

Introduction to Prompt Engineering

Generative AI: Prompt Engineering Lab Series Lesson Plan (Ages 13+)

This lesson introduces students to the concept of prompt engineering within generative AI, focusing on how to effectively communicate and guide AI systems through well-crafted prompts.

Duration

20 minutes

Learning Objectives

Students will be able to:

- Evaluate the importance of prompt engineering in AI interactions.
- Apply the rules of safety and responsibility when using generative AI tools.
- Identify different types of prompts and their applications in AI communication.
- Demonstrate their prompt engineering skills in practical exercises, enhancing their ability to interact with AI tools.

Key Skills

- Constructing good prompts

Important Note

Please ensure you adhere to your school's approved guidelines and AI policy before introducing this lesson to your students. It is important for educators to be familiar with this technology and its challenges, including the following:

- Many AI tools require students to be at least 13 years old, and may require parental consent for those under 18 years old. Read the terms of service and privacy policy before using any AI tool, app, or website.
- It is important to teach students about the safe and responsible guidelines of using AI at the start of every lesson.
- Generative AI tools may occasionally produce inaccurate or fabricated content. Verify the accuracy of AI outputs using discretion and critical thinking.
- The outcomes of exercises in this toolkit may differ from provided examples, as they depend on your specific inputs and the AI tools employed.

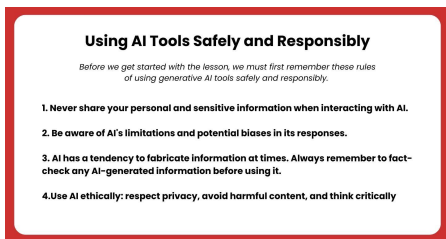
LESSON SLIDE

WHAT TO SAY OR DO



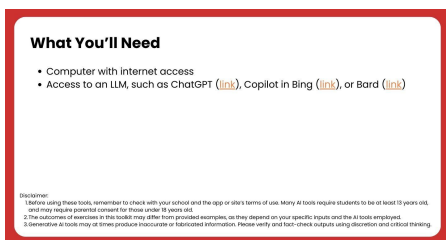
Slide 1

Welcome the students to the class and introduce the topic of prompt engineering in generative AI. Briefly explain that today's lesson will uncover how to effectively communicate with AI systems.



Slide 2

Start by stressing the importance of ethical and responsible AI use. Encourage an open discussion on each of the guidelines presented, asking students for their input and any experiences they may have had with AI tools.



Slide 3

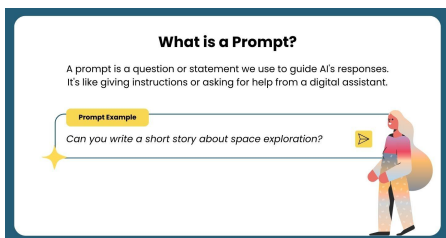
Ensure that all students have access to the necessary technological tools. Walk them through how to access and utilise the AI platforms that will be used during the lesson, offering assistance to those who might be less familiar with these tools.

*Note to Educators: you may choose any of the listed AI tools that is in line with your school's policies.



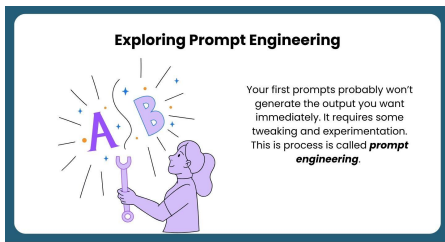
Slide 4

Outline the day's learning objectives, focusing on the art of crafting effective prompts. Highlight how a well-constructed prompt can significantly impact the response and functionality of AI.



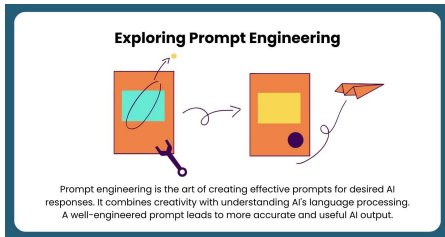
Slide 5

Define what a prompt is in the context of AI. Use examples to demonstrate how different prompts can guide AI in various directions. Invite students to suggest their own prompt examples and discuss their potential effectiveness.



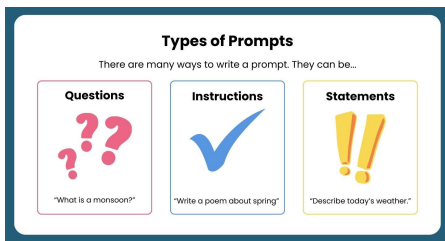
Slide 6

Introduce the concept of prompt engineering and explain its crucial role in guiding AI interactions.



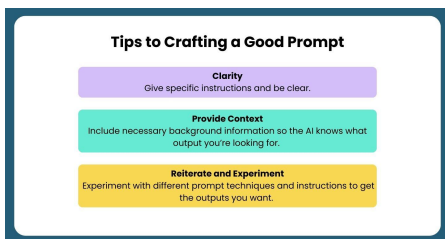
Slide 7

Discuss the creative and technical aspects of this skill and how it's becoming increasingly important in the AI field.



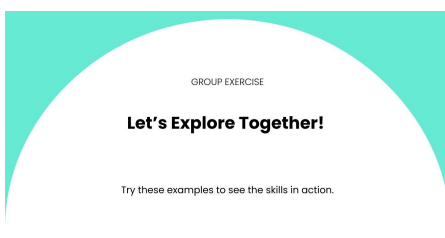
Slide 8

Showcase different types of prompts such as questions, instructions, and statements. For each type, provide examples and discuss how these prompts could be used in different AI interactions.



Slide 9

Discuss tips for creating effective prompts, emphasizing the importance of clarity, providing context, and the willingness to experiment. Encourage students to think about these aspects when they create their prompts.



Slide 10

In this section, you will be going through an example together as a class. Prepare students to access the AI tool, as this is a hands-on exercise.

Deconstructing Prompts

1. Enter both prompts into the LLM (ChatGPT, Copilot in Bing, or Bard).

| | |
|---|---|
| <p>Prompt 1</p> <p>"Give me a recipe for bread that's enough to serve at a big party."</p> | <p>Prompt 2</p> <p>"I'm throwing a party for 12 people, and two of them are on a gluten-free diet. I need an easy bread recipe to make enough dinner rolls for everyone to have two each."</p> |
|---|---|

2. Compare and contrast the outputs. Which prompt is better?

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Slide 11

Have students experiment by entering various prompts into AI tools and observe the responses.

Deconstructing Prompts

1. Enter both prompts into the LLM (ChatGPT, Copilot in Bing, or Bard).

| | |
|---|--|
| <p>Prompt 1</p> <p>"Can you tell me about renewable energy sources?"</p> | <p>Prompt 2</p> <p>"I'm studying for my year 10 environmental science exam. Can you provide comprehensive notes to help me revise on the topic of renewable energy sources and how it can combat climate change?"</p> |
|---|--|

2. Compare and contrast the outputs. Which prompt is better?

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Slide 12

Lead a discussion on the effectiveness of different prompts. Focus on analysing how changes in wording and context alter the AI's response.

TRY IT YOURSELF

Independent Exploration Task

Apply the skills you've learned in this task.

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Slide 13

For this exploration task, students can choose to work in pairs, small groups, or independently. Encourage students to use the skills they have learned in this lesson to complete the task ahead.

Your Task

Your two friends, Nalia and Ricky, are visiting you this weekend, arriving at 12pm on Friday and leaving on Sunday at 6pm. They've never been to your city before, so you want to show them around. Nalia loves to explore history and culture, while Ricky is a foodie.

Using generative AI tools, plan an itinerary for the weekend with Nalia and Ricky around your city.

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Slide 14

Guide students through an independent task where they use AI to plan a weekend itinerary based on their interests. Promote creativity and experimentation with different prompt styles.

Group Sharing!

What did you come up with?

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Slide 15

Invite students to share their itineraries and discuss the prompts they used. Encourage a group discussion on the effectiveness of these prompts and the AI's responses, highlighting creative and insightful approaches.

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Well Done!

Slide 16

Wrap up the lesson by summarising the key points. Emphasise the importance of practice in mastering prompt engineering. End the session by answering any remaining questions and encouraging students to continue exploring prompt engineering outside the classroom.