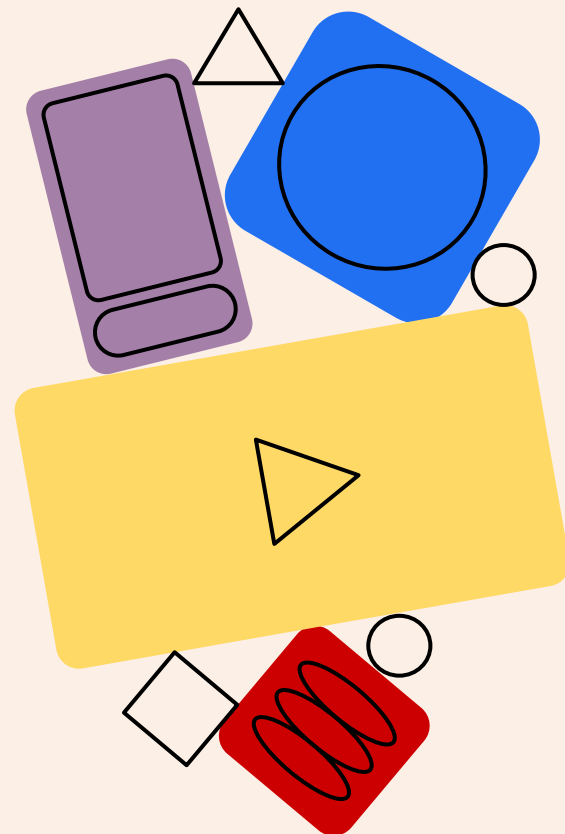


Explore the World of Artificial Intelligence & ChatGPT for Teachers

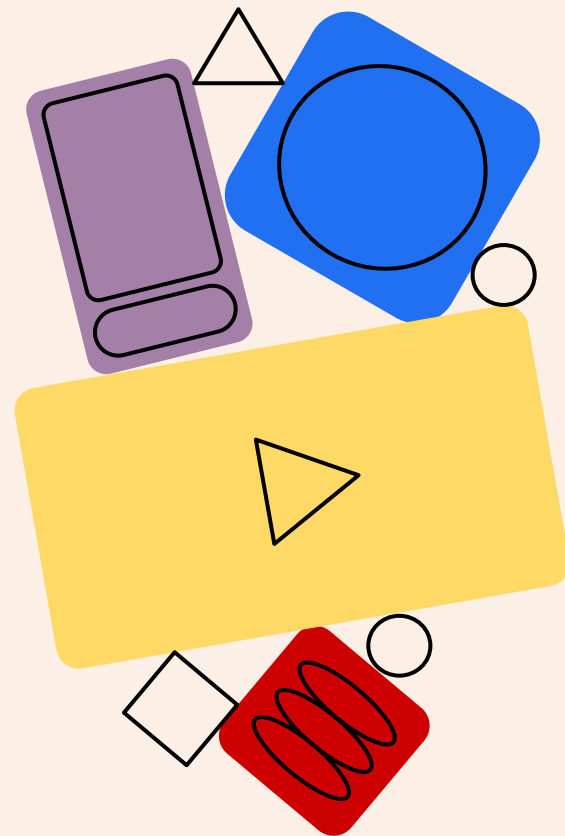
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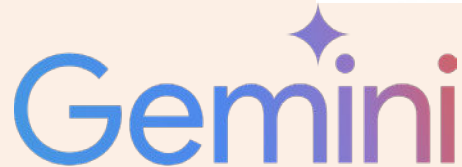
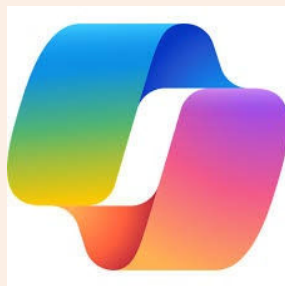
Ms Josianne Grech & Ms Jana Brown



Making sense of the AI
landscape

Large Language Models





ChatGpt



Developer: OpenAI

History: Launched in November 2022, ChatGPT gained widespread popularity for its conversational abilities and human-like text generation. It has undergone several model updates (e.g., GPT-3.5, GPT-4) with improved capabilities and features.

Strengths:

- Excels at engaging in natural and open-ended conversations.
 - Highly capable in creative text generation (poems, scripts, emails, etc.).
 - Can explain concepts at various levels of complexity.
 - Useful for brainstorming, generating ideas, and drafting different types of content.
 - Widely accessible through its web interface and API.
-

ChatGpt



Weaknesses:

- Can provide inaccurate information.
- May lack the specificity of search-focused tools.

Uses for teachers: Can be used for generating educational content, assisting with lesson planning, and providing interactive learning experiences.

Copilot



Developer: GitHub (owned by Microsoft) & Microsoft

History:

- **GitHub Copilot:** Launched in 2021, initially focused on code completion and generation for developers. It was trained on a vast amount of publicly available code.
- **Microsoft Copilot (formerly Bing Chat Enterprise):** Evolved from Microsoft's search engine AI capabilities, integrating more broadly into Windows and Microsoft 365 products.

Strengths:

- **GitHub Copilot:** Excellent for coding assistance, suggesting relevant code snippets and helping with debugging in various programming languages. Understands project context within integrated development environments (IDEs). Can improve code quality and efficiency for teachers who code for their lessons or research.
 - **Microsoft Copilot:** Integrated into familiar Microsoft applications (Word, PowerPoint, Excel, Teams), aiding with content generation, summarization, and data analysis. Can help teachers draft emails, create lesson plans, and analyze student data. Strong integration with web search for up-to-date information.
-

Copilot

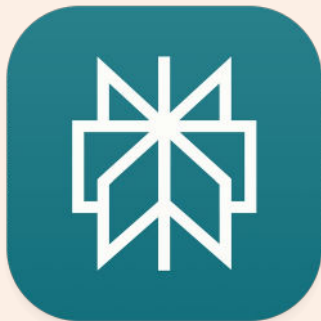


Weaknesses:

- **GitHub Copilot:** Primarily focused on code; less versatile for general language tasks outside of programming. Suggestions may sometimes be incorrect or not aligned with best practices, requiring review. Can struggle with niche or less common programming languages.
- **Microsoft Copilot:** Requires Microsoft ecosystem for full functionality

Uses for teachers: Can be used to teach coding by providing examples and assisting students with code completion, helping them focus on understanding concepts rather than syntax.

Perplexity AI



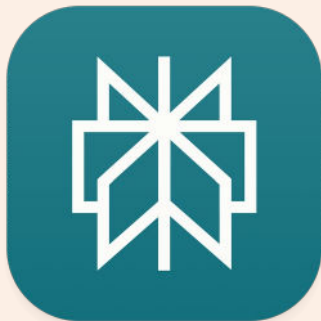
Developer: Perplexity AI

History: Founded in 2022, Perplexity AI quickly gained attention for its focus on providing concise answers with citations to sources. It aims to be a research tool that directly answers questions using web-based information.

Strengths:

- Excels at providing direct answers to questions with clear citations, allowing for easy verification of information.
 - Strong focus on information retrieval and summarization from the web.
 - Offers a conversational interface for refining searches and exploring topics in more depth.
 - Can summarize research papers and complex topics efficiently.
 - Mobile application provides accessibility across devices.
-

Perplexity AI



Weaknesses:

- While it cites sources, the depth of understanding and nuanced reasoning might be less than some other LLMs.
- May sometimes provide excessive information or struggle with highly specific or subjective queries.
- The free version might have limitations compared to the Pro subscription.
- Hallucination (providing plausible but incorrect answers).
- Plagiarism concerns.

Uses for teachers: Can be used for research assistance, helping students find reliable sources and providing concise summaries of complex topics.

Grok AI

Developer: xAI (Elon Musk's AI company)

History: Released in late 2023 as a competitor to OpenAI, integrated into X (formerly Twitter)

Strengths:



- **Real-time Information Access:** Grok can access and process information from the X platform, providing up-to-date answers on current events and trending topics.
- **Humorous and Rebellious Tone:** Designed to "answer questions with a bit of wit" and having "a rebellious streak," Grok can engage in conversations in a more informal and entertaining way. It was modeled after *The Hitchhiker's Guide to the Galaxy*.
- **Multimodal Capabilities:** Newer versions, such as Grok-3 and Grok-1.5V, can process text and visual information like documents, diagrams, graphs, screenshots, and photographs. Grok can also generate images from text prompts.
- **Strong Technical Prowess:** Grok models have shown strong performance in benchmarks for math, coding, and reasoning, sometimes outperforming competitors in specific areas.
- **Transparency:** Grok may sometimes show citations or links to X posts it references.

Grok AI



Weaknesses:

- **Potential for Inaccuracies:** Since it's trained on publicly available internet data, including X, Grok may sometimes provide misleading or factually incorrect information.
- **Informal Tone:** The humorous and sometimes "unhinged" tone may not be suitable for all contexts, especially professional or academic settings.
- **Reliance on X Data:** While providing real-time information, its strong reliance on X might limit its scope and potentially expose it to biases or misinformation present on the platform.

Uses for teachers:

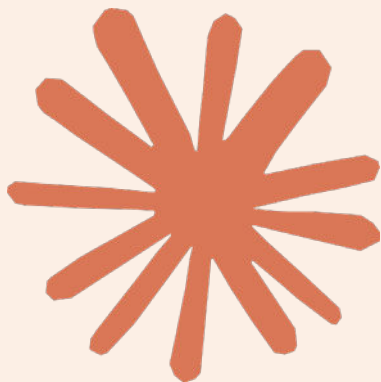
Staying Current: Teachers can use Grok to quickly find out about the latest news and trending discussions relevant to their subjects.

Brainstorming and Idea Generation: The chatbot's unique personality might help teachers think outside the box and generate creative ideas for lessons or activities.

Explaining Concepts in Different Ways: Teachers could ask Grok to explain a concept with a touch of humor or in a more informal style to engage students.

Quick Research: While verifying information is crucial, Grok can provide a starting point for researching specific topics and identifying relevant discussions on X.

Claude AI



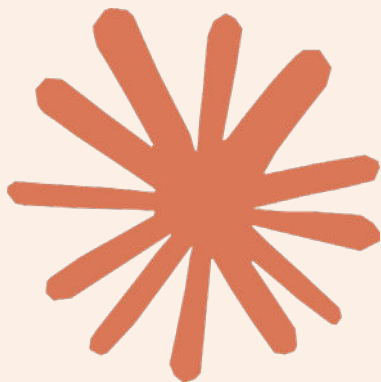
Developer: Anthropic

History: Anthropic, founded by former OpenAI researchers, developed Claude with a focus on safety and ethical considerations in AI. Claude has gone through several iterations, with increasing context window sizes and improved capabilities.

Strengths:

- Emphasizes safety and transparency.
 - Offers more controlled and predictable interactions.
 - Good at editing and refining written work, checking grammar, and improving flow.
 - Known for strong reasoning abilities and advanced problem-solving.
 - Excellent at summarizing large amounts of text and creating knowledge bases.
-

Claude AI



Weaknesses:

- Can be less creative in open-ended tasks
- Less information available on specific limitations compared to other models.
- Lack of Real-Time Information Claude's knowledge is based on its training data and doesn't include real-time updates. Teachers should verify current events or recent developments independently.

Gemini



Developer: Google DeepMind

History: Rebranded from Bard to Gemini in 2024, built on Google's deep learning expertise

Strengths:

- Multimodal capabilities allow it to process diverse inputs (e.g., text, images, audio) seamlessly .
- **Integration with Google Ecosystem:** Gemini has deep integration with Google's suite of tools and services, making it particularly powerful for users within the Google ecosystem. This includes enhanced capabilities in research, productivity, and data analysis.
- Excels in complex reasoning and multilingual tasks.
- Strong in math and logical reasoning.

Gemini



Weaknesses:

- Privacy and Data Concerns Being a Google product, there are potential concerns about data usage and privacy that educators and institutions might need to carefully consider.
- **Evolving Capabilities:** As a relatively new model family, its capabilities and limitations are still being actively explored and refined.
- **Inconsistent Performance:** Unlike some AI models, Gemini can show variability in performance across different tasks and domains. Its responses may not always be consistently high-quality.

Uses for Teachers:

- Enhanced Engagement: Multimodal features make learning materials more interactive and accessible, improving retention and understanding.
 - Summarizing Complex Information: Condensing lengthy articles, research papers, or other materials for easier comprehension.
 - Can be integrated with Google Classroom for assignments
 - Good for STEM subjects, including math problem-solving
-

DeepSeek

Developer: Hangzhou DeepSeek Artificial Intelligence Basic Technology Research Co., Ltd. (DeepSeek), funded by Chinese hedge fund High-Flyer.

History:

- Founded in July 2023 by Liang Wenfeng (co-founder of High-Flyer).
- Focuses on developing cost-efficient, high-performance language models.

Strengths:

- **Cost-Effective Performance:** Aims to provide performance comparable to leading models (like GPT-4) at a significantly lower cost for training and inference.
- **Strong in Technical Domains:** Excels in coding, mathematics, and logical reasoning tasks. Often benchmarks highly in these areas.
- **Open-Source Availability:** Many DeepSeek models are open-weight or open-source, allowing for greater accessibility, research, and customization.



DeepSeek



Weaknesses:

- **Potentially Less Polished Conversational Abilities:** While capable, some comparisons suggest its conversational flow and versatility might not yet match models primarily focused on general dialogue.
- **Newer Player:** Being a more recent entrant, its ecosystem and community support might still be developing compared to more established LLMs.
- **Focus on Technical Tasks:** While capable in general language, its strengths are particularly pronounced in technical domains, which might make it less of a general-purpose assistant for all types of tasks.

Uses for teachers:

- **Coding Education:** DeepSeek-Coder provides robust support for teaching programming languages and solving complex coding problems.
 - **Mathematics Support:** Its strong mathematical reasoning capabilities can assist in teaching advanced math concepts.
 - **Multilingual Learning:** Excellent for language teachers, especially for Chinese language education or multilingual classrooms.
-

ADVANCED PROMPTING

The Basics of Prompting



Task



Context

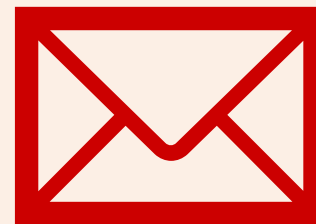


Reference



Evaluate

Advanced Prompts



Tone – Set the Voice and Personality: Instructing the AI to adopt a specific style or emotion (friendly and casual, professional and formal, witty or humorous).

"Write a welcome email for new students in a warm, friendly tone."

Advanced Prompts

- Format – Control the Output Structure: Asking for the response in a specific format (list, table, quiz, email...)
- "Summarize the causes of World War I in a bullet - point list for a history handout."

Advanced Prompts

- Audience – Tell the AI Who It's For: specifying the intended audience (parents, students, adults, colleagues).
 - “Write instructions for using Google Meet for teachers over 50 who are not good at using technology.”
-

Advanced Prompts

- Multi - Step Tasks – Asking the AI to complete a complex task in stages or a sequence within one prompt, or across several.
- "Create a B2-level reading comprehension activity on urbanization. First, write a 250 - word article. Then, write five multiple - choice questions and answers. Finally, provide a short glossary of difficult terms."

Few-shot Prompting – Teach by Example

You show the AI a few examples of what you want before asking it to generate more - the AI learns the pattern or style and replicates it.

Prompt:

"Here are three sample comprehension questions about a short story. Write three more in the same style."

Examples:

Q1. What was the main character's problem?

Q2. Why did she hide the letter?

Q3. What happened at the end?

Chain-of-Thought Prompting

Make AI Think Aloud: ask the AI to explain its reasoning step-by-step before giving the final answer. It improves accuracy in complex tasks, especially logic, math, or evaluation.



"You are grading an essay. First, list what the student did well. Then explain two weaknesses. Finally, give a mark out of 10. Think through your answer step-by-step."

Role Prompting – Give the AI a Persona

You tell the AI to act like someone with a specific background or personality - it changes the AI's tone, focus, and assumptions.

“You are a creative writing coach helping a shy teenager.”

Constraints – Set the Rules



You give clear limits or instructions the AI must follow.



“Limit your explanation to 100 words.”

Evaluation is CRITICAL!

Human oversight is indispensable and we have to check if the AI's output is factually correct and is suited to our needs.

We always need to check for hallucinations and biases.

Hallucinations

In AI, a hallucination refers to when a model generates incorrect, misleading, or entirely fabricated information that is not based on real data. This can happen in large language models (LLMs) like ChatGPT, image generators, and other AI systems.

Bias

Bias in AI output refers to systematic and unfair preferences or distortions in the responses generated by an AI model. Bias can arise from the data the model was trained on, how it was designed, or how users interact with it.

Prompt Example



You

You are an English as an Additional Language Teaching Assistant. Generate 10 questions which test the use of the present perfect in English. The questions should be gap fill questions, where the present perfect has been left out, and the verb that the students need to change is given at the end of the question in brackets. For example, "I _ the bottles and cans, so they will be reused. (recycle)", where the answer would be "I have recycled the bottles and cans, so they will be reused."

I am teaching teenage students at a lower intermediate level of English, and the language in your questions should be graded appropriately. Your questions should try to use vocabulary from the topic of sustainability, because this is what we are studying in class. Your tone should be instructive and friendly.

BE CAREFUL ABOUT PRIVACY

Protect your students

NEVER give any personal or specific information about yourself, colleagues, institution, or students to the AI.

ANONYMISE your data.

Before asking your students to use GenAI tools, check your institution rules or GenAI's rules.

Today's Activity:

Your task is to create a 3-to-5-minute video using CapCut.

Instructions:

1. You will have 3 to 5 minutes to collect around 8 to 10 photos/video clips for your project.
2. Once you gather your media, you will begin creating the video using CapCut.
3. After that, we will show you how to create a video using AI.

Thank you for your attention!

