



Gen AI, Schools, and Education

A Guided Tour

Have a go.



OpenAI's ChatGPT



Microsoft's Copilot

Google's Gemini
Meta AI

A prompt plus multi-turn
chat

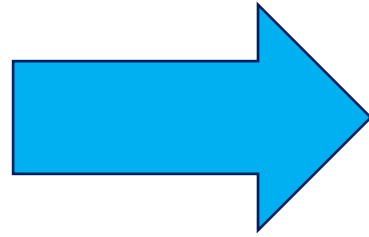
List for me 50 uses
for a wire paper clip

Tell me 10 more

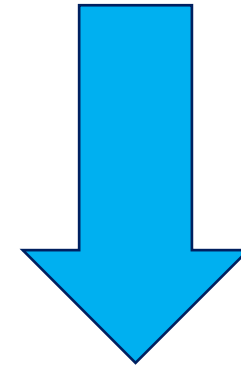
Create for me detailed
instructions how I might
create...



Core Understandings



Practical Experience



Enriching students' learning

Every step matters!





Core Understandings

Definitions

Terminology

Myth
busting

Ethics

“Boundaries”

TLDR: What is Generative AI?

[From: Microsoft]

Too Long
Didn't Read!

I can
read this
later!

Just give me
the
highlights!



- **Generative Artificial Intelligence (AI)** is an exciting frontier in technology, building on decades of research in the broader field of AI. **GAI** or **Gen AI** is a sub-branch of artificial intelligence that's capable of generating new content such as texts, images, videos, or even coding! It does so by learning patterns from existing data and understanding the context and intent of language. Generative AI tools can produce fascinating and imaginative creations, making it a powerful tool that's used by various professions.
- Gen AI tools are powered by Large Language Models (LLM). LLMs are mathematical algorithms that are pre-trained on large amounts of data (think billions!) of texts, from books to articles to entire internet archives. Through the training process, LLMs become proficient at algorithmically predicting the most likely words to follow in a sentence. This allows the model to capture language usage and patterns, resulting in their exceptional language skills.
- Prime examples of applications that are powered by LLMs are **ChatGPT** and **Microsoft Copilot**. The LLMs behind these applications excel at grasping and responding to everyday language (in the form of user made **prompts**). They can craft responses that sound like natural conversation.

The very least you need to know!

Lots of different types of AIs.
You have almost certainly used AI already.
We're talking **Generative AI** – like Chat**GPT**.

Ubiquitous

GAI is the first **general purpose technology** since the Internet.

2017 breakthroughs in Large Language Models (LLMs) allowed AI to create new content.

Undetectable

General purpose technologies led to many other inventions and become ubiquitous.

LLMs are models trained on billions of pieces of online information and, in essence, the ways that language works. This creates a predictive effect and allows for a “**chat**-like functionality” using “**prompts**”.

Transformative

Steam, Electricity, the Internet

LLMs that existed prior to 2022 led to the creation of **Generative AI**... **GAI**

November 2022: OpenAI's **ChatGPT** [**Chat** – **Generative Pre-trained Transformer**] was relatively unexpected in its ability to perform highly in tests.

Disruptive
... especially in fields such as **education**



Human intelligence!



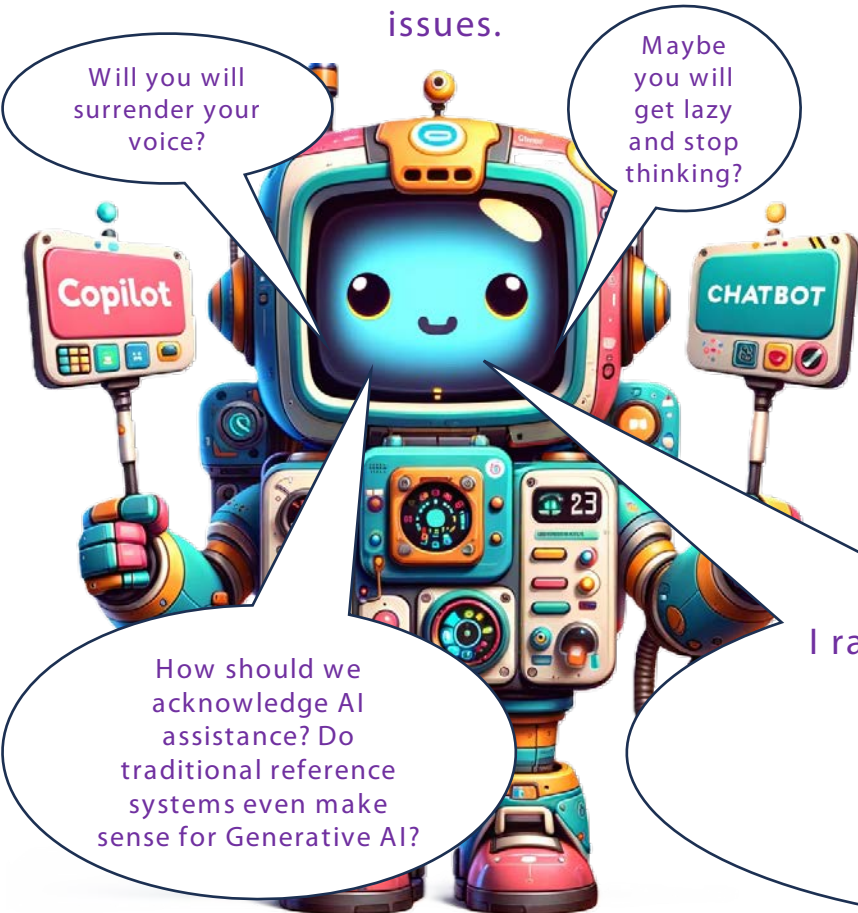
Hi,
A.I.

Artificial Intelligence!



Ethical questions, issues and concerns

Emerging and legitimate concerns include environmental impacts, energy impacts, jobs, data security and privacy, integrity, bias, fraud, crime, terrorism PLUS educational, wellbeing, and pedagogical questions... There is a whole community at work on these issues.



Some Myth Busting...

“IA regulation”

“AI accuracy”

“AI hallucinations”

Court cases and decisions

Guardrails within models

School Guidelines

School Codes of Conduct

I raise some very significant ...
Ethical questions ...
Legal questions ...
Pedagogical questions ...
Purpose questions ...
Existential questions ...

Existing industry standards, laws and regulations both in Australia and internationally (e.g. USA, EU)

Australian Framework

State and Systemic Guidelines

QCT Code of Ethics (for teachers)

But not so many accuracy and hallucination questions!

Some talking points:

How reliable / accurate / credible are Generative AI tools?

- Bias? Fabrication? Hallucination? Ghosts?
Jagged Frontier? Manners? Pleading? Weirdness?

Integrity and authenticity concerns?

- Plagiarism, Tutors, Parents, Teacher Aids
- Assessment design, checkpoints, process not product
- Acknowledgement of Assistance and Referencing [... yet.]
- Human Intelligence + Generative Artificial Intelligence.

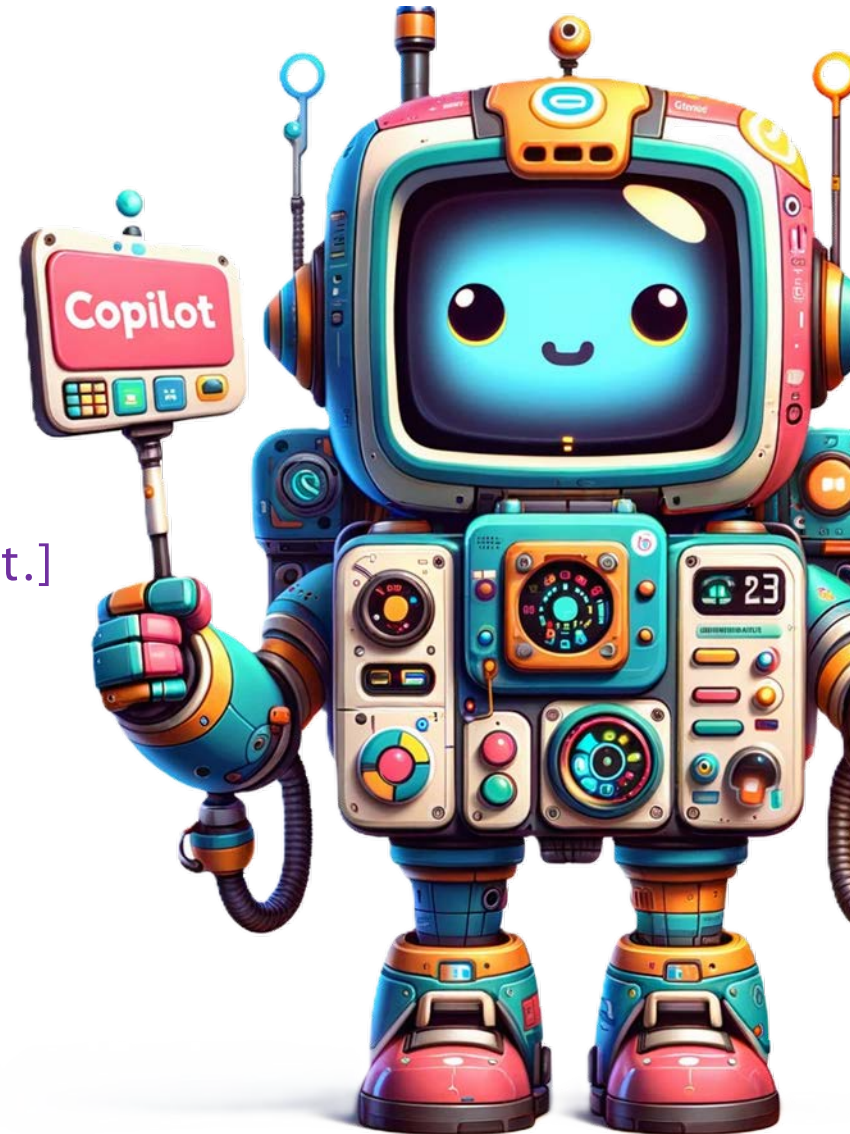
What tools to use?

- The never-ending, ever-changing 'Costco'; 'Wrappers'

Safety, privacy, ethics of using AI?

Ask me (almost) anything... ?

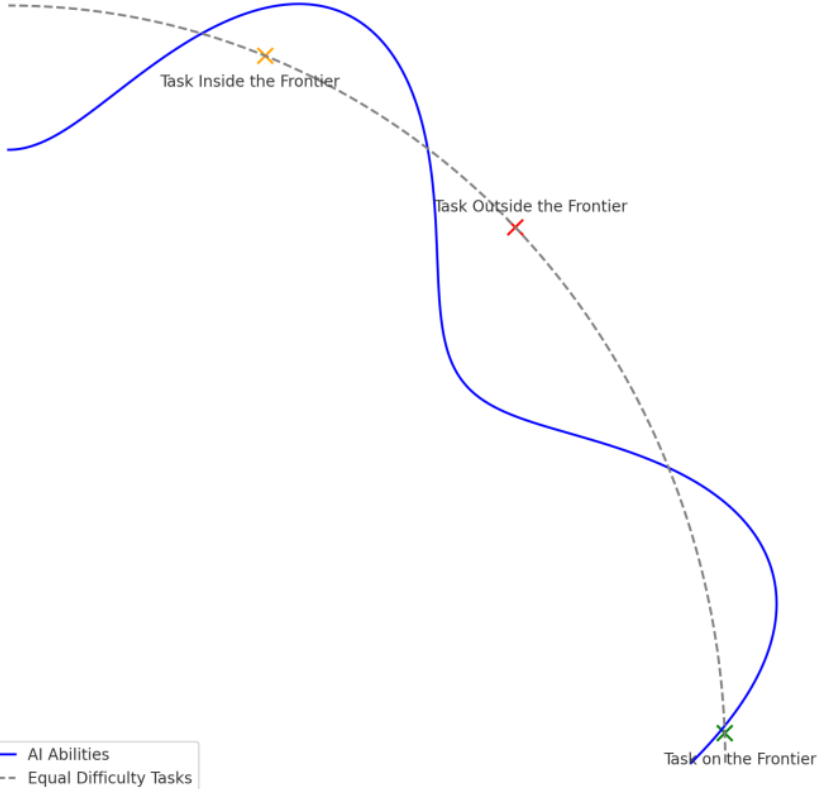
I'll try to give you a succinct and accurate (humanities) answer.





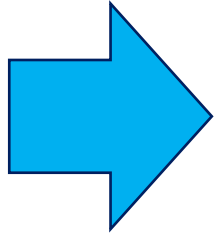
HELM Leaderboard

Jagged Frontier of AI Capabilities

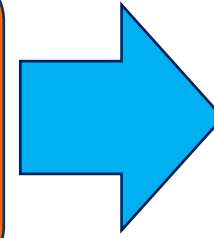


“Practical AI”

Some basic principles for effective use of Generative AI...



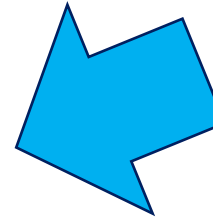
Generative AI works best as a conversational exchange. Each conversation commences with a **‘prompt’**.



The prompt starts an interaction... a **‘chat’**



The better the prompt the better chat and, then, the better the output.



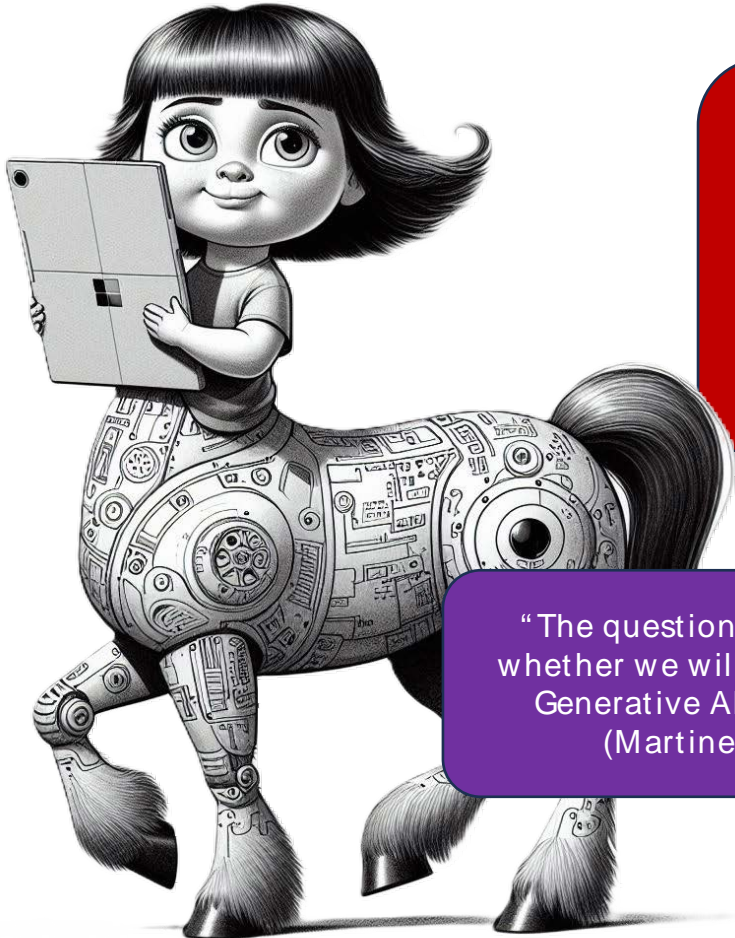
Let’s correct a common misconception: Prompts don’t have to be complex or ‘engineered’ to be effective. Sometimes very simple prompts get great results. Prompting will get easier!

“The question is no longer whether we will interact with Generative AI, but how.”
(Martines, 2023)

It’s all about the chat!

Best Practice Advice: Practice and Play.

“Choose and develop your use of one key GAI tool... but experiment and play with many.” [Best users currently are largely self taught.]



Prompts don't have to be complex or 'engineered' to be effective.

Sometimes very simple prompts get great results.

The prompting process will get easier!

The best outcomes result from your considered interactions with the Generative AI tool... the 'chat functionality'.

Use your HI, your professional knowledge, experience, and skills, to get towards a desired outcome WITH THE HELP OF AI.

It's a copilot not the pilot!



WARNING!

Don't stop with the response to your initial prompt.

Many users stop after their initial prompt.

This tends to limit their success.

(Fun fact: They may have also under achieved using search engines!)



<https://copilot.microsoft.com/>



Sign in

Copilot

Your everyday AI companion



Write a short essay that analyzes the merits of basic income



Create a Renaissance-era painting of a farmhouse at dawn



Should I have a hometown wedding or a destination wedding?

Check for mistakes. [Terms](#) | [Privacy](#) | [FAQs](#) [Get Copilot Pro](#)

Choose a conversation style

- More Creative
- More Balanced**
- More Precise

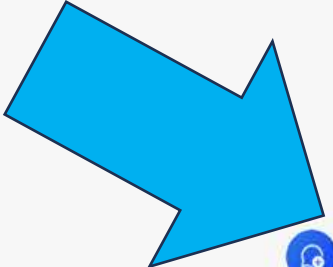
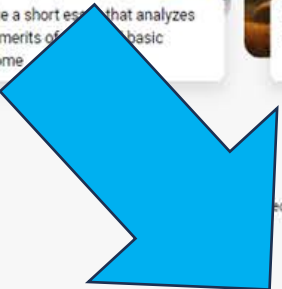
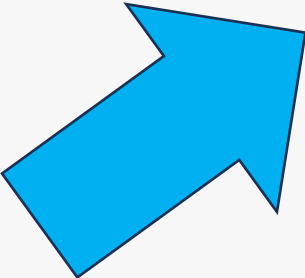


Ask me anything...



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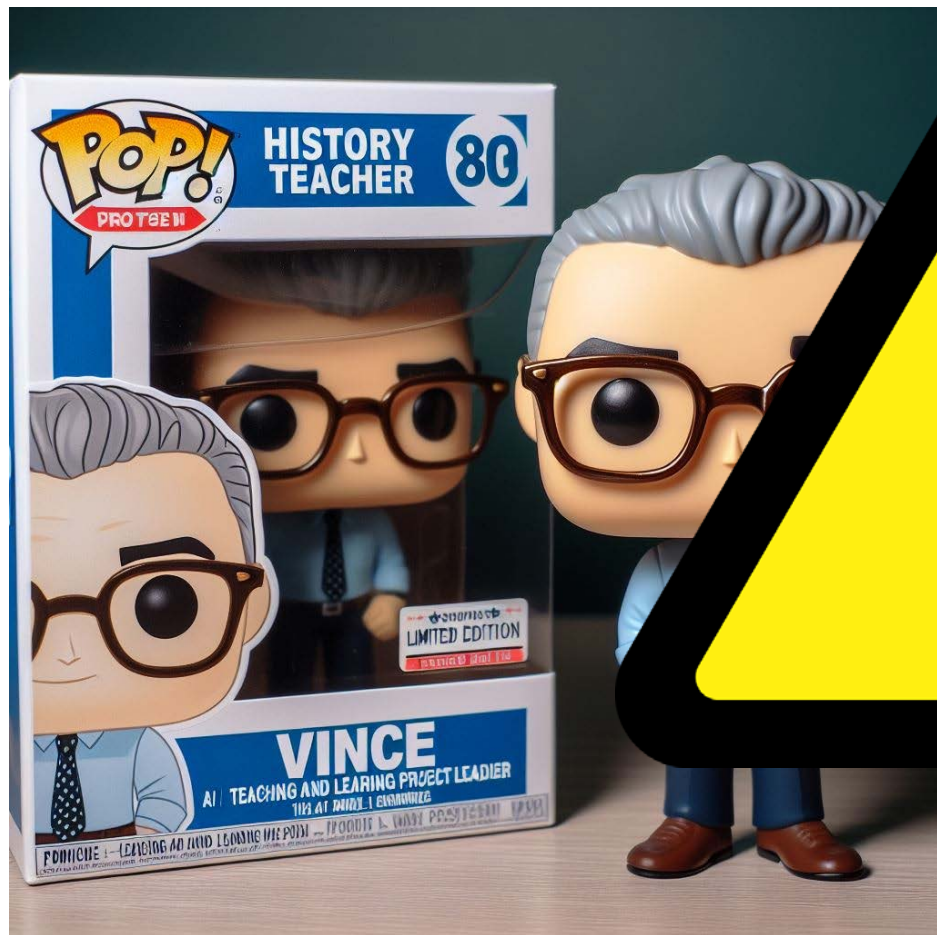
[Feedback](#)



Go to <https://copilot.microsoft.com/>

1. Sign in
2. Switch to "More Creative"

Create a Funko Pop doll of [DESCRIBE YOURSELF]. The Funko Pop doll's box must be labelled "Year X teacher". The Funko Pop doll's packaging must include your name.



or another doll...



Elements of an Effective Prompt – An Example For You

Act as an effective and helpful tutor who breaks down complex subjects into easy explanations.

Explain the process of photosynthesis to a

14 year old Australian high school student, to assist with biology exam preparations.

Your response should be in dot point form. Use analogies in your explanation.

Persona: Ask the tool to assume a role

Objective: What do you want the AI to do

Audience: Specify who it's for

Context: What does the tool need to know

Boundaries: Set your own direction & limitation

Tip 1

Give Clear Instructions

Use commands that instruct the AI tool on what you want to generate, such as 'explain', 'translate', 'summarize' or 'compare'.

Tip 2

Provide Context

Adding context and background information can help the tool to understand the task better. For example, mention the project type such as 'short story', 'report' or 'outline'

Tip 3

Iterate & Experiment

Try different instructions and techniques if you don't get the results you want. Prompting can be like an experiment that may require several rounds of iterations! Chat, challenge, refine... "boss the bot" ... "call out BS".

The good news!

Some evidence indicates that the skills needed to effectively use Generative AI are a match with the skillset that effective teachers use when setting tasks, clarifying expectations, engaging with and challenging student responses, and giving feedback.

(Early evidence: Power users? Literature, humanities / social studies, art teachers!)

Persona: Ask the tool to assume a role

Objective: What do you want the AI to do

Audience: Specify who it's for

Context: What does the tool need to know

Boundaries: Set your own direction & limitation

Repeated "I - statements"
Repeated "You - statements"

Purpose

Audience
and/or
Context

Verbs
Addition specific directions

TLDR: A Basic Prompt Writing Routine



“2 eyes and a vee”

This routine develops prompts based upon students writing **two “I-statements” and a well-directed verb (the “V”)**.

The first **“I statement”** students write into their prompt in this routine should refer to themselves as a **learner** – and establish themselves as the audience and learner for AI responses. For example:

I am an Australian school student aged 10 who is learning how to write fairy tales.

The second **“I statement”** should refer to the specific content that they hope the GAI will assist them with. The second “eye” clarifies and refines the objective of the AI so as to better allow for a targeted response.

I am trying to understand how fairy tales can be used to teach young people life lessons.

The second “I statement” in the 2 Eyes and a Vee approach has a powerful benefit. It forces students to consider their purpose when they create prompts for their use of generative AI.

The **“V”** refers to the need to direct the GAI’s response with verbs. For example:

Explain for me how fairy tales can be used to teach young people life lessons. List for me, in bullet point form, five examples of where this happens in real fairy tale stories.

Students’ consideration of the **verbs** that they wish to use in the prompt has been helpful in the teaching process. Students, when engaging with the 2 Eyes and a Vee method, have increasingly engaged in rich conversations about the meanings of cognitive verbs that often underpin a syllabus and that guide assessment tasks.

Students who are making use of this routine are developing an increased awareness of the important differences between verbs such as:

explain, define, discuss, outline, list, compare, synthesise, develop, argue, summarise and so on.



Personal Copilot
https://copilot.microsoft.com

Microsoft account | Copilot | Gmail | Gemini | Activity | Vince Wall... | Home | Substack | Samsung SmartThi... | AI 4 ED / AI for Ed | AI | Other favorites

COPILOT NOTEBOOK

Copilot

Your everyday AI companion

Help me create a plan for a vegetable garden

Compose a blues song that laments the loss of time
Suno Terms | Privacy

Compose an electronic song about camping
Suno Terms | Privacy

Copilot uses AI. Check for mistakes. Terms | Privacy | FAQs Try Copilot Pro

Choose a conversation style

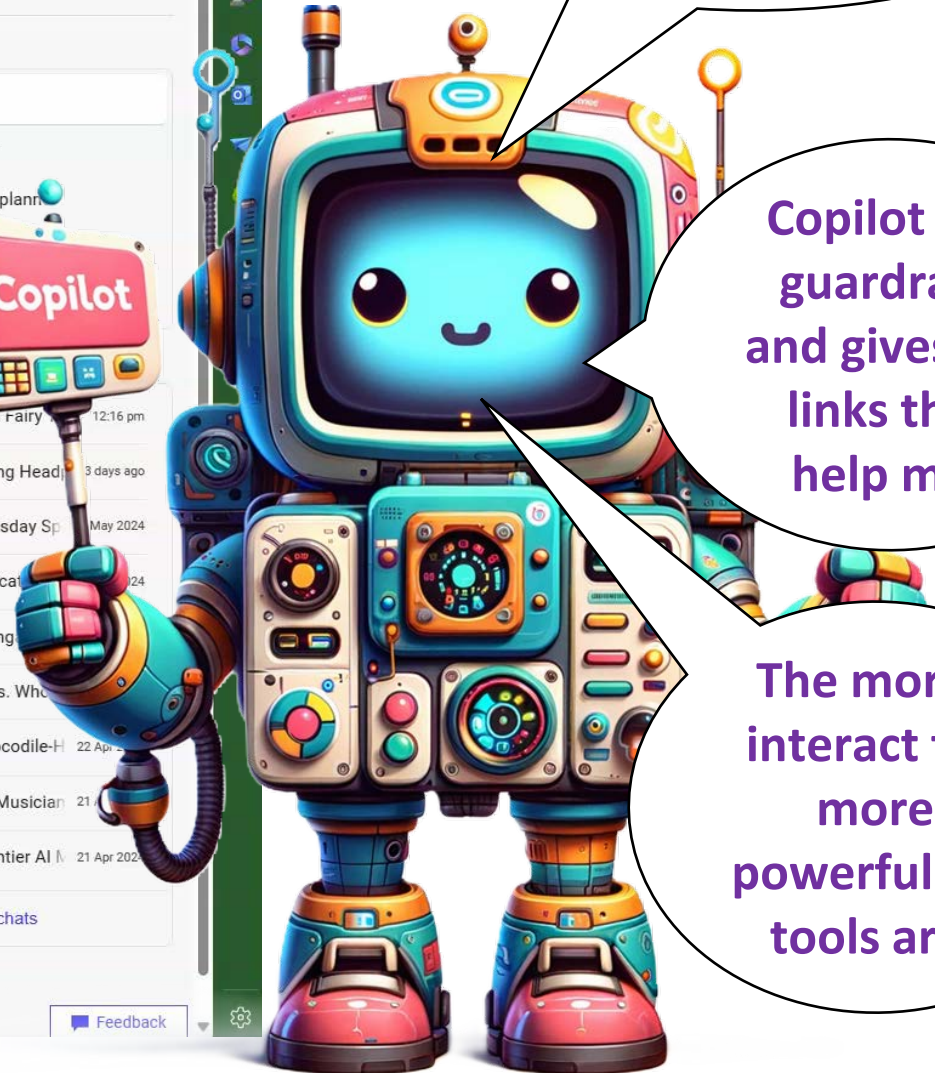
Ask me anything...

Feedback

Should I teach students to be polite to AI?

Copilot has guardrails and gives me links that help me!

The more I interact the more powerful the tools are!



<https://copilot.microsoft.com/>



Sign in

 Copilot

Your everyday AI companion



Write a short essay that analyzes the merits of universal basic income



Create a Renaissance-style painting of a farmhouse at dawn



Should I have a hometown wedding or a destination wedding?

Copilot uses AI. Check for mistakes.

Choose a conversation style

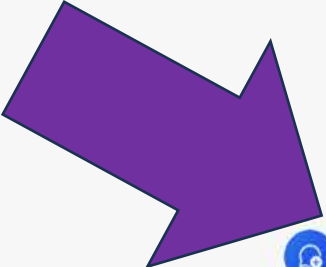
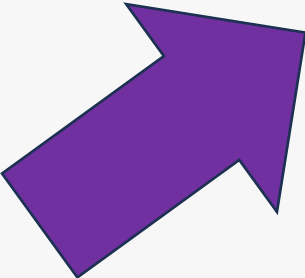
More Creative **More Balanced** More Precise



Ask me anything...

0/2000

Feedback



Go to <https://copilot.microsoft.com/>

1. Switch to "More Balanced"
1. Signing in doesn't matter...

I really enjoyed watching the TV drama series "Peaky Blinders" recently. I enjoyed it because of the unpredictable script, the rich characters, and the plot twists. I also liked the TV shows Ozark, Game of Thrones, Breaking Bad, and The Walking Dead. Suggest for me five more shows that I might like to watch.

Notice the contextual clues + a direction

The use of "I statements" + Verb





Go to <https://copilot.microsoft.com/>

1. Switch to “More Precise” mode
2. Signing in doesn’t matter...

Let’s modify a piece of text using AI to assist a student’s understanding.



Use your HI to “boss the bot” and to call out the BS”

Challenge 1

“Rewrite the following passage of text as if I were a 10-year-old. The passage is: “...”

Follow up:

Use an analogy to explain...

List the five most important points about... in numbered bullet points.

Tell me more about....

Expand upon bullet point 2...

Lower / raise the reading age of the following passage to...



WARNING!

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<https://copilot.microsoft.com/>



Your everyday AI companion



Write a short essay that analyzes the merits of universal basic income



Create a painting of a farm



Should I have a hometown wedding or a destination wedding?

Copilot uses AI. Check for updates. [Get Copilot Pro](#)

Choose a conversation style

- More Creative
- More Balanced**
- More Precise

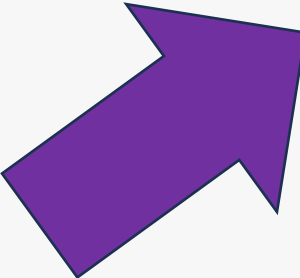


Ask me anything...

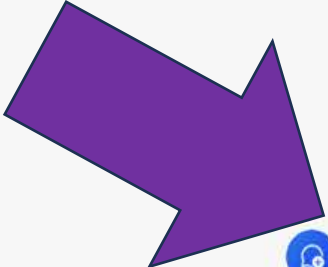


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[Feedback](#)



Sign in





Go to <https://copilot.microsoft.com/>

1. Switch to “More Balanced”
1. Signing in doesn't matter...

Think of a particular teacher's or student's needs.



Use your HI to “boss the bot” and to call out the BS”

Challenge 2

“Assume the role of a highly experienced and specialised curriculum expert and teacher of [----].

Explain the concept of [----] for a student [aged... / with... / in... / who experiences difficulty ... / who has been diagnosed with... / who has a reading age of ...].

Follow up:

Use an analogy to explain...

List the five most important points about... in numbered bullet points.

Tell me more about....

Expand upon bullet point 2...

Lower / raise the reading age of the following passage to...



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More good news!

“A skillset is a skillset in AI!”

Most power users are self-taught. You can experiment from this point in many different ways in your planning.

I am a teacher aide of... Many of my students in ... excel in... provide for me three extension activities that ...

Assume the role of an expert curriculum designer ... Create for me a lesson plan for explores the concept of ... The activities of the lesson must include a range of individualized and differentiated learning experiences for a student who.... 45 minutes of class time. Present this plan in dot point form.

Assume the role of a teacher with AITSL's Highly Accomplished Teacher status. Many of my students in ... are extremely gifted in... concept of... provide for me three analogies that explain...




Assume the role of a highly experienced teacher with expertise in and who ia also an expert curriculum designer. Create a 45-minute lesson on ... that caters for a group of students who ...

Best Practice Advice: Practice and Play.

“Choose and develop your use of one key GAI tool... but experiment and play with many.”

Start with one tool (browser and phone app)...

**Microsoft
Copilot**



Make a song with...

Suno AI

Do some research with...

Perplexity AI

Visit the “pioneer”...

ChatGPT

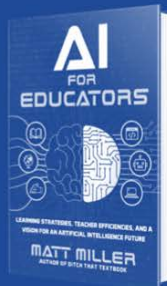


Other
Stuff



Prompt Libraries
(including Copilot Lab)
Exist

WHAT ARE CHEATING AND PLAGIARISM ANYMORE?



AI GENERATED

HUMAN GENERATED

Student plugged prompt into AI, copied response and submitted it to teacher.

AI created a response. Student read, edited, adjusted, and submitted.

Student created multiple AI responses, used the best parts, edited, and submitted.

Student wrote main ideas. AI generated a draft and offered feedback to improve.

Student consulted internet/AI for ideas, then wrote and submitted.

Student wrote all assignment content without consulting AI or the internet.

KEY QUESTIONS TO CONSIDER:

?

Which of these would you consider "cheating"?

?

Which of these is relevant to our students' future?

?

Which of these would you use in your work as an adult?

A question of values?

Integrity?
Respect?

Voice?
Authorship?



Every image in this presentation has been AI created.

A suggestion or two for consideration and further discussion...

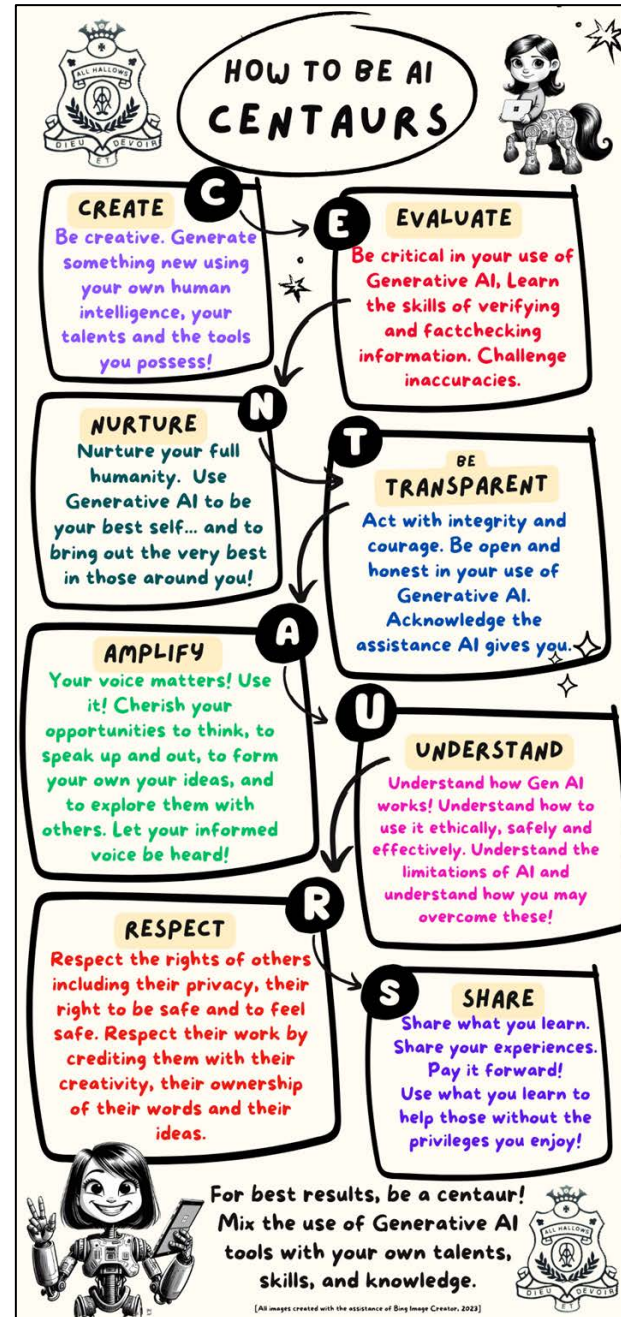
1. Don't quote an AI source. Perhaps (generally) consider it non-academic. Maybe think of it like Wikipedia? It isn't an interview.
2. How do students acknowledge the assistance of parents, tutors, teacher aides, friends and others? What are your expectations around 'assistance'?

Starting with a student?



Talk to them

Develop Shared Guidelines



Be learning focused

Be values focused

Enhance student voice

Share your experiences

Accreditation and Feedback.

- **Add to your QCT CPD records:** 45+ minutes
 - **Standard 3:** Plan for and implement effective teaching and learning
 - **Standard 4:** Create and maintain supportive and safe learning environments
 - **Standard 6:** Engage in professional learning

- **ETPF:** [Understand the Teacher Standards \(aitsl.edu.au\)](https://aitsl.edu.au) and [Teacher Standards \(aitsl.edu.au\)](https://aitsl.edu.au)

AITSL Some *Proficient Standard* samples:

APST 2.6: Use effective teaching strategies to integrate ICT into learning and teaching programs to make selected content relevant and meaningful.

APST 3.3: Select and use relevant teaching strategies to develop knowledge, skills, problem solving and critical and creative thinking.

APST 3.4: Select and/or create and use a range of resources, including ICT, to engage students in their learning.

APST 4.5: Incorporate strategies to promote the safe, responsible and ethical use of ICT in learning and teaching.

APST 6.2: Participate in learning to update knowledge and practice, targeted to professional needs and school and/or system priorities.

