such as climate change, poverty, and disease” ([Forbes](#) 2023).

# Potential cont. – focus on education

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Mike Quartararo (2023): “GenAI is going to play a crucial role in enabling people to acquire new skills and knowledge. There is almost no limit to the possibilities. It has the potential to transform education in ways we could not envision just a few years ago.”

“To paraphrase a recent quote, artificial intelligence is not going to replace teachers – or lawyers - but teachers who use AI will replace teachers who do not use AI.”

# Risk

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But it's disruptive – there are certainly downsides, indeed there's no shortage of quotes suggesting that embracing AI is taking us several steps closer to the edge of a dystopian future, e.g.

“AI could lead to extinction, experts warn” ([Center for AI Risk 2024](#)).

A conceptual  
picture  
(without  
words)

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# What we'll cover today

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- UHI policy and guidance [approved tools]
- Prompt engineering
- Gathering information
- Learning outcomes
- Lesson planning
- Activity planning
- Assessment

# UHI policy and guidance

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- [Staff guidance on the use of Generative AI](#) (v1.2 22/4/24)
- The doc. links to list of UHI approved [free] tools:
  - MS Copilot (previously Bing Chat Enterprise)
  - Claude.ai
  - Elicit
  - Leonardo.ai
  - ChatGPT4o
  - Perplexity
  - Phind
  - Satlas
  - SciSpace
  - Semantic Scholar
  - AI Tutor Pro
- [\\*AI SharePoint page](#)



# Prompt engineering

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# Prompt engineering (6 key elements)

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Success comes down to **what** you ask, and *how* you ask:

- **Clarity:** The prompt should be clear and unambiguous, providing straightforward instructions to the AI. If appropriate, provide step-by-step tasks. E.g., “First do X, then Y...I will give you x and you will do y with it...”
- **Specificity:** It should be specific, detailing the exact request and avoiding vague language.
- **Context:** Define AI’s role and objective. For example, “You are an experienced instructional designer assisting in X.”

# Prompt engineering cont.

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- **Constraints:** Set parameters like “The course should be online and no longer than X hours.”
- **Examples:** Providing examples, such as questions and answers, or points that you wish to all begin in the same way (like learning outcomes) can illustrate the desired output and help the AI generate similar results.
- **Feedback loops/iteration:** there is never any need to try and get everything right in one prompt. Iteratively refining prompts based on the AI's outputs is totally normal and can improve the quality of the interaction.

**Note:** If in doubt, you can ask the tool to tell you what it needs from you!  
(suggestion from [Harvard](#))

# “What do you need from me?”

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**“I want to use Phind to help me create engaging and robust quizzes for students. What do you need from me?”**

“To create engaging and robust quizzes for students using Phind, I'll need the following information from you:

1. **\*\*Subject Matter\*\***: Specify the subject or subjects you're focusing on. This could range from mathematics to literature, science, history, etc.
2. **\*\*Grade Level\*\***: Indicate the grade level of the students for whom you're creating the quizzes. This will help tailor the content and difficulty level appropriately.... With this information, I can assist you in designing quizzes that not only assess students' understanding but also engage them in the learning process, potentially incorporating elements of gamification, real-world applications, and personalized learning paths.”

# Prompt engineering (images)

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- Ask it for specific format, in the following order:

**“Can you create an image [adjective + noun + verb + style]” e.g.:**

## **Referencing**

Best practice in this regard is evolving. See UHI’s support tool Cite Them Right (and select Harvard).

“Can you create a Minimalist image of a person cooking, in black and white, inspired by traditional Chinese art”

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Image: Copilot

“Can you create an atmospheric picture of a 1920s detective, investigating a crime scene, as a digital painting.”

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Image: Copilot

“Raised by a historian, Ella’s hazel eyes, often shielded by reading glasses, reveal a life immersed in tales of ancient civilizations and untold secrets. Her passion for knowledge is evident, and an old compass she always carries symbolizes her boundless journeys. Ella’s adventurous spirit contrasts sharply with her meticulous nature, especially when she’s deciphering ancient codes.

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However, this fervor occasionally blinds her to immediate dangers. Her driving force is the legend of the ‘Lost City’, a story passed down through her family for generations, and her unmatched ability to decipher ancient languages is her key to unlocking its secrets”



Image: Copilot





# Scenario 1: Gathering information



# Scenario 2: Learning Outcomes



*Scenario 3:  
Lesson planning*

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# Content Generator

Subject

Social Studies

Grade

Post Secondary (College Level Students)

## Favorites



Engagement Activities



Lesson Seed



Unit Plan



## Resources

Planning

Information Objects

Independent Practice

Cooperative Learning

Gamification

Questions



Prior Knowledge + Scaffolding



A list of methods for scaffolding prior knowledge necessary for students to engage with to-be-learned material.



Learning Objective + Success Criteria



Objective for the class and the scaffolded steps to reach that objective.



Assessment Measures



Evaluate students' level of attainment in pursuing mastery of course content.



Rubric



Precise rubrics, streamlining grading and providing clear feedback.



Unit Plan-2023-10

Unit Plan: Post-World War Tw

Grade Level: Post Secondary

Objective: Students will ana  
Two.

Lesson 1: Introduction to Pos

Objective: Students will unde

1. Hook: Show a video clip
2. Discuss the impact of W
3. Introduce the concept of
4. Assign readings or provi
5. Formative Assessment: F

Lesson 2: Traditional Gender

Objective: Students will comp

1. Review the traditional ge
2. Present examples of cha
3. Lead a class discussion o
4. Assign a small group act
5. Formative Assessment: F  
post-war expectations.

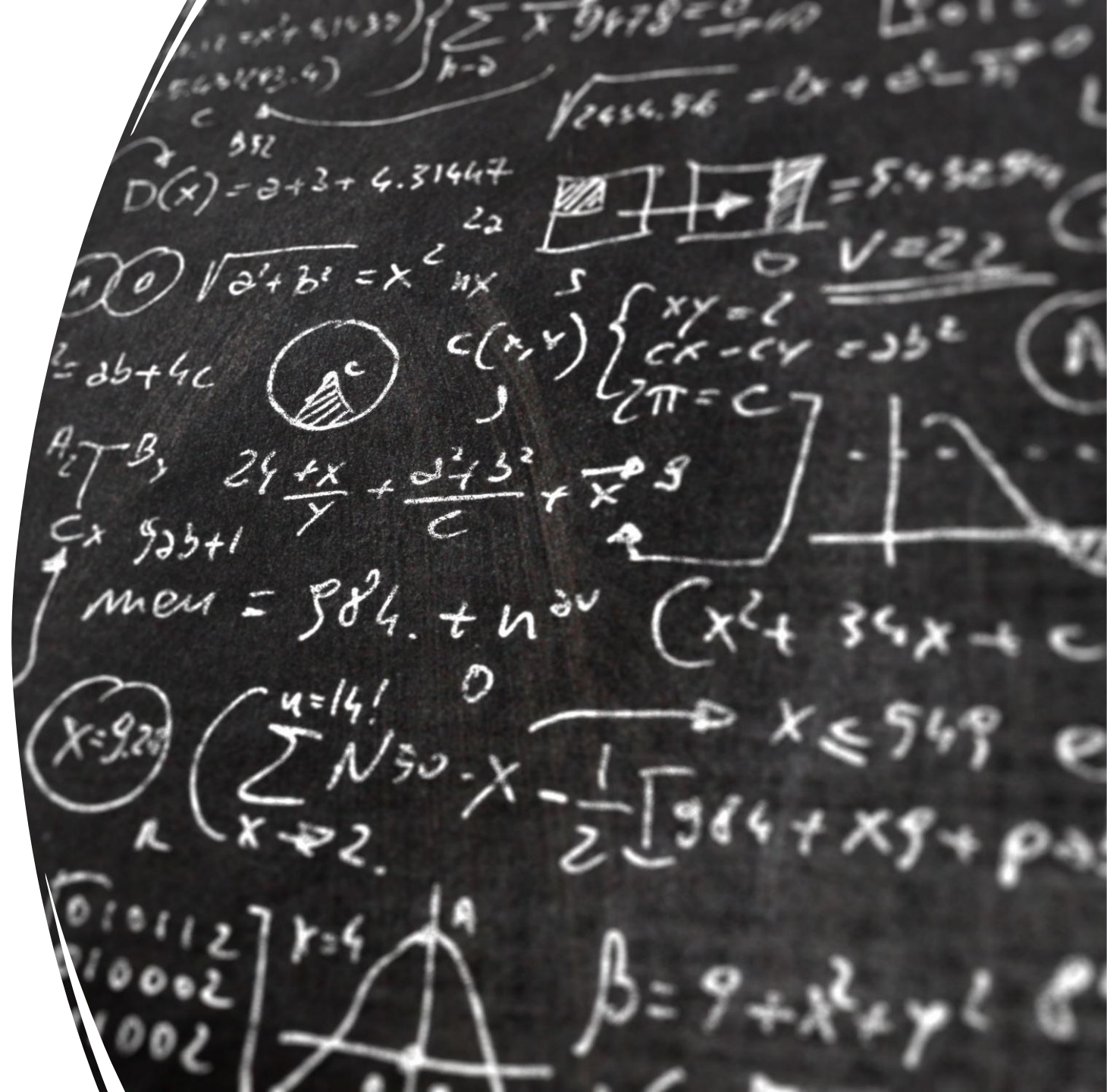
# Scenario 4: Interactive activities

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“I’m teaching a practical subject online...”





# Scenario 5: Assessments



Merely scratching the surface!