Generating Images with AI

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

This lesson focuses on using generative AI tools to create images based on text prompts, highlighting the importance of detailed and creative prompts in guiding AI to produce specific visual outputs.

Duration

20 minutes

Learning Objectives

Students will be able to:
- Apply the principles of prompt engineering to create various artistic styles and moods in images.
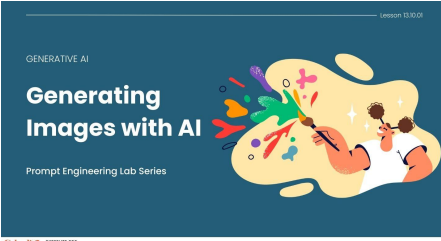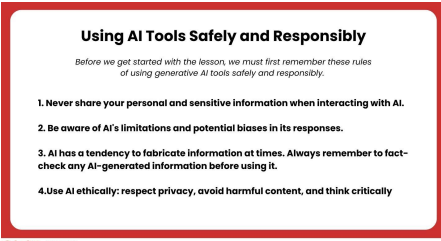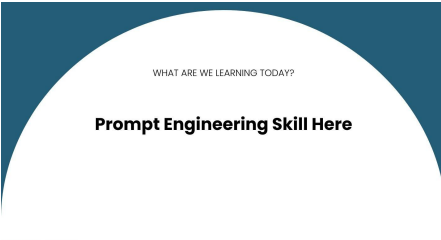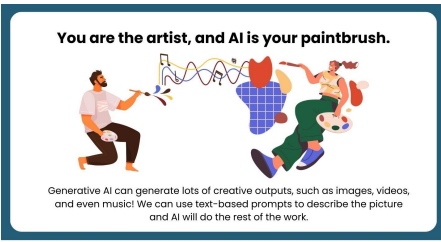- Experiment with AI tools to create unique and creative images for different scenarios.

Key Skills

- Text to image 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
GENERATIVE AI **Generating Images with AI** Prompt Engineering Lab Series *Slide 1*	Welcome the students to the class and introduce the concept of generating visual content with AI.
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 Image Creator by Bing (link) Disclaimer: 1. 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. 2. The outcomes of exercises in this toolkit may differ from provided examples, as they depend on your specific inputs and the AI tools employed. 3. 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 Image Creator 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? **Prompt Engineering Skill Here** *Slide 4*	Introduce the lesson's focus on generating images with AI. Explain how text-based prompts can be used to guide AI in creating visual content.
You are the artist, and AI is your paintbrush. Generative AI can generate lots of creative outputs, such as images, videos, and even music! We can use text-based prompts to describe the picture and AI will do the rest of the work. *Slide 5*	Encourage students to think of themselves as artists using AI as a tool. Discuss how generative AI can create various outputs, including images, videos, and music.

Prompts for Image Generation To generate images, you can let your prompts be as open-ended or specific as you want! Open-ended prompts like "a banana on a skateboard" means the AI will come up with creative interpretations of your instruction. *This image was AI-generated on Image Creator by Bing.* *Slide 6*	Discuss the difference between open-ended and specific prompts. Use the example of "a banana on a skateboard" to illustrate how an open-ended prompt may be interpreted by the AI.
Prompts for Image Generation More specific prompts like **"a banana on a skateboard in a busy city in the style of a Van Gogh painting"** will direct the AI in the direction you want. *This image was AI-generated on Image Creator by Bing.* *Slide 7*	Discuss how this example of a more specific prompt generates a different result. Compare and contrast the differences by illustrating how the specificity of each prompt changes the AI-generated image.
What can you specify? When crafting prompts for AI image generation, including specific details can significantly influence the output. **Artistic Style** Specify a particular artist's style or an art movement. For example, "in the style of Leonardo da Vinci" or "like Art Nouveau." **Colour Scheme** Dictate the colours to be predominantly used, such as "monochrome," "pastel colours," or "vibrant and contrasting hues." **Mood or Atmosphere** Describe the desired mood, like "serene and peaceful," "mysterious and eerie," or "joyful and lively." **Setting and Location** Specify a place or setting, such as "rainforest," "medieval castle," "busy urban street," or "an alien planet." *Slide 8*	Explain the elements that can be specified in prompts, such as artistic style, colour scheme, mood, and setting. Highlight how these details affect the final image.
Credit and Citation Being transparent with your use of AI tools is an important part of being a safe and responsible user. Whenever you have generated content with the help of generative AI, **you must give proper credit and cite your source.** For example: *"This image was AI-generated on Image Creator by Bing."* *Slide 9*	Stress the importance of transparency and ethical use when employing AI tools. Teach students to properly credit and cite AI-generated content.
GROUP EXERCISE **Let's Explore Together!** Try these examples to see the skills in action. *Slide 10*	Conduct a group exercise where students enter specific prompts into an image generator and observe the results. Encourage creativity and experimentation.

Generate an AI Image

1. Enter this prompt into Image Creator:

Try This Prompt!

An astronaut cat floating in space...

2. Choose one of the following details to add to your prompt:
   ○ "...in a photorealistic style"
   ○ "...in pastel colours"
   ○ "...with an adventurous mood"

3. Click 'Generate'!

4. Share your new artistic creations with the class!

Slide 11

Instruct students to enter the prompt "an astronaut cat floating in space" into an image generator, adding their choice of details like style, colours, or mood.

TRY IT YOURSELF

Independent Exploration Task

Apply the skills you've learned in this task.

Slide 12

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 task is to create a poster for a movie about a mysterious figure known as the Colour Thief who steals colours from the world, turning everything into shades of grey.

Using generative AI tools, use your imagination to create a prompt that will produce an eye-catching poster. You can decide on what the Colour Thief should look like, the genre of the movie, and artistic style.

Slide 13

Assign students the task of creating a movie poster for 'The Colour Thief' using generative AI tools. They should decide on the appearance, genre, and artistic style of the poster.

Group Sharing!

What did you come up with?

Slide 14

Invite students to share their AI-generated posters. Encourage discussions on the effectiveness of their prompts and the creativity of the AI responses.

Lesson 13.10.05

Well Done!

Slide 15

Wrap up the lesson by summarising the key learnings. Encourage continued practice in using AI for creative image generation.