Boundaries and Specificity

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

This lesson delves into the importance of setting clear boundaries and being specific in prompt engineering, essential skills for achieving relevant and appropriate responses from generative AI tools.

Duration

20 minutes

Learning Objectives

Students will be able to:
- Recognise the significance of specificity and boundary setting in prompt engineering.
- Apply the principles of specificity and boundary setting in crafting AI prompts.
- Engage in practical exercises to refine their prompt engineering skills, focusing on specificity and boundaries.

Key Skills

- Setting boundaries in prompts
- Being specific with prompt instructions

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.

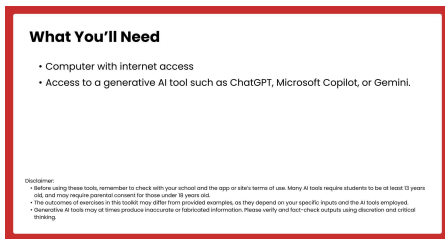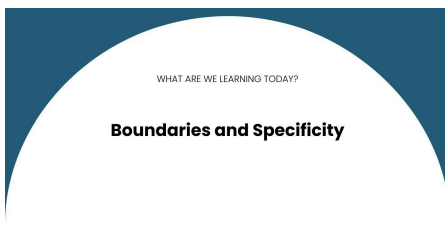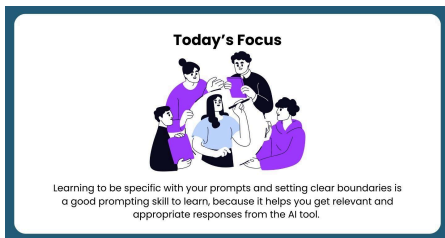| LESSON SLIDE	WHAT TO SAY OR DO
GENERATIVE AI **Boundaries and Specificity** Prompt Engineering Lab Series *Slide 1*	Welcome the students to the class and briefly summarise the topic of prompt engineering in generative AI. Explain that today's lesson will help them learn how to set boundaries and be specific in prompts.
Using AI Tools Safely and Responsibly *Before we get started with the lesson, we must first remember these rules of using generative AI tools safely and responsibly.* 1. Never share your personal and sensitive information when interacting with AI. 2. Be aware of AI's limitations and potential biases in its responses. 3. AI has a tendency to fabricate information at times. Always remember to fact-check any AI-generated information before using it. 4. Use AI ethically: respect privacy, avoid harmful content, and think critically *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.
What You'll Need • Computer with internet access • Access to a generative AI tool such as ChatGPT, Microsoft Copilot, or Gemini. Disclaimer: • Before using these tools, remember to check with your school and the app or site's terms of use. Many AI tools require students to be at least 13 years old, and may require parental consent for those under 18 years old. • The outcomes of exercises in this toolkit may differ from provided examples, as they depend on your specific inputs and the AI tools employed. • Generative AI tools may at times produce inaccurate or fabricated information. Please verify and fact-check outputs using discretion and critical thinking. *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.
WHAT ARE WE LEARNING TODAY? **Boundaries and Specificity** *Slide 4*	Introduce the concepts of boundaries and specificity in prompt engineering.
Today's Focus Learning to be specific with your prompts and setting clear boundaries is a good prompting skill to learn, because it helps you get relevant and appropriate responses from the AI tool. *Slide 5*	Explain how being specific and setting clear boundaries leads to more relevant and appropriate AI responses, because it helps the AI understand what is expected of the outputs.

The Power of Being Specific If your prompt is too vague, it may lead the AI to generate irrelevant, unexpected, or inappropriate responses. Detailing the what, why, and who of your desired output can help generate better results. **Vague Prompt** *Create a poster.* **Specific Prompt** *Design a digital poster for a new action movie about a group of student detectives solving a school mystery.* *Slide 6*	Discuss the consequences of vague prompts, using the provided examples to illustrate how specificity can significantly improve AI-generated results.
Drawing Lines: Setting Boundaries Boundaries in prompts guide the AI tool on what to include or exclude. Here are some boundaries you can set: **Length** For example: "500 words" "a short essay" "one-sentence summary" **Tone & Style** For example: " in a professional tone" "In the style of Shakespeare" "in a friendly tone" **Format** For example: "a movie script" "an informal email" "a newspaper article" *Slide 7*	Explain how setting boundaries in prompts can guide AI tools on what to include or exclude. Use examples like length, tone, style, and format to demonstrate how these boundaries can be applied.
GROUP EXERCISE **Let's Explore Together!** Try these examples to see the skills in action. *Slide 8*	Engage students in a group exercise where they experiment with the provided examples to see the skills of specificity and boundary setting in action.
Refining Prompts Exercise Let's transform vague prompts into specific, bounded ones. As a group, discuss what boundaries and specific details you can add to improve the following prompts. *Slide 9*	Guide the students through exercises that involve transforming vague prompts into specific, bounded ones. Facilitate discussions in pairs or as a class on how to improve each prompt.
Refining Prompts Exercise #1 You want to learn about Newton's Second Law of Motion, using real life examples. How would you improve this prompt? **Improve This Prompt!** *Help me with science homework.* Discuss in pairs or as a class what details you would add. *Slide 10*	Set the scene of the exercise by using the example of learning about Newton's Second Law of Motion. Encourage students to discuss and share how they would improve the prompt with boundaries and specificity.

Refining Prompts Exercise #1 Here's a suggestion of how you can improve on the prompt: **Improve This Prompt!** *Help me with science homework.* **Suggestion** *Explain Newton's Second Law of Motion using real-life examples suitable for a 9th-grade physics student.* *Slide 11*	Compare and contrast the two prompts, highlighting how the improved prompt adds more instruction and clarity for the AI.
Refining Prompts Exercise #2 You need to write a report on the differences between Bengal Tigers and African Elephants. How would you improve this prompt? **Improve This Prompt!** *Tell me about elephants and tigers.* Discuss in pairs or as a class what details you would add. *Slide 12*	This second example is about researching Bengal tigers and African elephants. Encourage students to discuss and share how they would improve the prompt with boundaries and specificity.
Refining Prompts Exercise #2 Here's a suggestion of how you can improve on the prompt: **Improve This Prompt!** *Tell me about elephants and tigers.* **Suggestion** *Provide a detailed comparison of the dietary habits and habitat requirements of African Elephants and Bengal Tigers.* *Slide 13*	Compare and contrast the two prompts, highlighting how the improved prompt adds more instruction and clarity for the AI.
TRY IT YOURSELF **Independent Exploration Task** Apply the skills you've learned in this task. *Slide 14*	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 As the newly elected class president, you're in charge of your school's recycling programme. It's your responsibility to encourage your classmates to recycle properly. **You've decided to create a school-wide campaign to raise awareness about the recycling programme. Using generative AI tools, create the content for the following items in your campaign:** 1. A recycling contest for students to participate in. 2. A 2-minute speech to address the school at the next student assembly. 3. A 300 word article in the school magazine. *Slide 15*	Students should create three content outputs for a school-wide recycling campaign using AI tools, focusing on a contest, a speech, and an article.

Group Sharing! What did you come up with? *Slide 16*	Invite students to share what they came up with in the independent task. Encourage a discussion on the effectiveness of their prompts and the AI's responses.
Well Done! *Slide 17*	Wrap up the lesson by summarising key learnings.Emphasise the importance of specificity and boundary setting in effective prompt engineering.