



AI Foundations for Educators Workbook



Pre-Reflection

By the time you complete this course, you'll be able to answer these three essential questions:

1. What is AI and how does it work?
2. How might AI impact teaching and learning?
3. What are best practices for using generative AI ethically and responsibly?

Before you get started with the course content, take some time to take stock of the questions, thoughts, and feelings you have about artificial intelligence.

How do you feel about AI and its potential impacts on education?

What are three things that you're optimistic about and three things you're concerned about?

Things I'm optimistic about	Things I am concerned or skeptical about



Activity 1: Quick, Draw!

Google's [Quick, Draw!](#) is an AI experiment that was trained on hundreds of thousands of doodles drawn by people from all over the world. Engineers used these doodles and a type of machine learning algorithm called a neural network to teach a computer to guess the doodle someone is trying to draw.

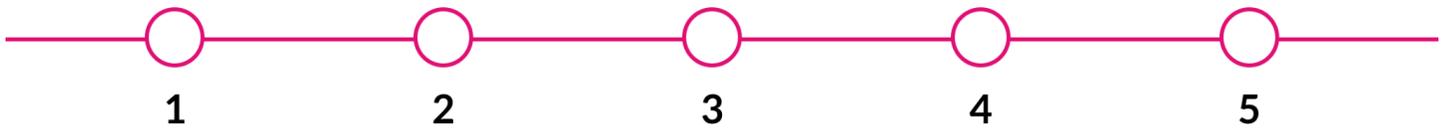
In this activity, you'll be testing whether this AI is any good at deciphering YOUR doodles. You'll be asked to draw six sketches, each in under a minute. As you draw lines, the AI that is powering Quick, Draw! will attempt to guess what you are trying to draw. Follow the instructions and let's see how it goes!

STEP ONE: Go to the homepage for [Quick, Draw!](#)

STEP TWO: Click on the yellow LET'S DRAW button and complete the six prompts.

STEP THREE: Complete the reflection questions below.

On a scale of 1-5 (5 being the best), how well did Quick, Draw! recognize your sketches?



Did Quick, Draw! fail to recognize any of your sketches? Why do you think that is?

What if the challenge grew to include more abstract concepts like "making dinner" or "relaxing." What kinds of potential hiccups do you anticipate?



Activity 2: Quick, Draw! AI Bias

The idea of AI bias can be a bit hard to grasp so let's look at a real-life example involving the Google Quick, Draw! experiment. Follow the steps below, then return to the course.

STEP ONE: [Go to the page](#) that hosts the dataset that was used to train the Quick, Draw! AI.

STEP TWO: Pick one or two doodles to review. Scroll through some of the illustrations and write down any patterns you notice or questions that come to mind.

What doodle(s) did you choose?	What patterns did you notice in the dataset?

STEP THREE: Visit [the dataset for the doodles of a shoe](#). Once again, scroll through the illustrations complete the reflection questions below:

Did you notice any patterns in the “datasets” you reviewed? Were the doodles mostly the same or different?

What did you notice when you looked at the shoes dataset? Did you see any high heels represented?



Activity 3: Using genAI

Generative AI tools need human inputs to create content. These inputs are called prompts and the process of crafting instructions to get the generative AI to produce high-quality responses is called prompt engineering.

We've created **three activities** for you to experiment with generative AI and build some experience with prompt engineering. Pick one of these activities and follow the instructions.

Note: You may use any of the generative AI tools you've learned about or any other one you feel comfortable using.

Option 1: Creating a Lesson with Generative AI

STEP 1: Clarify your objective. Answer the questions below to help identify the information you should include in your prompt.

What grade are you going to teach this lesson to?

What topic do you want to cover in this lesson? Identify 2-3 learning objectives.

What strategies or types of pedagogy do you want to incorporate into your lesson?

STEP 2: Write your prompt. Use the information from the previous step to write a clear description of what you want the AI to create.

Prompt:

STEP 3: Be “in the loop.” Review the output generated by the AI and complete the reflection questions below.

Based on your experience, do you think the outputs from the AI are accurate, relevant, and aligned to the goals you outlined in your prompt?

Are there any things about the AI output that you'd like to change or refine?

STEP 4: Now iterate! Prompt the AI to make any necessary revisions or changes until you get an output you're happy with.

Option 2: Designing a Learning Resource with Generative AI

STEP 1: Clarify your objective. Answer the questions below to help identify the information you should include in your prompt.

What type of resource would you like to develop?

- | | |
|---|---|
| <input type="checkbox"/> Discussion questions | <input type="checkbox"/> Examples of scientific questions |
| <input type="checkbox"/> A reading list | <input type="checkbox"/> Design thinking prompts |
| <input type="checkbox"/> Math problems | <input type="checkbox"/> Other: _____ |

What topics or skills do you want the resource to address?

STEP 2: Write your prompt. Use the information from the previous step to write a clear description of what you want the AI to create.

Prompt:

STEP 3: Be “in the loop.” Review the output generated by the AI and complete the reflection questions below.

Based on your experience, do you think the outputs from the AI are accurate, relevant, and aligned to the goals you outlined in your prompt?

Are there any things about the AI output that you’d like to change or refine?

STEP 4: Now iterate! Prompt the AI to make any necessary revisions or changes until you get an output you're happy with.

Option 3: Developing an Assessment with the Support of Generative AI

STEP 1: Clarify your objective. Answer the questions below to help identify the information you should include in your prompt.

What type of resource would you like to develop?

- Diagnostic
- Formative
- Summative
- Self-reflection
- Portfolio template
- Other: _____

What skills or concepts do you want to assess?

What types of questions should the assessment include? How long should it be?

STEP 2: Write your prompt. Use the information from the previous step to write a clear description of what you want the AI to create.

Prompt:

STEP 3: Be “in the loop.” Review the output generated by the AI and complete the reflection questions below.

Based on your experience, do you think the outputs from the AI are accurate, relevant, and aligned with the goals you outlined in your prompt?

Are there any things about the AI output that you’d like to change or refine?

STEP 4: Now iterate! Prompt the AI to make any necessary revisions or changes until you get an output you're happy with.



Ethical AI Use in the Classroom

Having clear guidelines and fostering agency are the key for helping students use AI ethically and responsibly. This activity will empower you to leverage generative AI in a way that centers student voice and agency.

Co-Developing Ethical Use Guidelines with Students and AI



STEP 1: Use a generative AI tools to create a list of discussion questions on the topic of ethical AI use in the classroom. When you prompt the AI consider:

- What are the values and norms you want to foster in your classroom community?
 - How can you make space for the knowledge or experiences students have had with generative AI?
 - How can you make the discussion culturally relevant?
-



STEP 2: Facilitate a class discussion using the questions you created with the help of AI. Make sure you take notes and encourage students to do the same.



STEP 3: Create an appropriate use policy using AI and your students' insights!

Use your notes and your students' to generate a list of things that matter the most to both of you when you think about the use of generative AI in your classroom. Incorporate this list of values and hopes in the prompt you give to the AI.



STEP 4: Evaluate the suggestions made by the AI with your students. As you do so, consider:

- Did the AI accurately reflect the values and desires you included in the collective prompt?
- Are there any changes or updates you or your students would make to the AI generated policy?
- How can you make the final policy visible and accessible to your students all year round? (e.g., creating a classroom poster, building a webpage, making printouts that students can sign, etc.)



GenAI Quickstart Guides

You'll have the opportunity to experiment with a generative AI application in the next activity.

If you've never used a generative AI tool before, we've prepared three guides to help you get started. Please review the guides and pick the application that you are most interested in trying out. You can also choose a different AI tool if that is your preference!

These are the three apps that we recommend exploring at the beginning of your journey with generative AI:



- OpenAI created this application.
- It's free to use.
- It does not require you to have an account or log in.
- It offers a setting to opt out of chat history and keep your data from being used to train future models.
- Common Sense Education [learning rating](#)
- [Privacy policy](#)



- Google created this application.
- It's free to use.
- You'll need to have a Google account and be logged in.
- Common Sense Education learning rating.
- [Privacy notice](#) and [privacy policy](#)



- Microsoft created this application.
- It's built on the same AI technology developed by OpenAI.
- It's free to use.
- It does not require an account or login for basic queries.
- Common Sense Education learning rating.
- To access more complex capabilities (like image generation) you'll need to have a Microsoft account and be logged in.
- [Privacy FAQs](#) and [privacy statement](#)

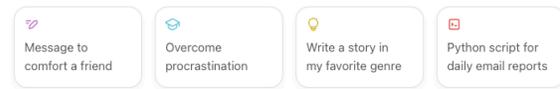


ChatGPT Quickstart Guide

ChatGPT Getting Started Guide: Go to <https://chatgpt.com/>

When the page loads, you'll see a chat interface that resembles a messaging application.

Let's break down some of the things you'll see on the page.

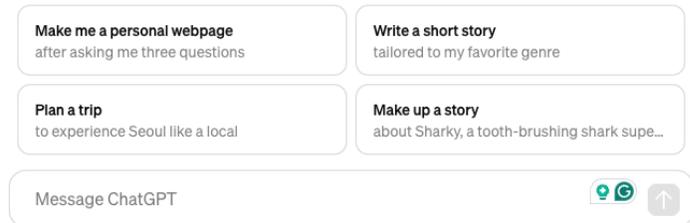


In the middle of the screen, you'll see a mostly empty screen with a text bar at the bottom.

The text bar is the place where you'll write the prompts for the AI.

The AI's output will take over most of the screen and will resemble a text conversation.

When you open ChatGPT for the first time, or after a while, you'll also see a series of suggested prompts. These buttons are clickable prompts that will help you explore how ChatGPT can be used.

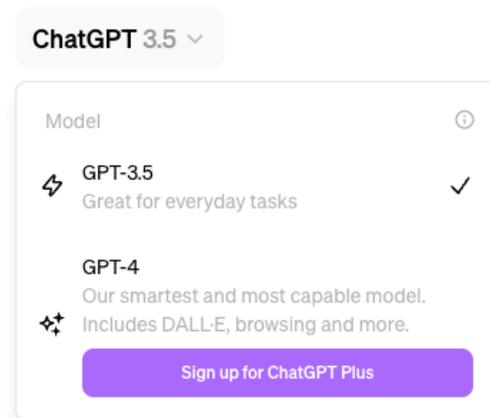


ChatGPT can make mistakes. Check important info.

In the top left, you'll see the words "ChatGPT" followed by a number. This indicates the generative AI model you are chatting with.

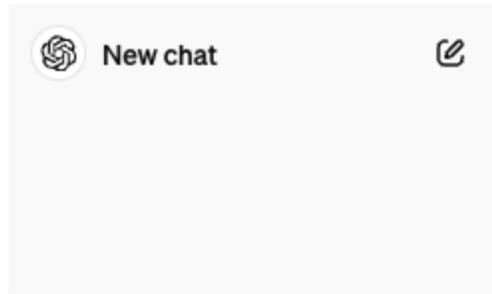
The basic AI model (at the time of writing it's GPT 3.5) is free to use without an account.

If you want access to newer or more sophisticated models you'll need to create an account AND sign up for a subscription.



If you create an account with ChatGPT, you'll have access to a couple of additional features.

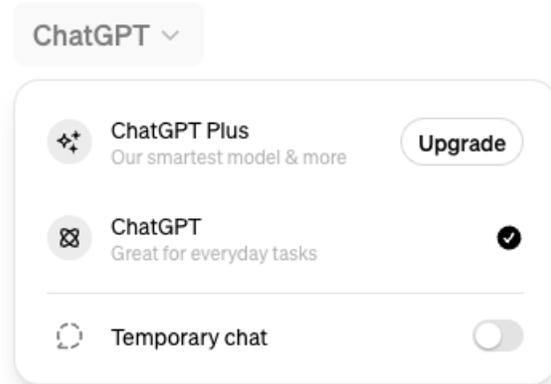
First, you'll be able to save and access previous conversations. You'll be able to see these conversations on the left-hand side of your screen under the "New Chat" button.



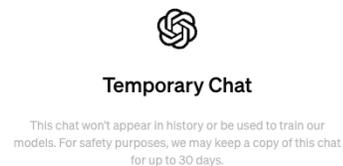
Having an account will also give you access to the "temporary chat" feature.

This feature changes how OpenAI may use your data. Here are a few things to keep in mind about temporary chat:

- Temporary chat is toggled off by default. You need to manually activate it.
- If this feature is enabled:
 - OpenAI will not use your data to train new AI models.
 - Your conversations will not be saved in your history.
 - The model you are using will not be able to access any previous data or interaction you've had with ChatGPT in the past.
- Open AI will still retain your temporary chats for at least 30 days. They do this to monitor any potential misuse of the platform.



Note: Enabling the temporary chat feature will change the interface. The words "temporary chat" will appear in the middle and at the top of the screen. Make sure you are in the mode of your choice before prompting the AI.





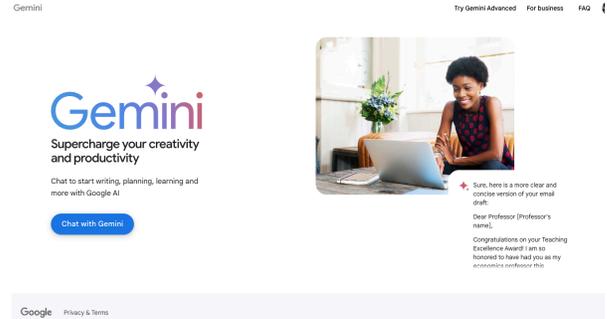
ARTIFICIAL INTELLIGENCE FOUNDATIONS FOR EDUCATORS

Gemini Quickstart Guide

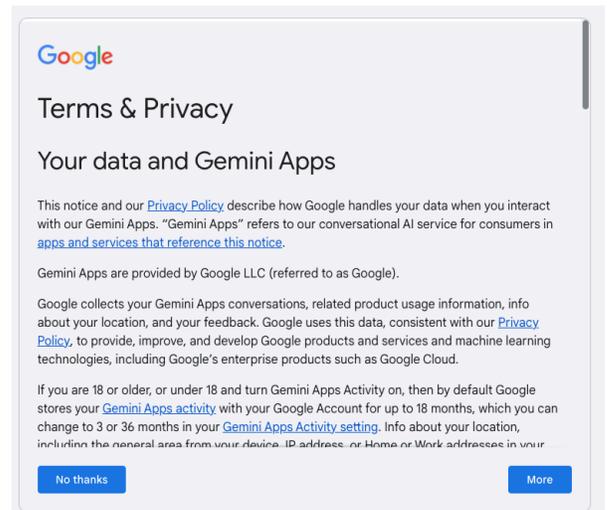
Gemini Getting Started Guide: Go to <https://gemini.google.com>

You will need to have a Google account and be logged into a Google account to interact with the AI system.

If you've never used Gemini, you'll see a page that gives a brief overview of the tool. Click on the button that says "Chat with Gemini" to access the chatbot interface.



First-time users will encounter a Terms & Privacy page. You'll have to agree to Google's terms of service before using Gemini.



Note: If you are trying to access Gemini using your school's Google account, you might come across a screen that says "Gemini isn't a supporter for this account."

This screen indicates that your IT administration has not enabled the use of the Google Gemini apps for your school accounts.

Before proceeding with your personal account, check in with your IT team and colleagues about any guidance or rules your school may have for how to use this tool on a personal account.



Gemini isn't supported for this account

You're signed in to . If you're signed in to a Google Workspace account, your admin may not have [enabled access to Gemini](#).

You also must be over 18 to access Gemini. [Learn more](#)

Once you access the chatbot interface, you'll see:

- A list of pre-written prompts
- A warning message alerting you about how Google manages the privacy of your conversation with the AI.
- A text bar at the bottom of the screen.

Hello,
How can I help you today?



Your conversations are processed by human reviewers to improve the technologies powering Gemini Apps. Don't enter anything you wouldn't want reviewed or used.
[How it works](#) [Dismiss](#)

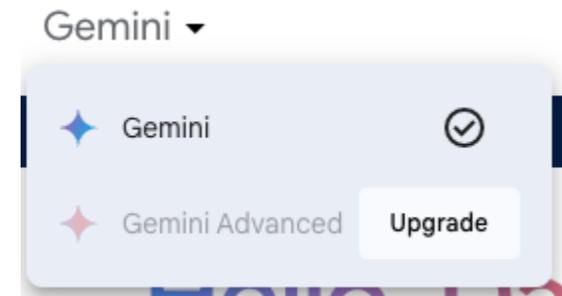
Enter a prompt here

Gemini may display inaccurate info, including about people, so double-check its responses. [Your privacy & Gemini Apps](#)

In the top left of the screen, you'll see the words "Gemini" with the option to open a dropdown menu.

Here, you'll be able to choose what AI model to use.

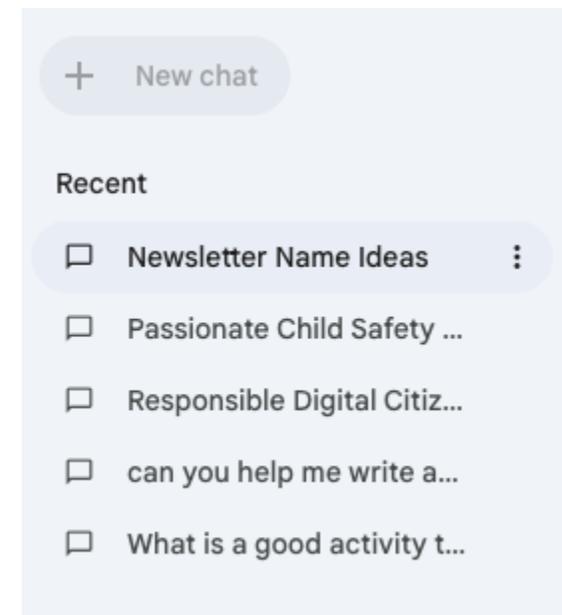
The basic Gemini model is free to use. To access Gemini Advanced, you'll have to sign up for a subscription.



On the left side of the screen, there is a menu bar.

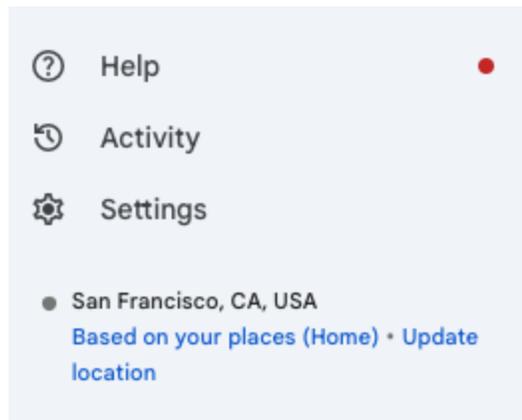
In this menu bar, you can:

- Access previous chats you've had with Gemini.
- Create a new chat.



At the bottom of the menu bar, you'll see options to access:

- Help resources
- Your activity on Gemini
- Your settings

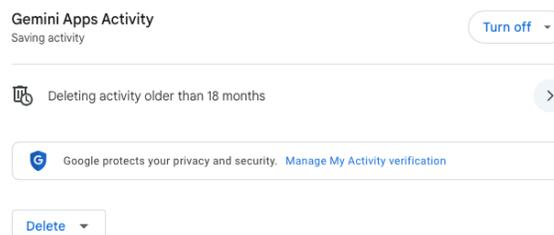


The “activity” window is the place where you can manage your chat history.

From here, you can delete previous chats with Gemini and set up the option to auto-delete your activity on a regular cadence.

Your Gemini Apps Activity

Gemini Apps give you direct access to Google AI. Your chats are saved in your account for up to 72 hours, whether Gemini Apps Activity is on or off. Google uses this data to provide the service, maintain its safety and security, and process any feedback you choose to provide.





Copilot Quickstart Guide

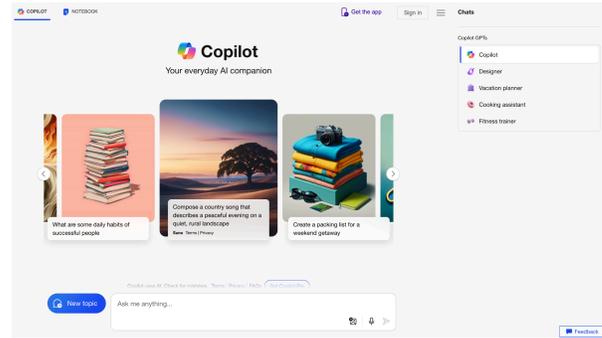
Copilot Getting Started Guide: Go to <https://copilot.microsoft.com/>

When the page loads, you'll see an interface that looks like a text messaging conversation.

The middle of the screen is populated with images that show pre-written prompts. You can click on these to get a sense of how the Copilot AI works.

At the bottom of the screen, you'll see a text bar. This is where you'll write your prompts.

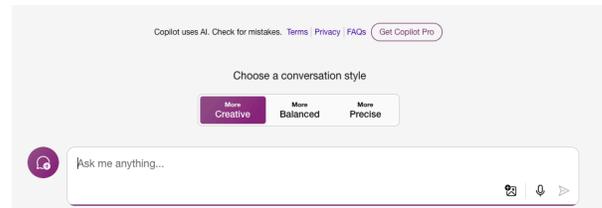
Copilot gives you the option to upload files (images, documents, etc) to the text bar.



In some instances, Copilot will give you the option to select how you'd like the AI model to behave. These options will appear at the top of the text bar.

You have three options:

- **Creative:** This option gives the AI output a bit more flair. This is a good option if you want to manipulate or generate text in a specific style.
- **Balanced:** This option strikes a balance between output that is conversational and outputs that prioritize brevity and accuracy.
- **Precise:** This option emphasizes accuracy. Here, the AI input will tend to be more brief and it will include links to sources you can review to vet the accuracy of the information.



On the right-hand side of the screen, you'll see a menu of options called GPTs.

GPTs are versions of the Copilot AI that have been finetuned to perform specific tasks. For example, the "designer" GPT has the capability of generating images.

Some of the GPTs will require you to have a Microsoft account and be logged in.

