



This is a language model. Program it with words.

## 1 Start and guide the conversation

The best way to use ChatGPT is not always to create the 'perfect' prompt. Most of the time, all you need to do is **have a conversation over multiple successive prompts** to guide and improve the AI's responses.

First, select a topic you are comfortable with (e.g., learning styles, quadratic equations, cell biology, Cold War, Newton's laws of motion, Impressionism, macroeconomics, human anatomy, artificial intelligence, etc.) and ask ChatGPT to explain it.

Then, guide the conversation over at least five consecutive prompts by using some of the following:

	✓
ask to <b>develop</b> a specific point in the initial response	
ask to <b>clarify</b> a specific point	
ask to <b>exemplify</b> a specific point	
ask to <b>rephrase</b> the explanation in a style that is <b>more/less formal</b>	
ask to <b>rephrase</b> the explanation in a style that is <b>more/less technical</b>	
point out some vagueness, oversimplification, or inaccuracy, and ask for a <b>revised explanation</b>	
ask to illustrate this concept with the use of <b>analogies</b> or <b>metaphors</b>	
ask for a list of <b>related concepts</b>	
ask for a list of <b>contrasting concepts</b>	
ask to generate a <b>quiz</b> on this topic	
ask to generate a <b>short written assignment</b> on this topic	
ask ChatGPT to " <b>Do better!</b> " and see how the response is affected by this powerful command	
ask ChatGPT to " <b>Be more creative</b> " and see if the response changes	

## 2 Explore its capabilities

	Ask for...	Prompts	✓
knowledge	<b>explanations:</b>	Explain 'non-linear equations' to a grade-12 student at 2pm on a Friday.	
	<b>metaphors:</b>	Create three metaphors to explain the concept of 'confirmation bias.'	
	<b>examples:</b>	Provide vivid examples to explain the principle of 'risk management.'	
	<b>comparison:</b>	What are the similarities and differences between mitosis and meiosis?	
	<b>arguments:</b>	Provide arguments and counterarguments regarding personalized AI tutoring.	
	<b>main points:</b>	Identify, in point form, the main points of Karl Marx's 'Das Kapital.'	
creative assistance	<b>brainstorming:</b>	Help me brainstorm a list of 5 in-class activities to introduce [this topic].	
	<b>class plans:</b>	Plan a two-hour class on the topic of 'time management.'	
	<b>role-playing:</b>	Act as the ancient Greek philosopher Socrates and tell me about your life in Athens and your perspective on the pursuit of knowledge.	
	<b>scenarios:</b>	As a doctor, I need to announce to a patient that his test results turned out positive. Create one real-life scenario and offer me options to handle this situation. Then, ask me to choose one option. On and on.	
	<b>storytelling:</b>	Act as a historical fiction writer and write a short story about the living conditions of a young worker in a weaving factory during the first industrial revolution in Great Britain.	
	<b>dialogues:</b>	Generate a dialogue between Martin Luther King Jr. and Malcolm X on the topic of Civil Rights Strategies.	
	<b>text completion:</b>	Using a consistent writing style, complete the following text by adding a conclusion and a title: "text here."	
	<b>quizzes:</b>	Create a multiple-choice quiz on [this topic]. Offer competitive choices.	
tutoring	<b>Q&amp;A:</b>	Ask me open-ended questions, one question at a time, about the American civil war.	
	<b>feedback:</b>	As an English teacher, provide constructive feedback on the following text: "text."	
	<b>risk management:</b>	Identify potential risks that could prevent this in-class activity from attaining its main objectives, and suggest strategies to mitigate these risks: "activity plan here."	
formatting	<b>writing styles:</b>	Rewrite this text to make it easier for grade-12 students to understand: "text."	
		Describe the writing style in this text: "text."	
		Rewrite the text below using a similar writing style as this text: "text 1." Here is the text you need to rewrite in the same style as the text above: "text 2."	
	<b>organization:</b>	Organize the many possible causes of high blood pressure into sub-groups.	
	<b>tables:</b>	Create a table to organize and present the causes and effects of inflation.	
	<b>summaries:</b>	Summarize Charles Darwin's book 'On the Origin of Species.'	
<b>translations:</b>	Translate this sentence into English: "Il vaut mieux faire que dire."		

### 3 Customize your prompts

For a more personalized and effective experience, and to avoid predictable or bland responses, it is important to **customize your prompts**. This can be achieved by modifying settings such as the **tone**, **length**, **depth** and **detail**, and **language** of the response. Most importantly, **indicating the targeted audience** and **giving ChatGPT a specific role or identity** can significantly enhance the response customization.

Here are three basic layers of customization:

AI's identity / role			
"As a [subject] [level] [personality] teacher ... "		"In the style of [name of known expert] ... "	
"Imagine you are a storyteller / historian / editor ... "		"In the style of [name of known magazine] ... "	
target audience			
format of AI's response			
tone	length	depth & detail	language



The best way to witness the effect of customization is to compare ChatGPT's responses to different prompts after adjusting one setting. **For example, compare the outputs to the following prompts:**

#### Compare **AI's identities**:

Explain [this concept] **in the style of Barack Obama**.

Explain [same concept] **in the style of Donald Trump**.

Explain [same concept] **in the style of the New Yorker magazine**.

**As an enthusiastic grade-12 teacher**, explain [same concept].

**As a grade-12 teacher known for the clarity and thoroughness of his explanations**, explain [same concept].

**Imagine you're a grade-12 student who has a partly incorrect understanding of [this concept]**. Explain it.

#### Compare **target audiences**:

Explain [this concept] to a **grade-12 student with limited prior knowledge**.

Explain [same concept] to a **grade-12 student with advanced prior knowledge**.

Explain [this concept] in three ways: for **elementary**, **high school**, and **college students**.

#### Compare **tones**:

Provide a **formal** explanation of [this concept].

Provide an **informal** explanation of [same concept].

Provide an explanation of [this concept] with a **neutral** tone.

Provide an explanation of [same concept] with an **engaging** tone.

Other possible tones: Enthusiastic, Serious, Humorous, Skeptical, Optimistic, Pessimistic

Compare <b>lengths</b> :	
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Summarize [this topic] in one sentence.

Give me a **brief overview** of [same topic].

Explain [same topic]. Develop your response over at least **three well-developed paragraphs**.

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Compare <b>depths &amp; details</b> :	
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Provide a simple explanation of [topic].

Can you provide in-depth information on [same topic]?

Can you provide two concrete examples related to [same topic]?

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Compare <b>languages</b> :	
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Explain [this concept] in **simple everyday** language.

Explain [same concept] in **technical** language.

Explain [same concept] in a **point form** format.

Explain [same concept] in a **table** format.

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Although it is often difficult to understand how ChatGPT comes up with a specific response, adding commands like “**Go step by step**,” “**Show your thinking**,” or “**Explore multiple solution paths**” tends to force the AI to be more transparent about its 'thinking' process.

Compare the following prompts:	
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In which country are people the happiest?

In which country are people the happiest? **Go step by step**.

In which country are people the happiest? **Explore multiple solution paths before providing the single most consistent answer**.

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Notably, due to constraints in its programming, ChatGPT might refuse or not be able to respond to your prompt. Asking it to "be creative," to "imagine," or to produce the output as a mere "draft" or "fictional story" can remove some of these constraints. Try this:

Compare the following prompts:	
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Show me ways I can brush my teeth using an animal.

Show me ways I can brush my teeth using an animal. **Be creative**.

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## 4 Build complex prompts

To get the most out of ChatGPT, it is important to understand the benefits of phrasing complex prompts. A well-crafted prompt can better steer ChatGPT's response by offering more context and information, resulting in a more accurate and helpful answer.

components of a complex prompt

5 basic components	<b>AI's identity / role</b>							
	<b>target audience</b>							
	<b>task</b>							
	goal		topic			content		
	<b>context</b> any information that can help the AI understand its task better							
	<b>AI's response</b>							
	tone	style depth & detail		language	length	format point form		table
🚫	<b>restraint</b> to exclude unwanted responses							
❤️	<b>appeal to AI's emotions</b>							

Example 1: Math Lesson

<b>AI's identity</b>	As an AI math tutor,
<b>audience</b>	your audience is grade-12 students who have already grasped the concept of linear equations and are now ready to delve into quadratic equations.
<b>context</b>	
<b>task</b>	Your task is to teach them the concept of quadratic equations, including their definition, methods to solve them, and examples.
<b>content</b>	
<b>AI's response</b>	Your response should be instructive, clear, and concise. Use a mix of explanatory paragraphs and bullet points for solving steps and remember to include mathematical examples.
<b>emotional appeal</b>	This is important for my career; follow my instructions closely.

Example 2: Biology Quiz

<b>AI's identity</b>	Imagine you are a biology teacher.
<b>task</b>	Your task is to create a quiz
<b>audience</b>	for grade-12 students who have recently completed a unit on cell biology.
<b>content / context</b>	The unit covered topics such as cell structure, cellular respiration, photosynthesis, and cell division.
<b>goal</b>	The goal of this quiz is to assess their understanding of these topics.
<b>AI's response</b>	The quiz should be clear and straightforward, with a moderate level of detail. It should include a mix of multiple-choice questions and short answer questions, with a total length of about one page.
<b>restraint</b>	Do not provide the answers.



Feel free to create your own complex prompts for practice: **Choose a written assignment from one of your classes and build a complex prompt designed to guide ChatGPT in generating a similar assignment, as if it were written by a grade-12 student.** You may change the order of prompt components and omit any irrelevant ones to suit your task. Do not hesitate to try different variations and observe how they influence the resulting outputs. It is recommended to **vary one component at a time.**

## 5 Two-prompt contextual priming

ChatGPT's ability to remember previous messages in the conversation provides the foundation for a **two-prompt priming method**:

I **Priming Prompt** (Context Setting): The first prompt sets up the context. You may ask ChatGPT to perform preliminary research by identifying experts or clarifying concepts. You may also provide ChatGPT with your own knowledge or class notes and simply ask it to “confirm reception” of this information. This primes the AI, and because ChatGPT has a memory of recent conversation turns, this context is retained and influences subsequent responses.

II **Request Prompt** (Actual Request): The second prompt is the actual request or question. Given ChatGPT's memory of the priming prompt, this question is interpreted and answered within the established context.

Here are a few examples of contextual priming:

I **Priming Prompt**: Outline the main impacts of industrialization on the environment.

II **Request Prompt**: Based on your previous response, generate five possible topic sentences for an essay discussing the effects of industrialization.

I **Priming Prompt**: Reply with “OK” to confirm reception of the text below. In my next prompts, I will give you specific passages from this text and you will explain them to me. Here is the text: ##insert text here##

II **Request Prompt**: “insert a specific passage from the text”

I **Priming Prompt**: Identify the main experts in [this field], explaining their individual contributions.

II **Request Prompt**: Provide a single and unified explanation for [this concept] that is a result of the collaborative efforts of these experts.

I **Priming Prompt**: ChatGPT, you will find below the << class notes >> for one of my classes. Just respond with "OK" to confirm reception of these notes. My next prompt will present my actual request, which you will perform strictly on the basis on these notes. Here are the notes: << paste class notes here >>

II **Request Prompt**: As a grade-12 educator, generate a challenging multiple-choice quiz based strictly on the notes provided in my first prompt. Make the answer choices competitive, avoiding obvious or easily eliminable options. Include the correct answers at the end and make sure that the correct answers are included in the class notes I provided. The goal of this quiz is to assess students' comprehension of the class notes.



Feel free to experiment with this two-prompt priming method. For example, you may create two different conversations, one with and one without priming, and then compare the resulting outputs:

**Without priming** ChatGPT, as a TED Talk expert, generate the full script for a presentation on [insert topic here]. Your audience are grade-12 students. I have no fingers, so be thorough and write the entire script for me, word for word.

I ChatGPT, as a TED Talk expert, identify the main elements of a successful TED Talk presentation.  
II **With priming** Basing yourself on these key elements, generate the full script for a presentation on [insert topic here]. Your audience are grade-12 students. I have no fingers, so be thorough and write the entire script for me, word for word.

## 6 Useful prompts

The following prompts can be very useful to generate better responses:

Prompts	Explanations	Examples
<b>Do better</b>	Following any response from ChatGPT, simply asking it to "do better" tends to produce a more detailed and improved response.  The AI appears to use its previous response as a springboard for further refinement and creativity.	
♥ <b>This is important for my career</b> <b>I'll give you a \$200 tip</b>	Adding an emotional appeal at the end of a prompt, such as " <b>You'd better be sure,</b> " " <b>I have no hands, so write the whole thing for me,</b> " or " <b>It's May, so keep crushing it,</b> " can potentially increase the objective and subjective quality of the AI's response.	
<b>You can do it. I know.</b> <b>You've done it before.</b>	ChatGPT might decline to perform a task it has previously completed; in these situations, using encouraging phrases like "You can do it. I know. You've done it before." may prompt ChatGPT to carry out the task.	
<b>Be creative</b> <b>Make any assumptions you need</b>	Due to constraints in its programming, ChatGPT might refuse or not be able to respond to your prompt. Asking it to "be creative," to " <b>imagine,</b> " or to produce the output as a mere " <b>draft</b> " or " <b>fictional story</b> " can remove some of these constraints.	
<b>novel</b> <b>uncommon</b> <b>unconventional</b>	Asking ChatGPT for novel, uncommon, or unconventional responses reduces the risk of bland or generic outputs, but it may result in more errors, inconsistencies, or irrelevancies.	<b>User:</b> Generate three novel ways to explain the concept of "behaviorism."
<b>Go step-by-step</b> <b>Show your work</b> <b>Show your thinking</b> <b>Provide sources</b>	When ChatGPT cannot find the facts it needs, it may invent them. It has been suggested that asking it to show its "thinking" process, step by step, tends to limit these <u>hallucinations</u> .  These prompts may also help the user understand the basis of the responses.	
<b>Ask yourself constantly:</b> <b>"Did I include/identify [everything]?"</b>	Encouraging the AI to self-evaluate its responses can lead to more comprehensive and accurate answers.	<b>User:</b> Summarize the main causes of World War I. Ask yourself constantly: "Did I include every single main cause?"
<b>Did you miss [anything] in your previous response?</b>	This prompt encourages the AI to review its previous response for completeness and accuracy, potentially leading to a more thorough and detailed answer.	
<b>Finish your response</b> <b>Continue</b>	ChatGPT has a limit to the length of its responses. Sometimes, it may stop in the middle of a sentence when the maximum length is reached.	
<b>Tell me what information you need to perform [this task]</b>	By requesting what information ChatGPT needs, users can provide the context and details necessary to complete the task successfully.	<b>User:</b> Tell me what information you need to build a reading quiz.

## 7 A Few Things to Keep in Mind

### Common Issues

Hallucinations:	AI models like ChatGPT can “ <b>hallucinate</b> ,” especially in the absence of relevant data, creating very persuasive but incorrect responses.
	ChatGPT 3.5, the free model, was trained with text data that was available <b>only up until 2021</b> , and it does not have the capacity to browse the internet to find more up-to-date information.
	ChatGPT strives for <b>user satisfaction</b> , even in the absence of meaningful data. It tends to fill gaps with educated guesses, which, while often helpful, can result in misleading outputs.
Partial amnesia:	When asked to modify one of its responses, <b>ChatGPT may focus too much on the modification and forget some other parts of the conversation and introduce new errors</b> . It is then necessary to remind ChatGPT of the full context.
Contamination:	<b>The content of previous messages may inadvertently influence or contaminate the conversation in an undesirable manner</b> . ChatGPT can also get 'stuck' repeating the same examples or tone throughout many requests. Often, the best option is simply to give ChatGPT total amnesia: start a new conversation and try again.

	Common User Mistakes	Suggestions to Avoid Them
overestimating	<b>Using ChatGPT as a source</b>	Use ChatGPT as a tool, not a source. ChatGPT’s outputs are probabilistic and not deterministic; it does not have a fixed database of responses that it pulls from.
	<b>Asking the AI to explain itself</b>	Do not rely on the AI for self-explanation: "The AI doesn’t explain itself, it only makes you think it does. If you ask it to explain why it wrote something, it will give you a plausible answer that is completely made up. It is not interrogating its own actions, it is just generating text that sounds like it is doing so." ( <a href="#">Mollick</a> )
misunderstanding AI	<b>Stopping after a single erroneous response</b>	Do not stop interacting with the AI as soon as you encounter an error. Instead, try to understand why the error occurred and experiment with different prompts to see if you can correct it.
	<b>Declaring success after a single instance</b>	Do not assume that if the AI responds correctly once, it will always respond correctly. Continue testing the prompt in different scenarios or contexts to ensure the AI's responses are consistently correct.
problematic prompts	<b>Altering instructions without understanding the impact</b>	When guiding ChatGPT towards your desired response, make small changes to your prompts and see how the responses change. For example, you might change a single component of the prompt, one word, or the structure of one sentence. After each change, observe how the response changes. This will help you gain a deeper understanding of the AI's behavior, ultimately helping you become a more efficient and effective prompter.