

Artificial Intelligence

how to use it in education

General information about Artificial Intelligence

Artificial Intelligence, commonly known as AI, is a branch of computer science that focuses on the development of intelligent machines capable of performing tasks that would typically require human intelligence. AI systems are designed to learn, reason, and make decisions based on data and algorithms. With advancements in technology, AI has emerged as a transformative force in various industries, revolutionizing the way we live and work.

AI technology offers a wide range of applications across industries and domains. Some common use cases include:

Automation: AI can automate repetitive tasks and processes, enhancing efficiency and productivity. This includes automating data entry, customer support, and manufacturing processes.

Data Analysis: AI algorithms can analyse large datasets and extract valuable insights. Businesses can leverage AI for predictive analytics, customer segmentation, and demand forecasting.

Personalization: AI enables personalized experiences by understanding individual preferences and behaviour. This is seen in recommendation systems for streaming platforms, online shopping, and content curation.

Autonomous Systems: AI powers autonomous vehicles, drones, and robots by enabling them to perceive and interact with their environment, making decisions in real-time.

While AI offers immense potential, there are certain considerations to be aware of:

Ethical Concerns: The ethical implications of AI, such as bias, privacy, and job displacement, need to be carefully addressed. Developers and organizations must ensure fairness, transparency, and accountability in AI systems.

Security Risks: AI systems can be vulnerable to attacks and misuse. Safeguards must be in place to protect data, prevent malicious use, and ensure the integrity of AI-driven applications.

Dependence on Data: AI relies heavily on data for training and decision-making. It is crucial to ensure the quality, representativeness, and security of data to avoid biases and inaccurate outcomes.

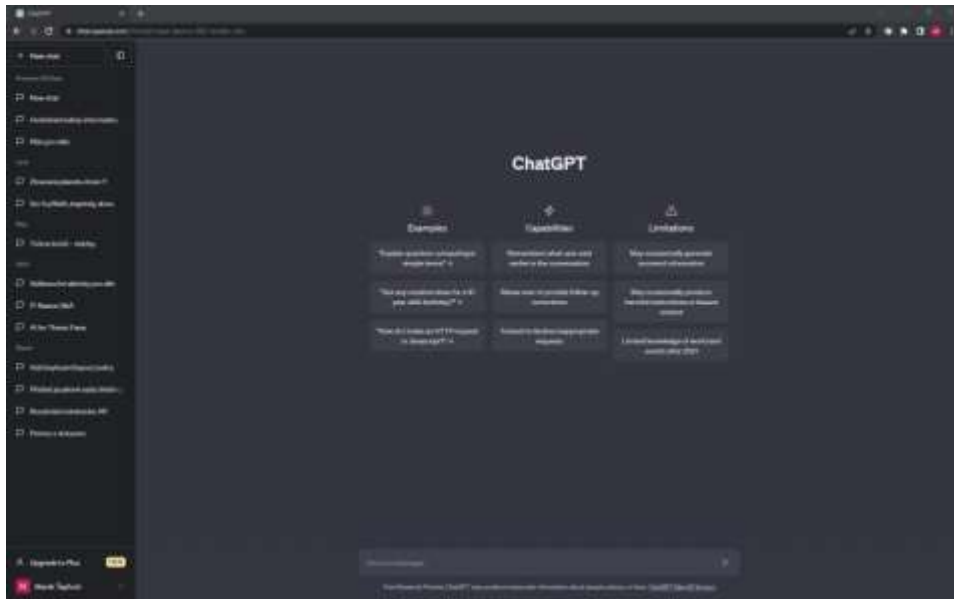
Human-AI Collaboration: As AI continues to advance, the role of humans in collaboration with AI systems becomes critical. Understanding the limitations and strengths of AI and fostering human-AI partnerships will be essential.

In conclusion, AI represents a powerful technology that has the potential to transform numerous aspects of our lives. Understanding the different types of AI, its applications, and the associated considerations will help us leverage its benefits responsibly while addressing potential challenges.

The best chatbots these days

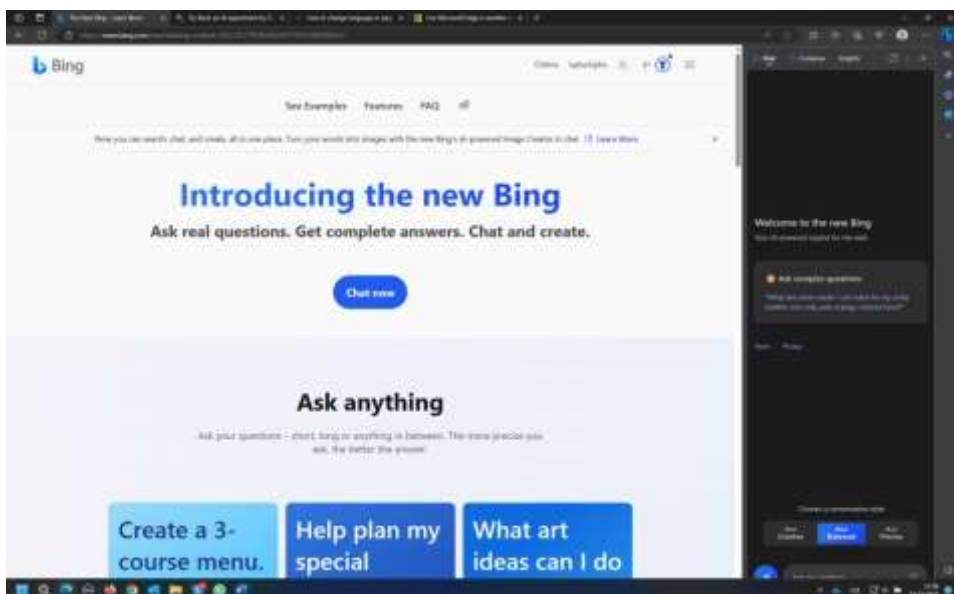
ChatGPT

- <https://openai.com/>
- can speak different languages (Czech, Slovak, Hungarian, Polish, ...)
- price: free of charge, use GPT-3.5 version of AI
- exist payable version: ChatGPT Plus, price is 20 USD/month, use latest GPT-4 version, can use add-ons.



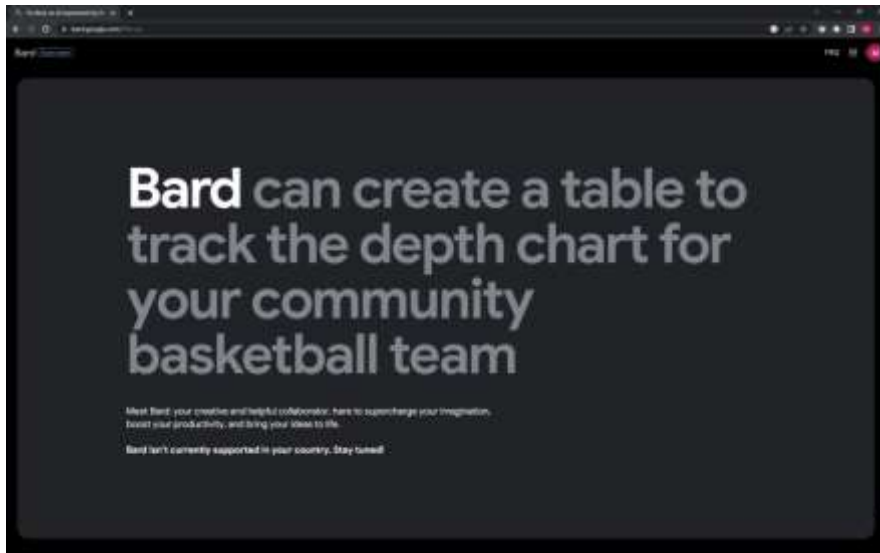
New Bing

- <https://www.bing.com/new>
- can speak different languages (Czech, Slovak, Hungarian, Polish, ...)
- price: free of charge
- is integrated into Edge browser sidebar.



Google Bard

- <https://bard.google.com/>
- can speak only some (world biggest) languages
- price: free of charge
- is not accessible in the most of EU countries, in these countries can be used only through VPN.



Personally, I mostly used ChatGPT, but Bing is also very popular. Because of limited possibilities to use Google Bard in Czech Republic, I have only minor experience with this tool. Good comparison is here: <https://www.makeuseof.com/chatgpt-vs-bing-ai-vs-google-bard/>

But these tools are still in progress, development is fast and lots of pros and cons can change, so keep this in mind.

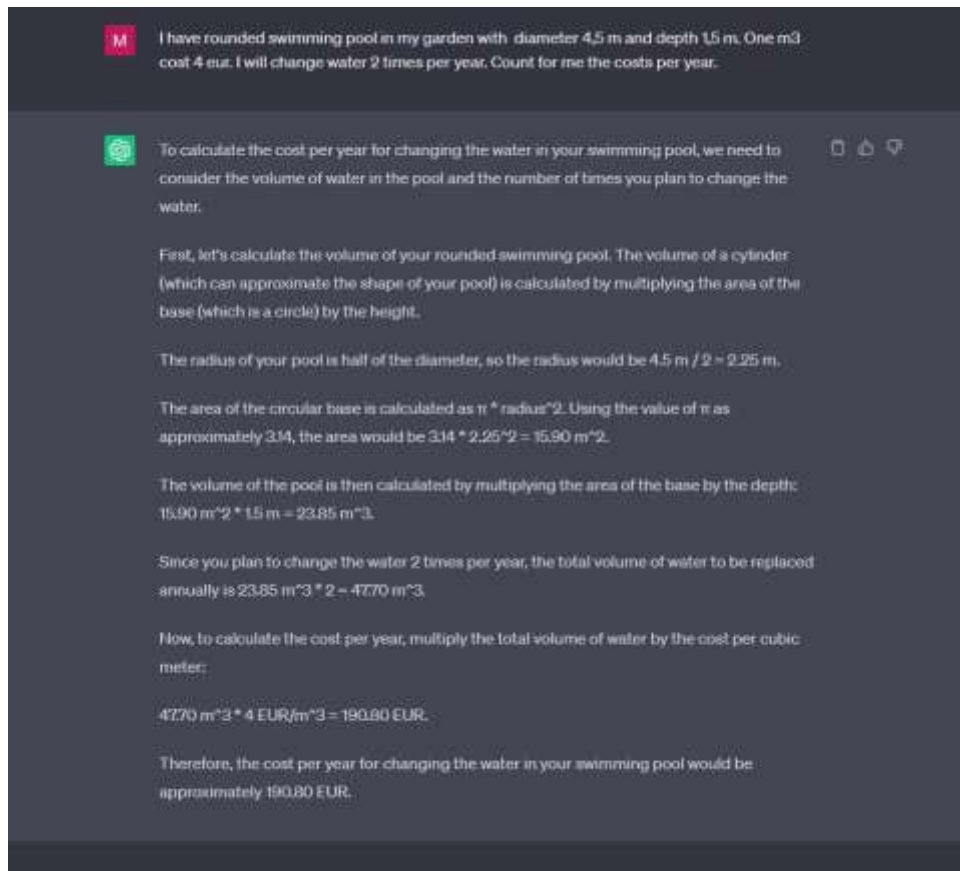
Great thing is, that these tools are free of charge without any significant limitations!!!

Chatbot is not a search engine

In the following lines, I will show you several use cases for chatbots. However, there is no one-size-fits-all solution. Chatbots are designed to assist you when you interact with them by engaging in a continuous dialogue and seeking solutions. Sometimes you may get the right answer on the first try, while other times it may take half an hour of discussion. AI chatbots are certainly not a substitute for traditional search engines and other tools. If you are looking for information such as the height of the highest mountain in the Czech Republic, you will find the answer much faster using a traditional search engine.

Solving word problems

Chatbots can count everything. Just describe the problem in words and you don't have to hunt for work with fractions or calculations of volumes and contents in your memory. Here I have an example with the calculation of the cost of water per year in the garden pool.



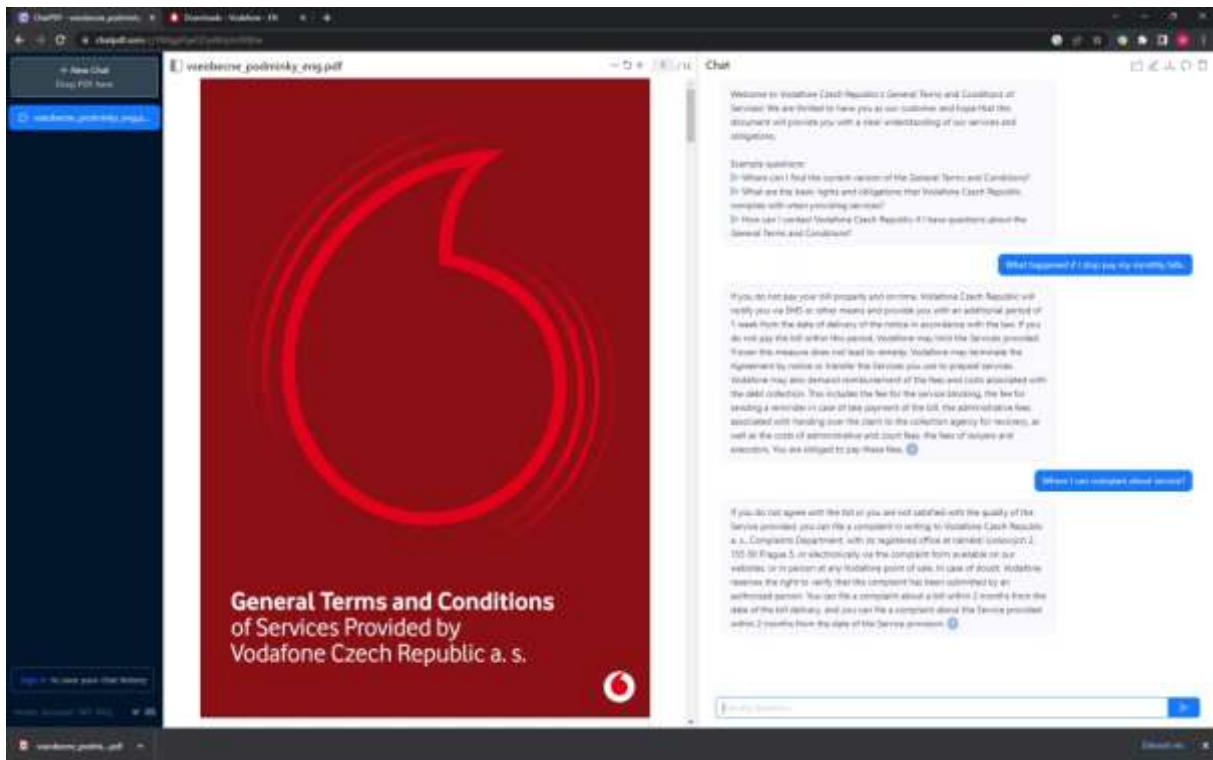
Analyzing long texts

The current generation of chatbots is very good at analyzing a long text that can be turned into an extract. We will show this on the [Chatpdf](#) web application, which allows you to debate the uploaded document in pdf format.

In the free version, it can handle up to 120 pages of text and files up to 10 MB in size. The application works on OpenAI's GPT-3.5 language model.

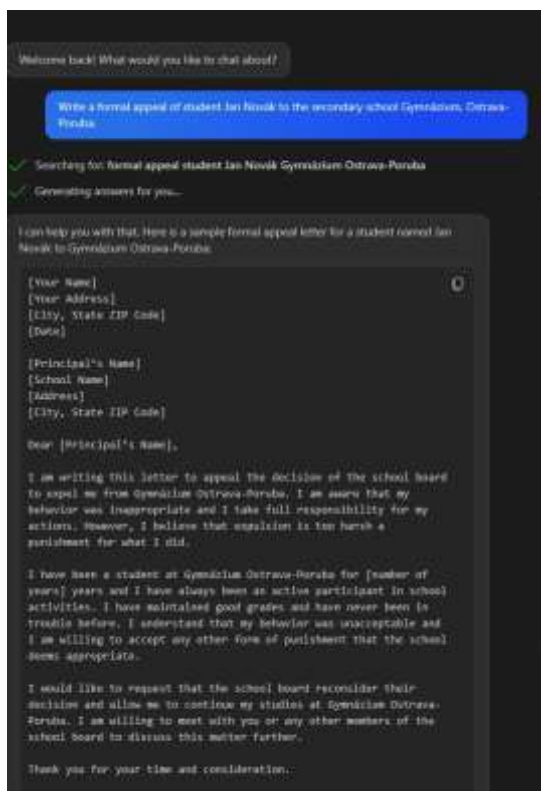


Analyze the terms of service in PDF. I uploaded the general terms and conditions of one of the mobile operators in the Czech Republic to Chatpdf application. I ask the bot what happens if I stop paying monthly invoices and where I can complain about the service.

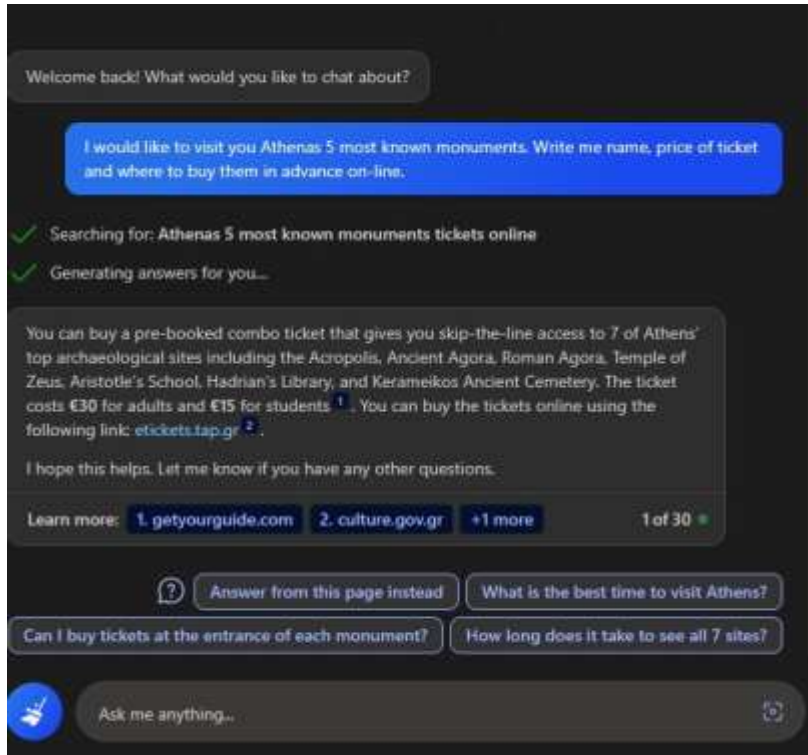


Create a formal document

In this example I use Bing chat and ask him for a formal appeal of student to the secondary school.



Another example of Bing chat. Where I would like to know price for 5 most known monuments and where to buy tickets on-line in advance. As you can see, Bing propose links where it find out the informations and give you an examples of other questions to topics you may be interested in.



Using a chatbots in education

The examples above were an introduction, a basic idea of what you can do with chatbots.

Other examples are focused directly on education.

Lesson program

If you want to discuss a topic with students and you want to have a lesson schedule ready, just enter it in a suitable way into the chatbot.

First part is a preparation of chatbot for a task to be a lesson creator. It is important to describe the task as best as possible and so that it can be used again at any time in the future. That's why I want the chatbot to ask me two questions that I can answer differently each time. This will guarantee the versatility of this chat.

OpenAI chat histories are stored in the left part of the window, and if you don't delete it purposefully, you can return to them at any time.

- Today
- Theme & Lesson Len
 - Pool Water Change Cost
 - Using ChatGPT in Education
- Previous 30 Days
- New chat
 - Uvolněné hodiny informatiky
 - Plán pro děti.
- June
- Ztracená planeta Arion-7
 - Sci-fi příběh, kapitoly, slova
- May
- Tvůrce kvízů - otázky.
- April
- Velikonoční aktivity pro děti
 - IT Basics Q&A
 - AI for Thesis Fixes
- March
- Add keyboard layout policy
 - Přidání jazykové sady (Adding
 - Rozebrání notebooku HP.
 - Pomoc s dotazem.

M You are lesson program creator. In every lesson first 50% of time will be for explaining the theme. Than some exercises and at the end funny quiz about theme. Ask me 2 questions. 1. The theme 2. Lesson length.

G Great! Let's get started with your lesson.

Question 1: What theme would you like for your lesson?

Please provide the theme you would like to focus on, such as a subject, concept, or topic you would like to explain and discuss.

Question 2: How long would you like your lesson to be?

Please provide the desired length for your lesson in terms of time. For example, you can specify the duration in minutes or hours. Keep in mind that the total lesson time will be divided into three parts: 50% for explaining the theme, some time for exercises, and the remaining portion for funny quizzes about the theme.

Answers on two questions:

M 1. Inflation 2. 90 minutes

G Great! Your lesson theme is "Inflation" and the lesson length will be 90 minutes.

Now, let's begin with the lesson on inflation.

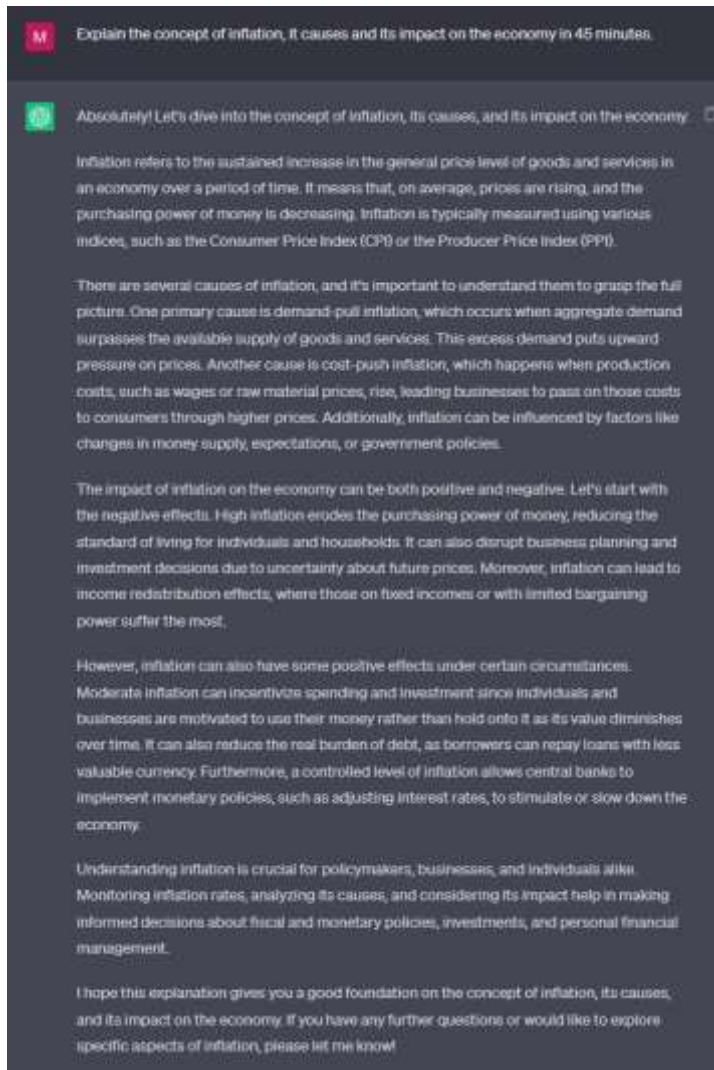
First, I will spend approximately 45 minutes explaining the concept of inflation, its causes, and its impact on the economy. We will cover topics such as the definition of inflation, types of inflation, measurement methods, and the relationship between inflation and various economic factors.

After the explanation, we will allocate around 30 minutes for exercises and activities related to inflation. These exercises will help reinforce the understanding of the concept and allow you to apply the knowledge learned. They may include analyzing real-life scenarios, interpreting inflation data, and discussing the implications of inflation on different stakeholders.

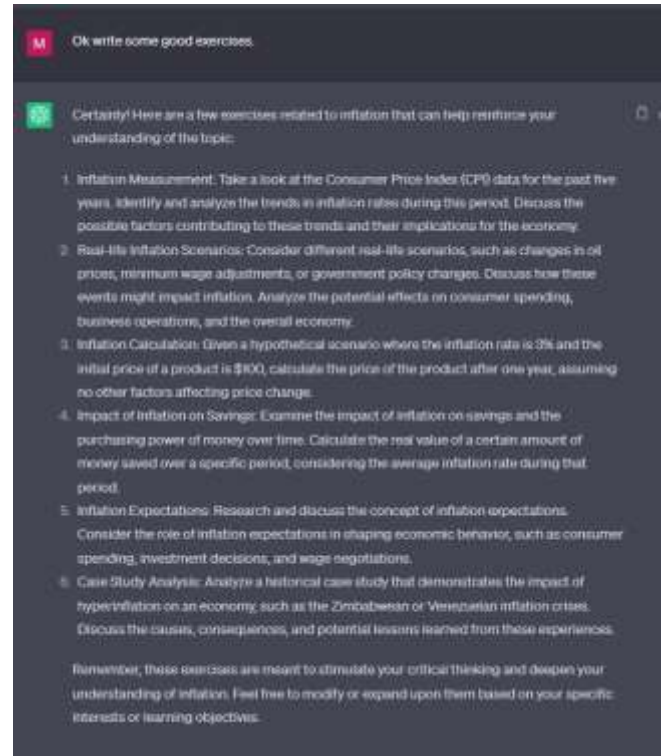
Lastly, we will conclude the lesson with a fun and interactive quiz about inflation. This quiz will be designed to test your understanding in an entertaining way, incorporating some humorous elements related to the topic. We will spend approximately 15 minutes on this quiz, allowing you to review the key points covered during the lesson while enjoying the learning experience.

Are you ready to begin the lesson on inflation with a duration of 90 minutes?

Preparation for the first part of lesson – explanation of theme:



And of course, some proposals of exercises:



This is just an example of how chat with chatbot and for sure there can be some improvements (I have one in my head: Another (3rd) question for grade (elementary, college, university)).

For more tips and inspiration how to use it in education, here are **some very useful links**:

[Using AI to make teaching easier & more impactful \(oneusefulthing.org\)](https://oneusefulthing.org)

[11 Ways Teachers Can Use AI to Save Time and Increase Productivity - Not So Wimpy Teacher](#) and one video:

[50 Ways Teachers can use Chat GPT to Save Time - YouTube](#)

And one last thing:

It is easy to use!!! You can use your mother language!!! And it is free of charge!!! So don't be ... and USE IT!!!

PS: Maybe you notice it, but you do not have to be polite. So, forget the words like: Hello, good morning, please, thank you etc.

You can find a short video about AI at: <https://www.ekf.vsb.cz/nice/en>