

# Your essential guide to Google AI for college



# What's inside:

We hope you find this guide helpful.

Remember: always follow the rules of your school when using AI.

- 1 Prompting Best Practices**  
Learn tips for writing clear, effective prompts that maximize your learning and help you accomplish tasks.
- 2 Gemini**  
Discover how the latest Gemini features - including Canvas, Deep Research, Guided Learning, and more - can elevate and support your learning.
- 3 NotebookLM**  
Use NotebookLM to generate study guides, deepen research, and create custom audio and video overviews based on your class materials.

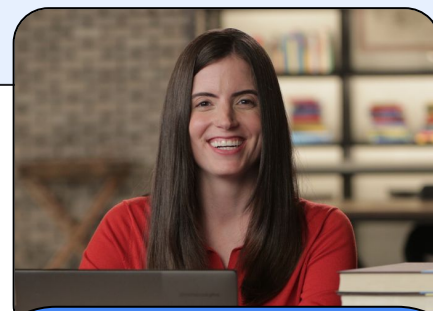
Want more? Check out our **AI for Students** website

[grow.google/students/](https://grow.google/students/)



# Study and learn with the help of AI

Ready to transform how you learn, study, and create? Check out our expert-led training to discover how AI tools can level-up your approach to homework, writing, and even kickstarting your career.



[Click to launch the full playlist](#)

## Homework help

- ⇒ [Ways AI can help with your studies](#)
- ⇒ [Turn any idea into a video with Gemini](#)
- ⇒ [Prompting tips to personalize your learning](#)
- ⇒ [Understand visual information in a snap](#)
- ⇒ [Make Gemini your research assistant](#)

## Exam prep

- ⇒ [Create instant study materials](#)
- ⇒ [Make practice quizzes ahead of your exam](#)

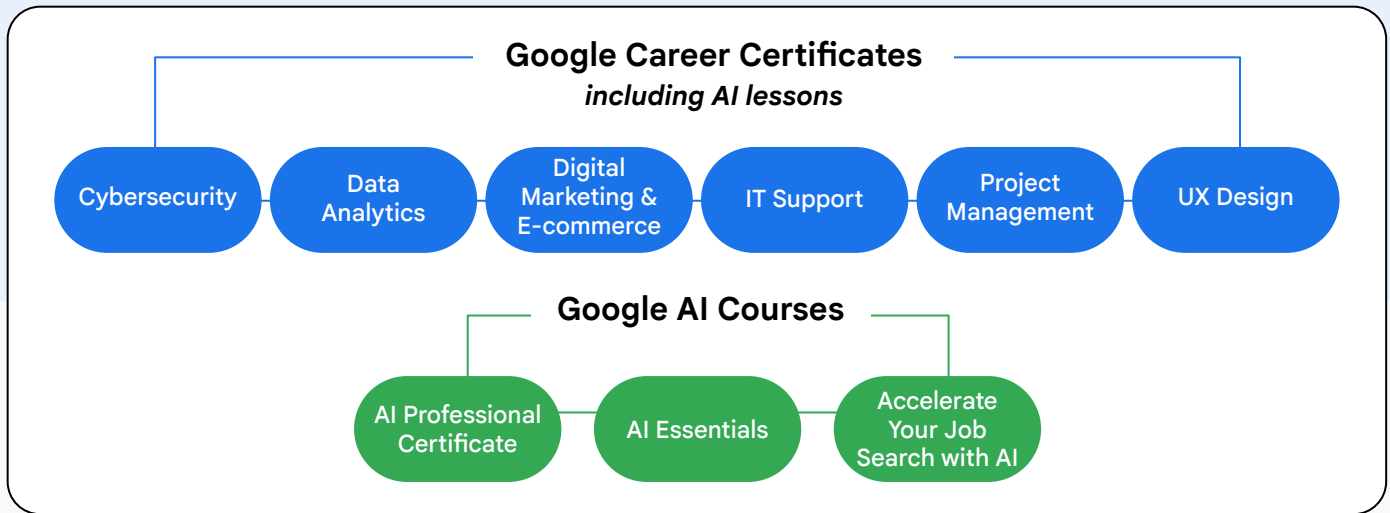
## Writing help

- ⇒ [Get writing feedback with Gemini](#)

## Job search help

- ⇒ [Explore careers that match your skills](#)
- ⇒ [Practice interviewing with Gemini Live](#)
- ⇒ [Update your resume with Gemini](#)
- ⇒ [A recruiter's perspective on resumes](#)
- ⇒ [A recruiter's recommended interview strategies](#)
- ⇒ [Managing your online presence](#)
- ⇒ [Handling challenging interview questions](#)
- ⇒ [Build resilience for your job search](#)

# Essential AI skills for everyone.



✔ **Created by Google experts**  
with **extensive experience** in each field.

✔ **Build AI skills**  
**AI lessons** are included in each Google Career Certificate or explore AI-focused courses.

✔ **Rigorous and relevant**  
**Hands-on learning** with built-in assessments, real-world projects, and skill-building labs.

✔ **Flexible & On-Demand**  
Google Career certificates can be completed part-time in **under 3-6 months**.

✔ **Earn College Credit**  
Google Career Certificates and the Google AI Professional Certificate are recommended by the American Council on Education (ACE®) for **up to 16 college credits**.

✔ **Vetted by employers**  
to ensure you develop the **skills employers are hiring for**.

Get on the fast track to high paying jobs with top employers.



[Get started today](#)

# Prompt like a pro: 5-step framework

## Structure of a great prompt

Great prompts follow the 5-step framework – a simple way to guide Gemini step-by-step in creating exactly what you need. Use this as a model when building your own.

Step	What it means	Example
<b>Persona</b>	Which expertise you want AI to draw from	Economics professor
<b>Task</b>	What you want AI to help you with	Test prep
<b>Context</b>	Any background information AI needs to help you with this task	Exam on macroeconomics
<b>Format</b>	How you want the results to appear e.g. table, bulleted list, paragraph	Open-ended and multiple choice questions
<b>References</b>	[Optional] Examples of what you are looking for	Example of quiz question



### Example Prompt:

You are an economics 101 professor. I am studying for a midterm exam on macroeconomics. Quiz me on the concepts of Gross Domestic Product (GDP) and the business cycle, starting with easier questions and getting progressively more challenging. Ask questions in open-ended and multiple choice format. For example, "What does the economic indicator Gross Domestic Product (GDP) measure?"

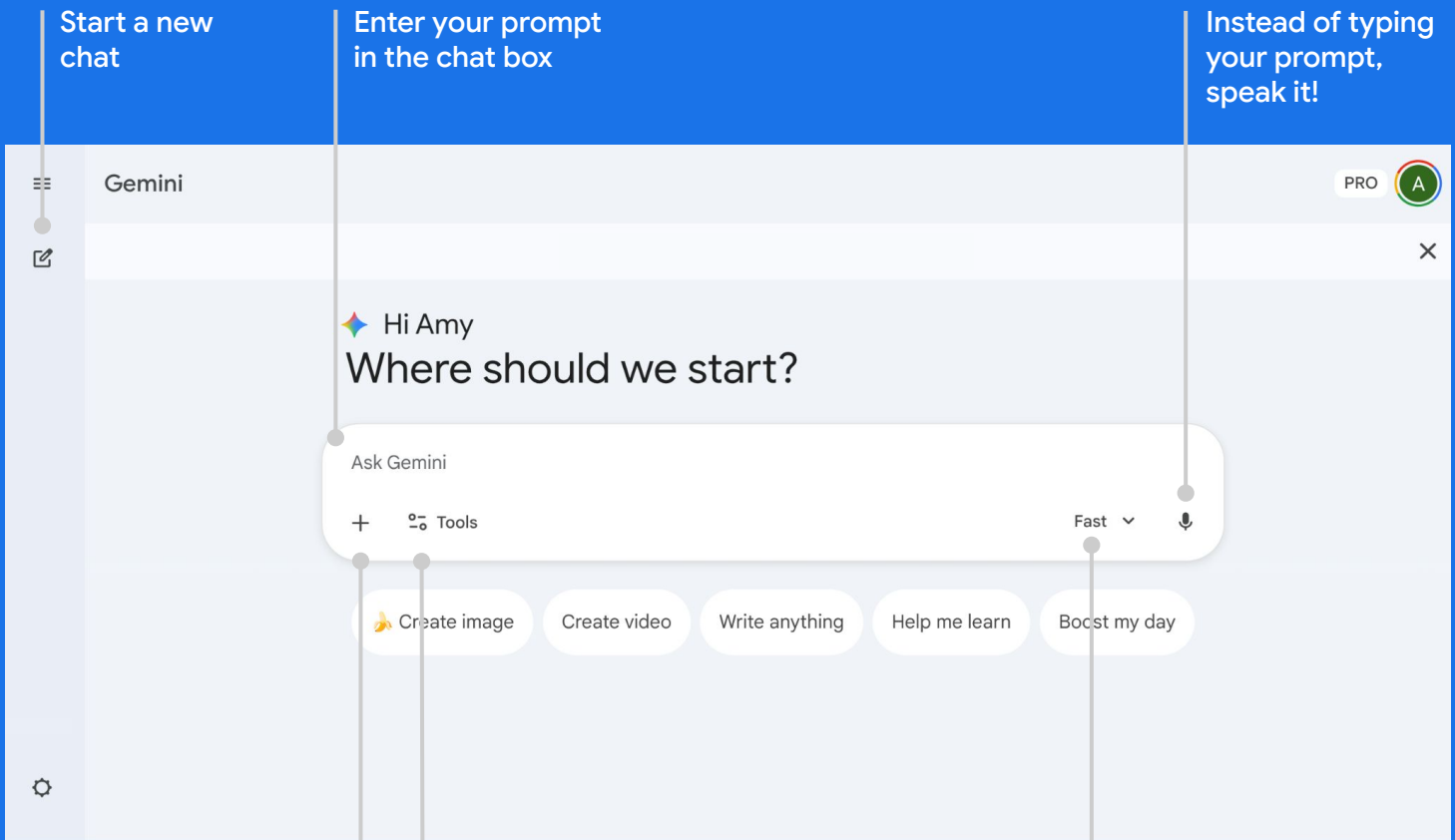
# Introduction to Gemini

Your personal AI assistant for learning.

Get started at [gemini.google.com](https://gemini.google.com)



Your personal AI assistant for learning.



Start a new chat

Enter your prompt in the chat box

Instead of typing your prompt, speak it!

Add files from Google Drive or your computer to your prompt, to provide more context.

## NotebookLM

**Pro Tip:** Connect your existing notebooks from NotebookLM to unlock Gemini's features on your existing sources.

Explore additional Gemini features in the Tool Menu, like:



**Deep Research:** Conduct in-depth, cited research reports on complex topics



**Create Videos:** Create 8-second videos you can use for presentations

**Images:** Generate new images based on a prompt, or upload images for editing



**Canvas:** Build apps, custom code, games, or work with Gemini to edit documents



**Guided Learning:** Receive Interactive, step-by-step guidance from Gemini.

**Model Picker:** Select your Gemini model.

Toggle between different Gemini models depending on whether you are looking for quick answers or advanced math, coding, and reasoning.

## Guided Learning

\*Access Gemini features in your 'Tools' menu

**Guided Learning** acts as your personal study partner, walking you through problems and concepts step-by-step to ensure you master the concepts.

## Use Guided Learning to...

- ✓ Move beyond answer-only output to receive full, adaptive explanations that reveal the "how" and "why" behind concepts
- ✓ Deepen your learning through active dialogue and open-ended questions
- ✓ Deepen your learning through active dialogue and open-ended questions

### Example Prompt

**"What are the parts of a plant cell?"**

Gemini will break down learning concepts step-by-step. Ask follow-up and clarifying questions to dive deeper.

The screenshot shows the Gemini chat interface. On the left, a chat window displays the prompt "what are the parts of a plant cell?". Below the prompt, Gemini provides a text-based explanation of a plant cell, mentioning organelles and their functions. A smaller, labeled diagram of a plant cell is shown below the text. On the right, a larger, more detailed diagram titled "Plant Cell Parts and Functions Explained" is displayed. This diagram is interactive, with labels for various organelles: Rough Endoplasmic Reticulum, Smooth Endoplasmic Reticulum, Golgi Apparatus, Nucleus, Ribosomes, Chloroplast, Vacuole, Plasma Membrane, Microbody, Mitochondria, and Cell Wall. A "Guided Learning" button is visible in the bottom toolbar of the chat window.

Optional: upload references and notes to generate better results

Select 'Guided Learning' from the tool box

Explore complex topics by opening interactive images (if available in the output) in the side panel and clicking labels for in-depth insights.



## Deep Research

\*Access Gemini features in your 'Tools' menu

**Deep Research** helps you get up to speed on just about anything by automatically browsing hundreds of websites and creating insightful reports in minutes.

## Use Gemini Deep Research to...

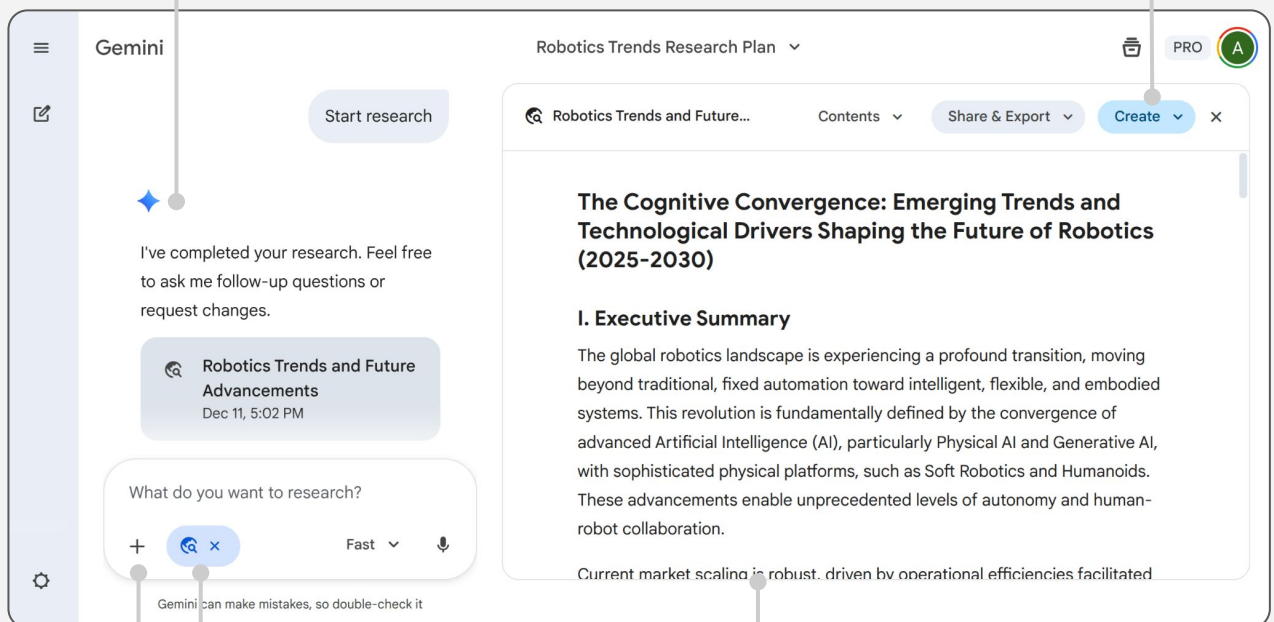
- ✓ Transform your prompt into a personalized, multi-step research plan to break down complex concepts more clearly
- ✓ Kickstart assignments and prepare for exams with broad, initial research summaries of your topics of interest
- ✓ Verify facts and cite with confidence with research findings that directly link back to original sources

### Example Prompt

*"I'm working on a paper about the current and future trends in robotics. Can you help me understand what are key emerging trends and technological advancements driving those trends?"*

Return back to your prompt to iterate and ask additional questions at any time.

Create web pages, infographics, quizzes, flashcards, and audio overviews of your research report



Optional: upload references, like notes and readings, to give more context and get better results

Select 'Deep Research' from the tool box

At the end of your report, Gemini will list the sources it referenced in its output for you to review and dive deeper



## Nano Banana Pro

\*Access Gemini features in your 'Tools' menu

Nano Banana Pro allows you to create and edit images with more creative control, enhanced details, and improved text rendering.

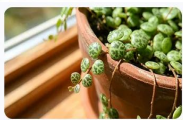
## Use Create images in Gemini to...

- ✓ Quickly create and edit images using simple, natural language prompts
- ✓ Generate clear text for posters, diagrams and infographics for clubs and activities
- ✓ Transform a photo into a professional headshot by adjusting style, camera angle, color, and more

### Example Prompt

*"Create an infographic about this plant focusing on interesting information."*

Uploaded reference photos will appear above the chat

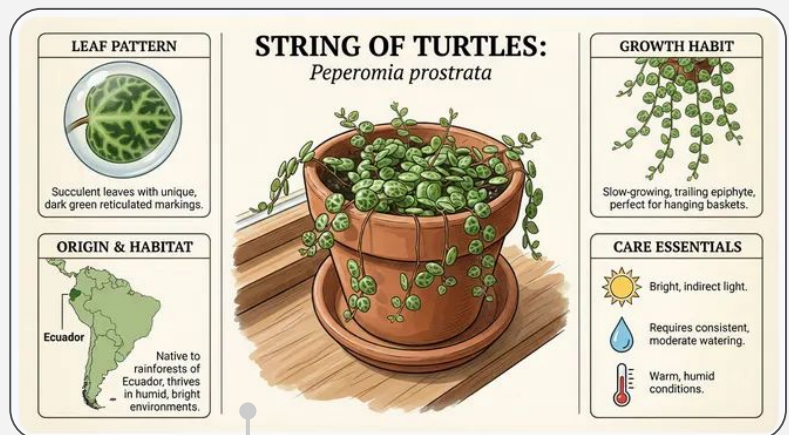


Describe your image

+ 🗨️ 📷 Image ✕

Optional: upload reference photos to give more context and generate better results

Describe the image you would like to create in the prompt bar



Gemini will share the generated photo directly in chat.

Iterate on your prompt to adjust the output.



## Coding Partner (Canvas)

\*Access Gemini features in your 'Tools' menu

With the Canvas feature, make Gemini your collaborative coding partner and go from prompts to prototypes within minutes to bring your ideas to life.

### Use Gemini Canvas to...

- ✓ Turn Deep Research reports into apps, games, web pages, and more.
- ✓ Get real-time feedback on your coding logic, debug errors, and refine your code
- ✓ Generate code that brings your ideas to life as a working, shareable game or app based on your prompt

#### Example Prompt

*"Help me build a simple physics simulation that shows a ball falling under gravity. Use Python and show how to adjust gravity, time, and object mass. Explain what each part of the code does".*

Return back to your prompt to iterate and ask additional questions at any time.

Export your finished output

The screenshot shows the Gemini Canvas interface. On the left is a chat window with the Gemini logo and a 'Show thinking' dropdown. The chat text reads: "I'll create a Python simulation using the Pygame library. This is the industry standard for creating 2D simulations and games in Python because it allows us to visualize the physics loop in real-time." Below the chat is a text input field with a plus icon, a 'Canvas' icon, and a 'Thinking' dropdown. A note below the input says "Gemini can make mistakes, so double-check it". On the right is a code editor window titled "Python Gravity Simulation with Pygame". It contains Python code for a gravity simulation. An "Export to Colab" button is visible in the top right of the code editor.

```
1 import pygame
2 import time
3
4 # =====
5 # 1. CONFIGURATION (Adjust these values!)
6 # =====
7 WINDOW_WIDTH = 800
8 WINDOW_HEIGHT = 600
9
10 # Physics Constants
11 GRAVITY = 9.8 # Acceleration due to gravity (m/s^2). Tr
12 MASS = 5.0 # Mass of the ball in kg (Used for Energy
13 PIXELS_PER_METER = 50 # Scale: 50 pixels on screen = 1 meter in
14 TIME_STEP = 0.016 # Delta time (dt). 0.016 is roughly 60 fr
15 RESTITUTION = 0.8 # Bounciness (0.0 = no bounce, 1.0 = perf
16
17 # Colors (R, G, B)
18 WHITE = (255, 255, 255)
19 BLACK = (20, 20, 20)
```

Enter your prompt in the chat bar.

Select 'Canvas' from the tool box

Gemini will provide code output based on your initial prompt



With quizzes and flashcards in Gemini Canvas, turn your class notes into interactive study tools.

## Quizzes & Flashcards (Canvas)

\*Access Gemini features in your 'Tools' menu

### Use Gemini Canvas to...

- ✓ Transform pages of lecture notes into study guides and flashcards
- ✓ Generate practice exams directly from your course notes to spot knowledge gaps and boost your learning
- ✓ Get a prioritized study plan that focuses your attention exactly where you need it most

### Example Prompt

*“Generate a quiz about the impressionist movement”.*

Return back to your prompt to iterate and ask additional questions at any time.

Gemini will provide an interactive quiz based on your prompt and uploaded documents

The screenshot shows the Gemini Canvas interface. At the top, it says 'Gemini' and 'Impressionist Movement Quiz Generation'. There's a 'Show thinking' dropdown. Below that, a prompt is entered: 'Here is a quiz to test your knowledge of the Impressionist movement, covering its origins, key artists, and defining techniques.' A document titled 'Impressionism: Art of Light and Moment' is uploaded. The quiz question is: '1. Which painting by Claude Monet is credited with giving the Impressionist movement its name?' with options 'A. The Starry Night' and 'B. Water Lilies'. At the bottom, there's a 'Strengths and Growth Areas' section with an 'Analyze my performance' button, and a 'Keep Learning' section with 'Flashcards' and 'Study guide' options.

Optional: add your class notes to your prompt for tailored quiz questions and recommendations

At the end of the quiz, get a detailed breakdown of performance and additional study resources

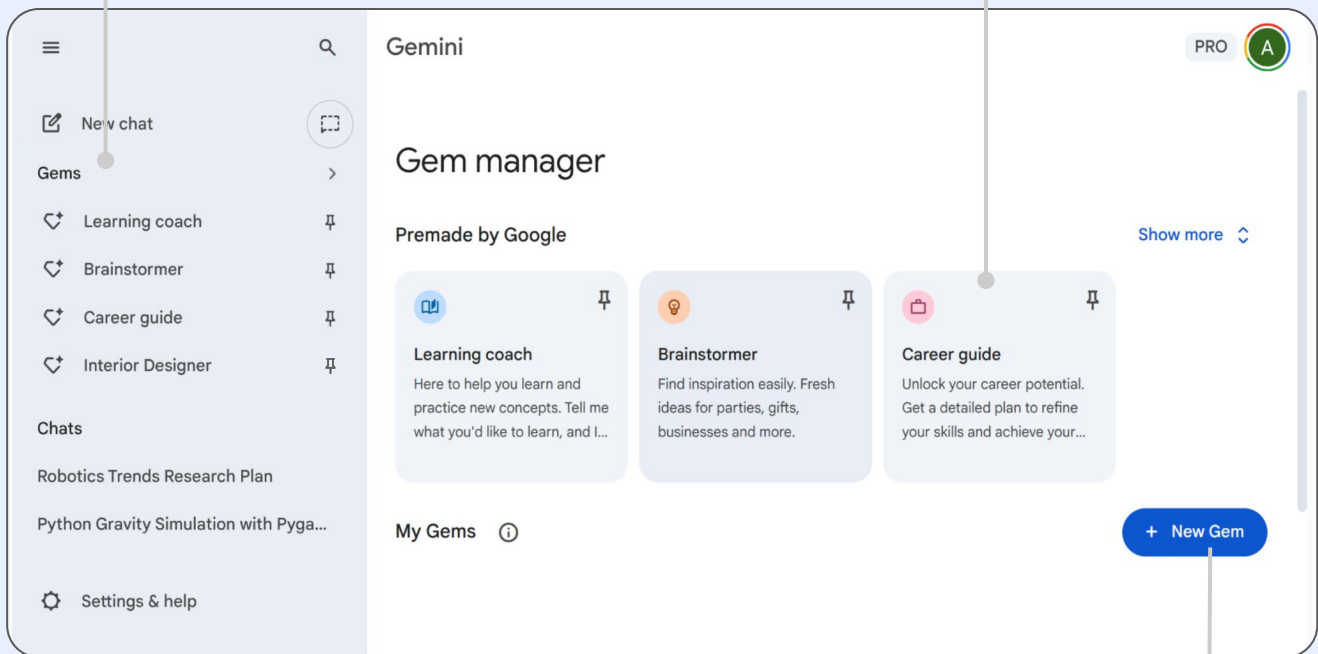


**Gems** let you turn your go-to prompts into reusable study tools, like custom tutors or flashcard generators, so you can spend less time setting up, and more time learning.



Access Gem manager in the side panel of Gemini

Get started easily with pre-made Gems by Google, like "Career Guide"



Create your own custom Gem built to tackle your specific needs. Scroll down to the Gem Manager to get started.

Give your new, personalized Gem a name, like "Chemistry Tutor".

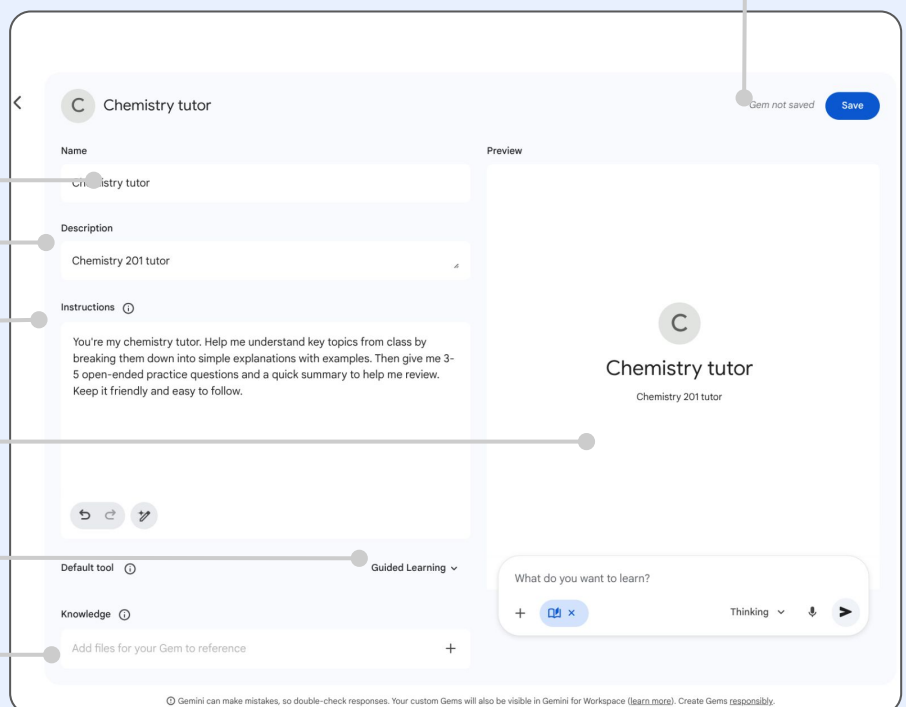
Add a description for your Gem.

Provide detailed instructions to make your Gem work for you. You can use the prepared prompts at the end of this guide for inspiration.

Test your Gem in the preview panel.

Select a default tool, like Guided Learning, for your Gem.

Optional: Upload files to give more context and get more helpful responses.



# Introduction to NotebookLM

Your personal AI assistant for learning.

Get started at [notebooklm.google.com](https://notebooklm.google.com)

# NotebookLM

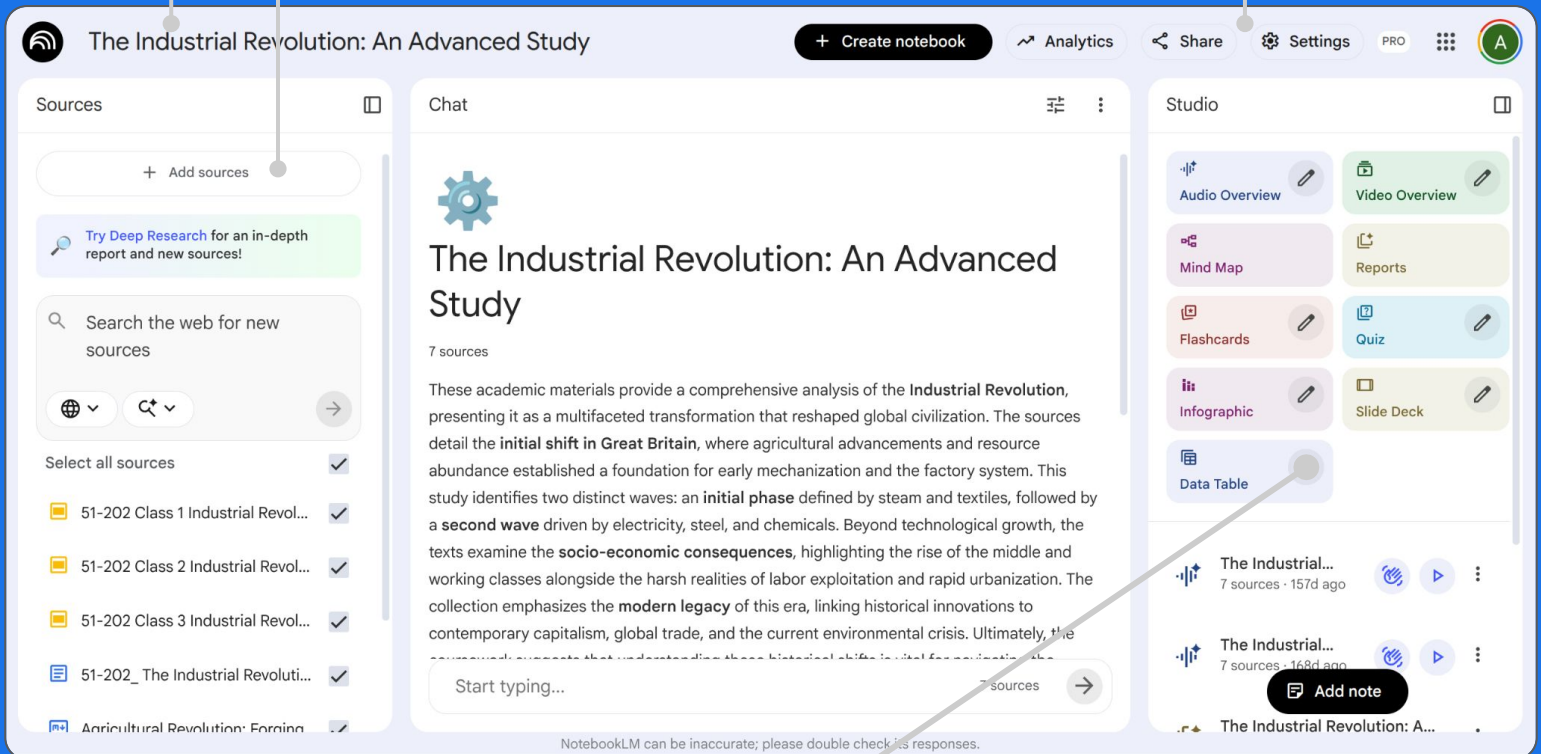
## Understand anything with NotebookLM

Give your notebook a name

Upload your own materials (like course notes, research, readings, or study guides) or browse the web for sources.

*NotebookLM will only use information from the sources you provide. Think of it as an expert on your specific documents.*

Share your notebook with your class so they can access the information and get their questions answered.



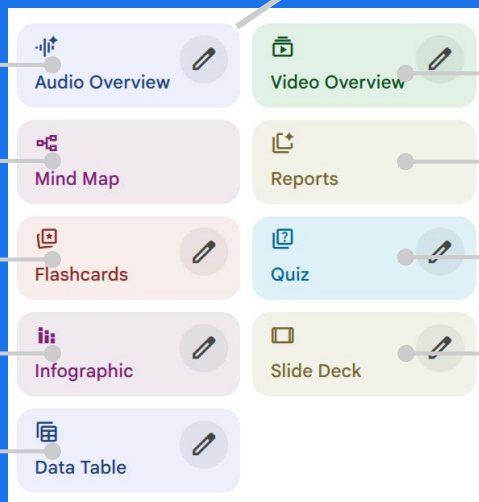
**Audio Overview:** Turn your sources into in-depth audio summaries.

**Mind Map** visually summarize your sources as a branching diagram.

**Flashcards:** Create interactive cards from your sources

**Infographic:** Turn your sources into a single, engaging visual summary

**Data Table::** Synthesize your sources into clear, structured tables



**Video Overview:** Turn your sources into a video of AI-narrated slides.

**Reports:** Generate custom documents, like blog posts, based on your sources.

**Quiz:** Test your comprehension with questions based on your sources.

**Slide deck:** Transform your sources into a polished presentation

Generate an Audio Overview of your sources.

Choose from over 80 available languages

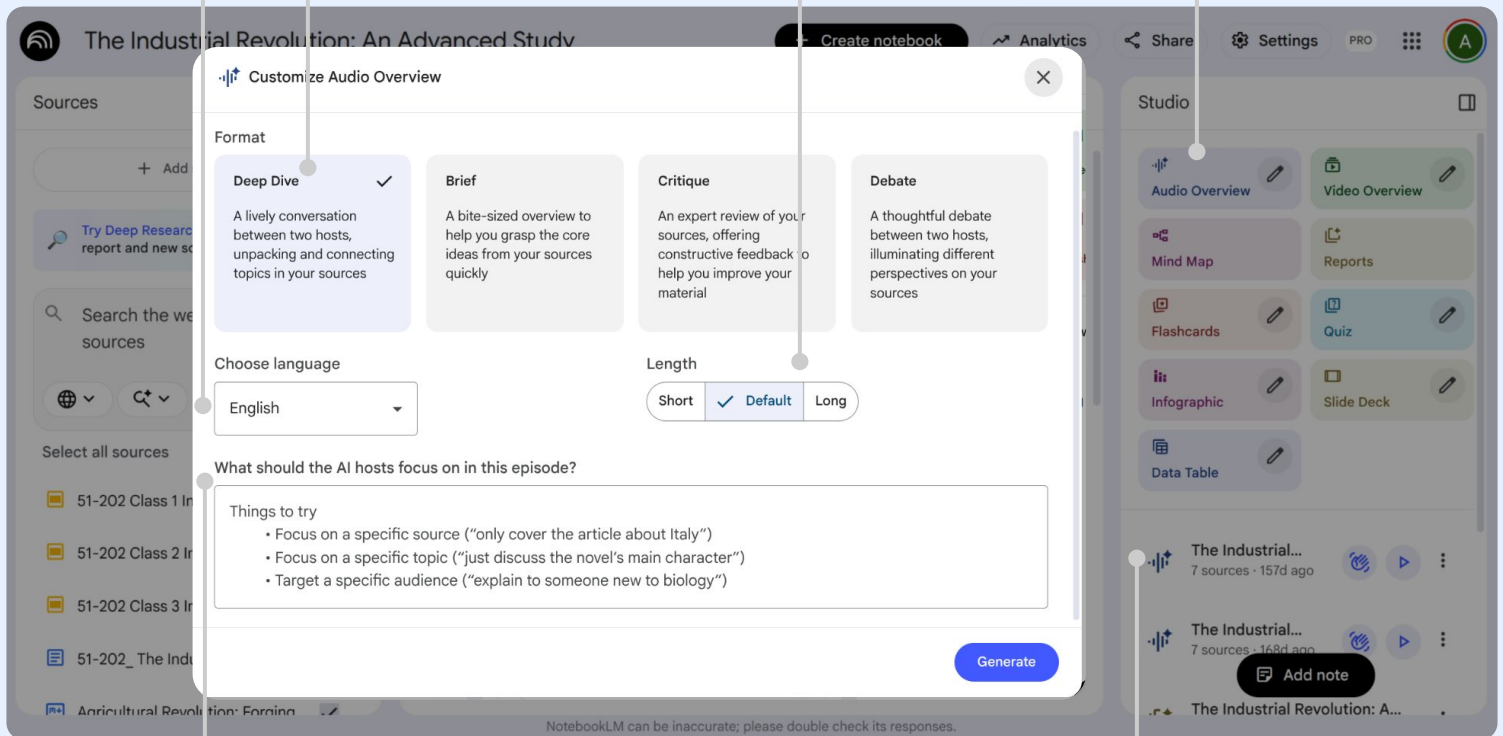
Select your Audio Overview format.

1. *Deep dive into your sources*
2. *Snackable brief to grasp core ideas*
3. *Critique to improve your material*
4. *Debate to offer new perspectives.*

Choose your Audio Overview length

Access [Audio Overviews](#) in the Studio Panel.

Choose the 'Edit' icon to customize the overview.

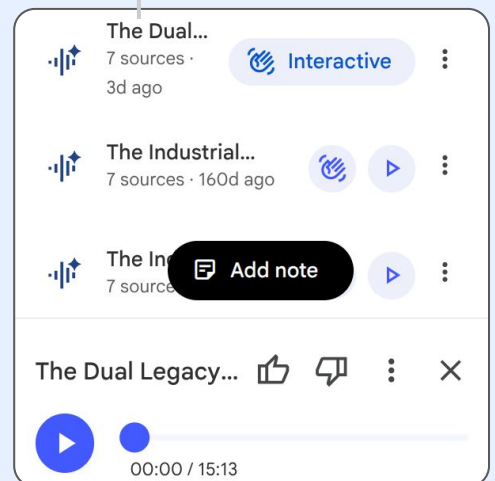


Describe the key topics, sources, and more that you'd like your Audio Overview to focus on.

*Remember: the Audio Overview will be based on the content from your uploaded sources*

Your Audio Overviews will be saved in the Studio Panel.

You can listen, share, rename, download, and delete your saved Audio Overview at any time.



## Video Overviews

Transform your sources into a video of AI-generated slides.

Choose from over 80 available languages

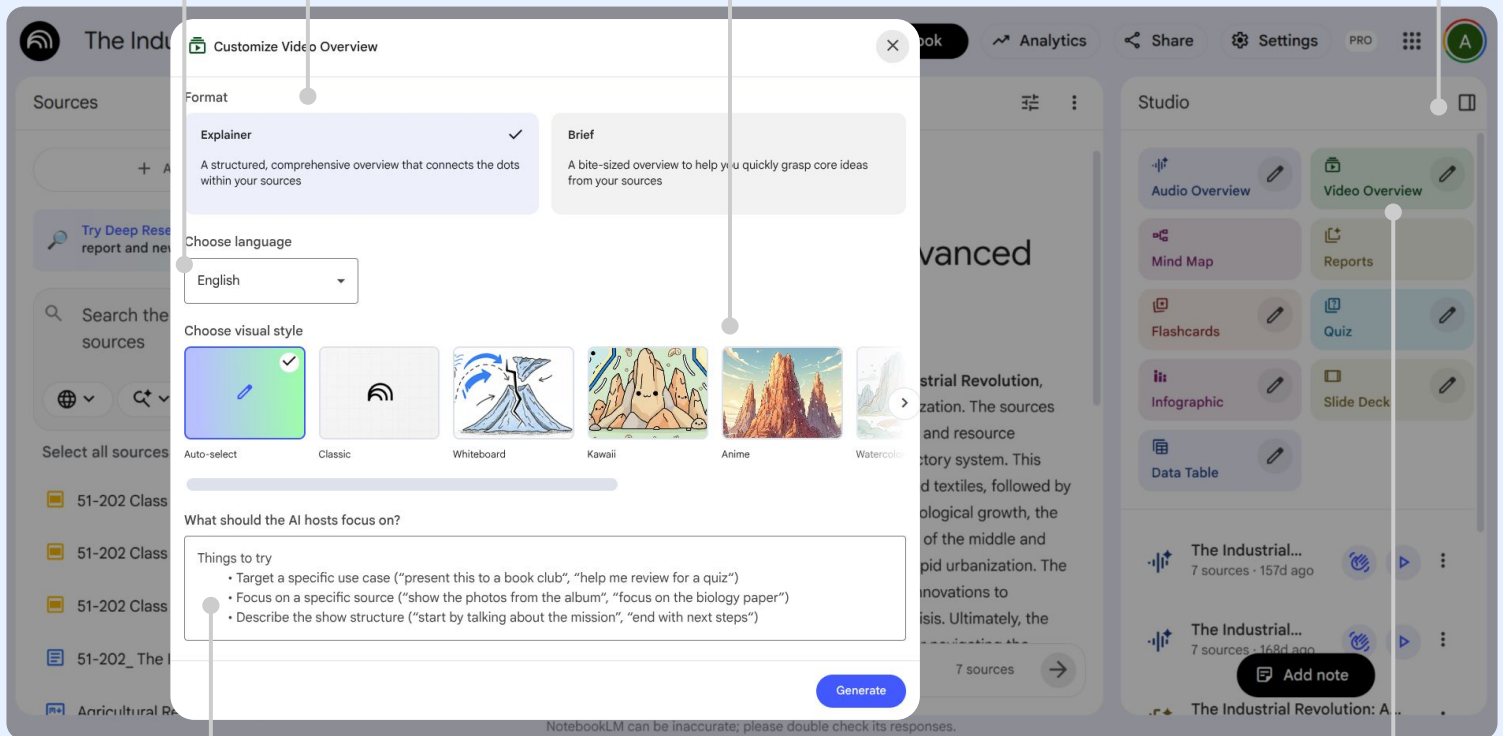
Select your Video Overview format.

1. A structured, comprehensive overview
2. A bite-sized overview to grasp core ideas

Choose your Video Overview style

Access Video Overviews in the Studio Panel.

Choose the 'Edit' icon to customize the overview.

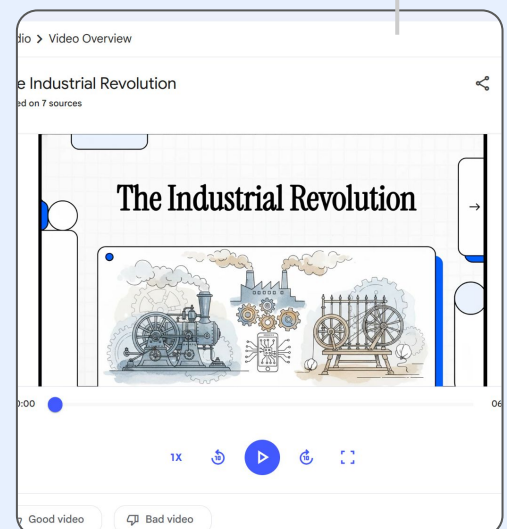


Describe the key topics, sources, and more that you'd like your Video Overview to focus on.

*Remember: the Video Overview will be based on the content from your uploaded sources*

Your Video Overviews will be saved in the Studio Panel.

You can watch, share, rename download, and delete your saved Video Overview at any time.



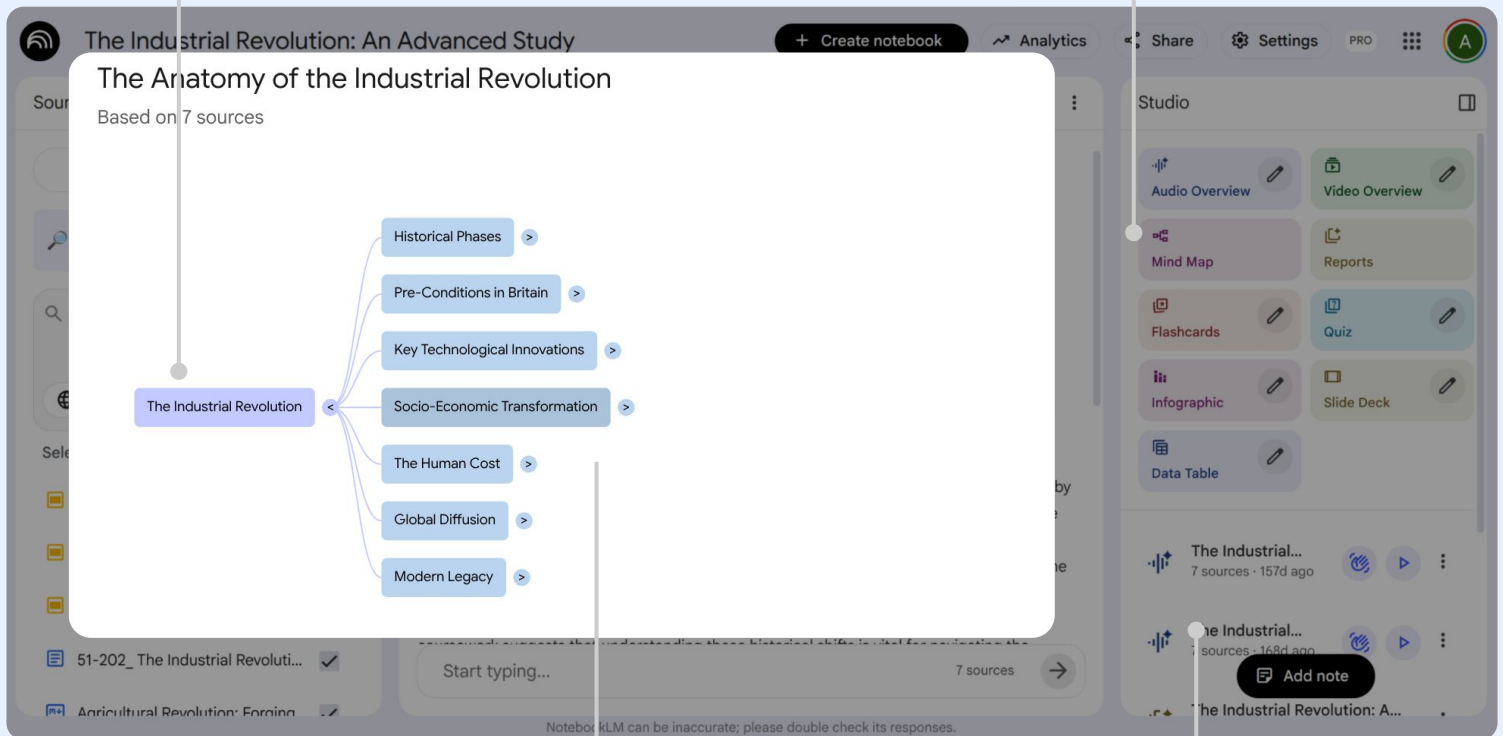
## Mind Map

Connect the ideas from your sources with a Mind Map.

The initial Mind Map will help you understand the big picture and key themes of your uploaded sources, quickly.

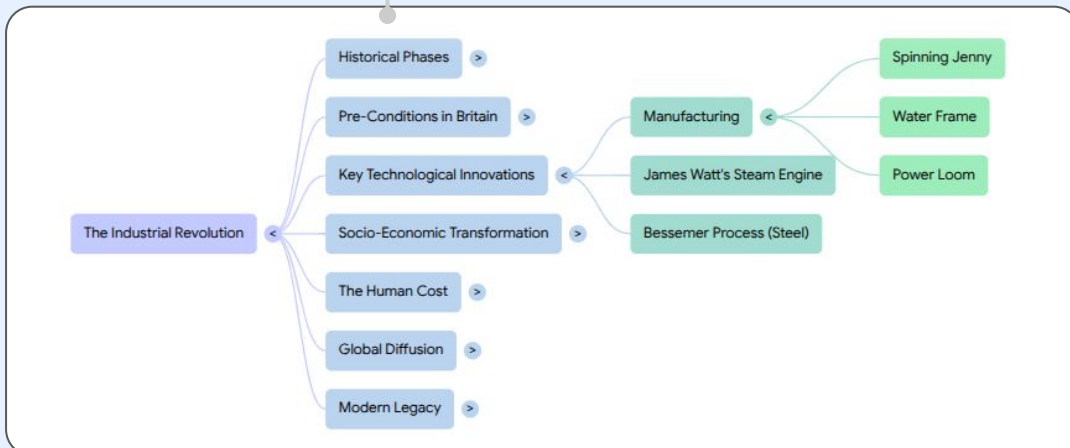
Access Mind Maps in the Studio Panel.

Click on the icon to open the Mind Map



Click on a node to expand the Mind Map and visually discover how different ideas relate to each other.

Your Mind Maps will be saved in the Studio Panel.



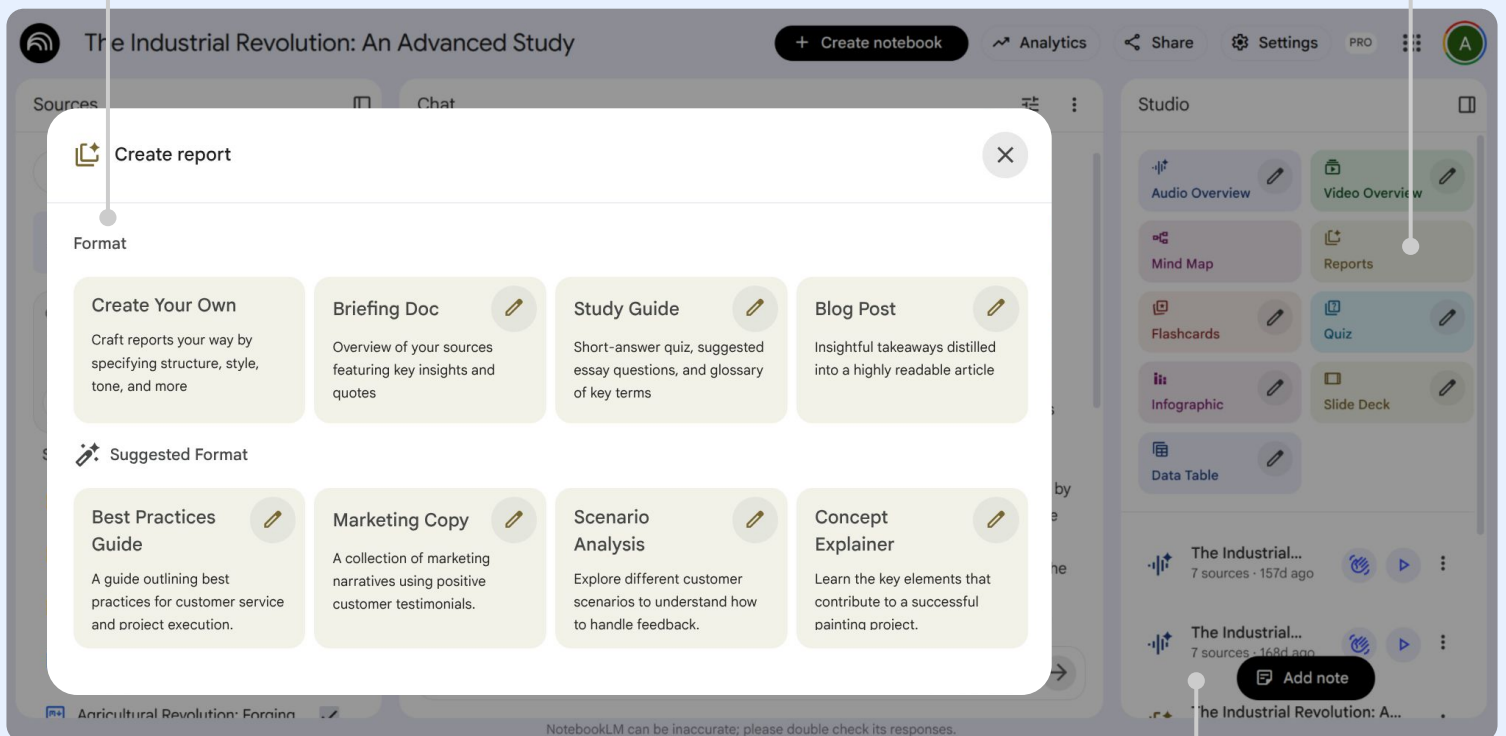
Create customizable reports based on your source documents.

Select the type of report you would like to generate. Create your own, or choose from one of the following:

1. Briefing doc highlighting key insights and quotes
2. Study guide of key concepts and test materials
3. Blog post of source material

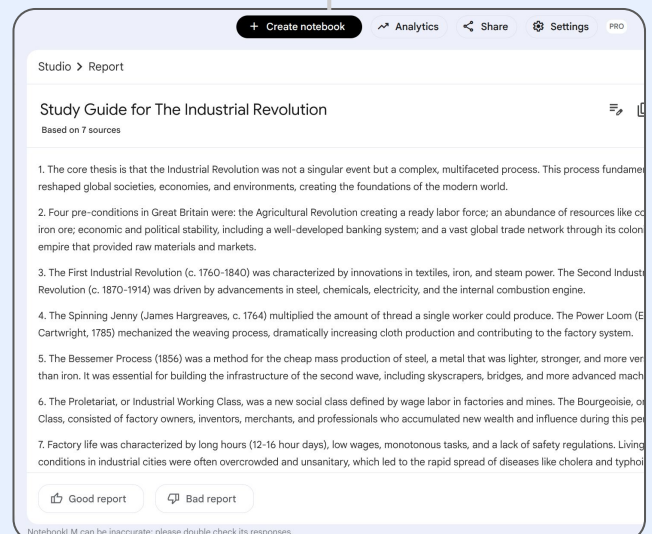
Access Reports in the Studio Panel.

Click on the icon to open the Reports menu.



Your Reports will be saved in the Studio Panel.

You can view, share, rename, download, and delete your saved Reports at any time.



## Flashcards

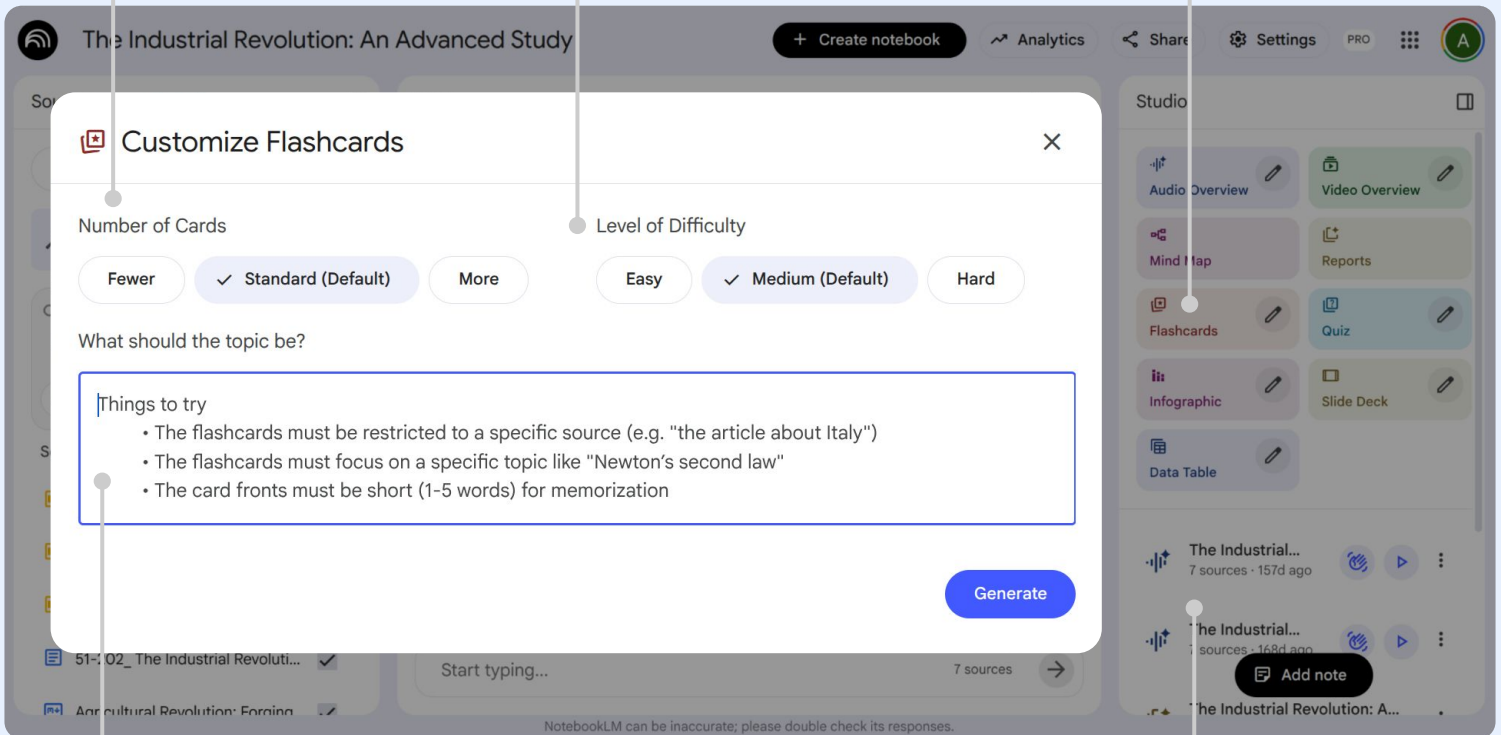
Reinforce key terms and core concepts with flashcards.

Select the number of Flashcards you would like to generate.

Select the level of difficulty for your Flashcards

Access Flashcards in the Studio Panel.

Choose the 'Edit' icon to customize the Flashcards.

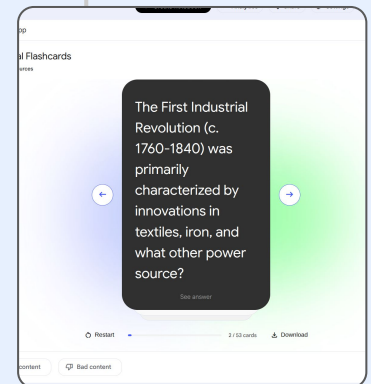


Describe the key topics, sources, and more that you'd like your Flashcards to focus on.

*Remember: Flashcards will be based on the content from your uploaded sources*

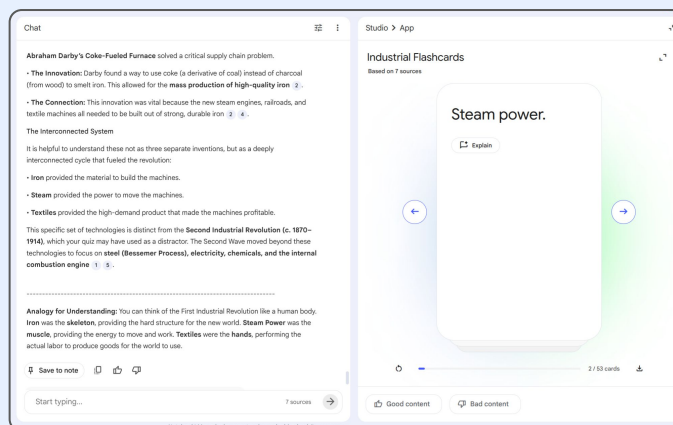
Your Flashcards will be saved in the Studio Panel.

You can view, share, rename download, and delete your saved Flashcards at any time.



Click on a flashcard to reveal the answer.

You can ask Gemini to 'Explain' an answer, which will open a chat window with more context.



## Quizzes

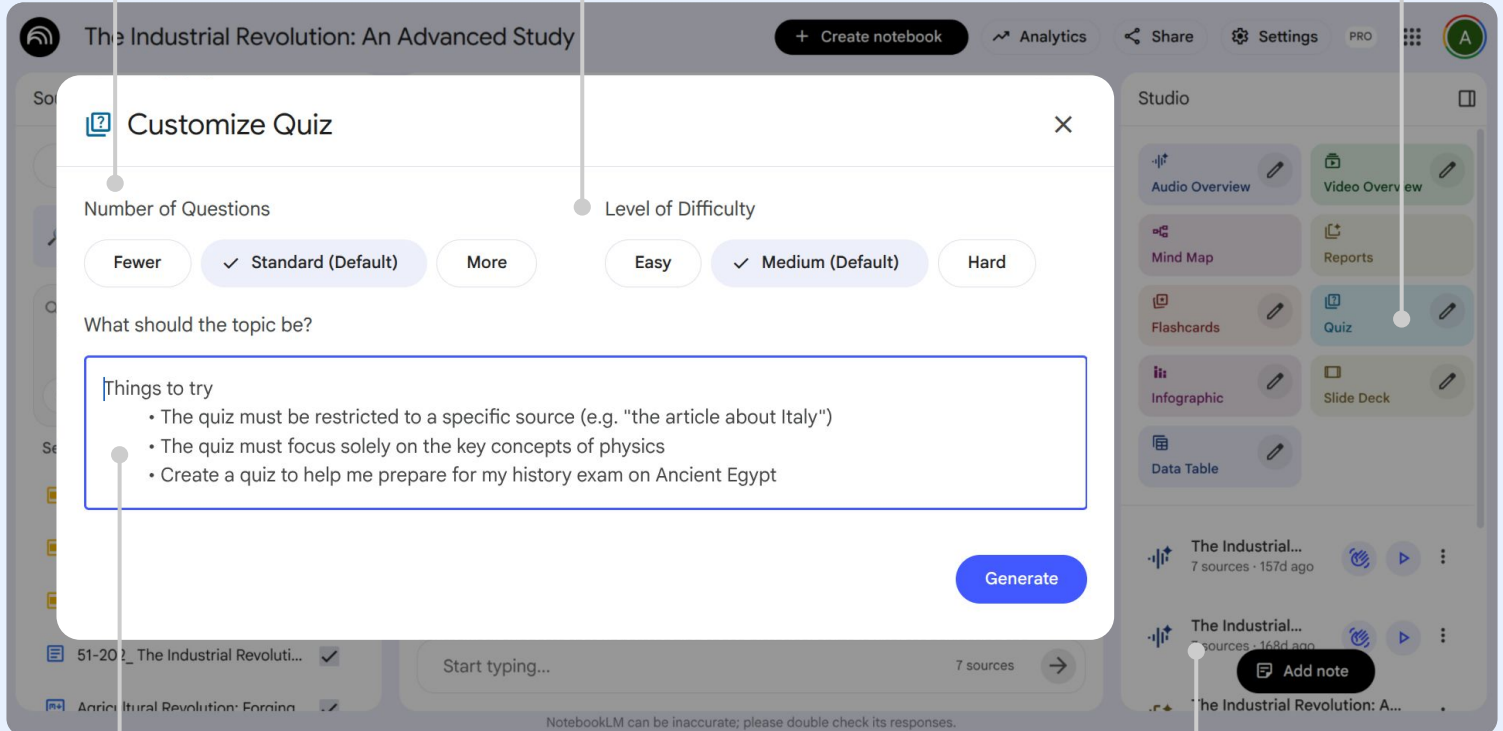
Test your comprehension and challenge yourself with interactive quizzes.

Select the number of Quiz questions you would like to generate.

Select the level of difficulty for your Quiz

Access Quizzes in the Studio Panel.

Choose the 'Edit' icon to customize the quiz.

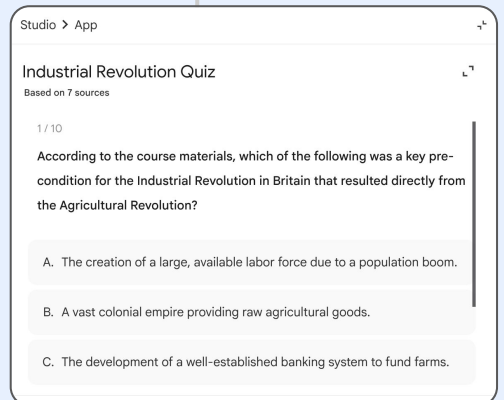
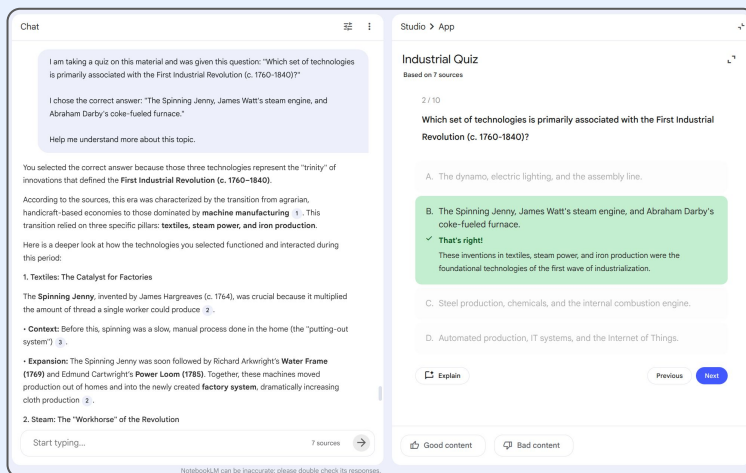


Describe the key topics, sources, and more that you'd like your Quizzes to focus on.

*Remember: Quizzes will be based on the content from your uploaded sources*

Your Quizzes will be saved in the Studio Panel.

You can view, share, rename download, and delete your saved Quizzes at any time.



After answering a question, You can ask Gemini to 'Explain' the correct answer, which will open a chat window with more context.

## Infographic

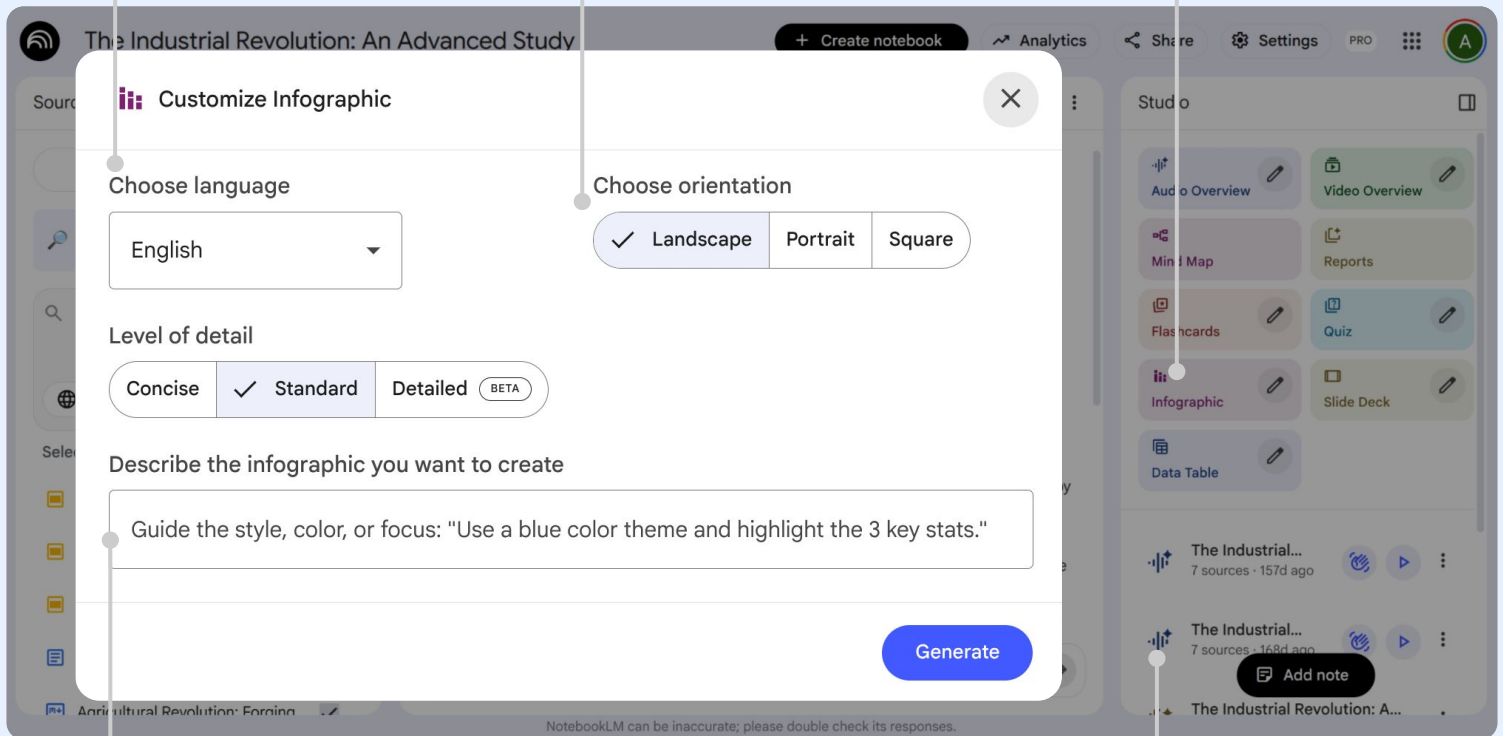
Turn complex information from your sources into a single, engaging visual summary.

Select the language for your infographic

Choose between landscape, portrait, and square for the orientation of your infographic

Access Infographic in the Studio Panel.

Choose the 'Edit' icon to customize the infographic.



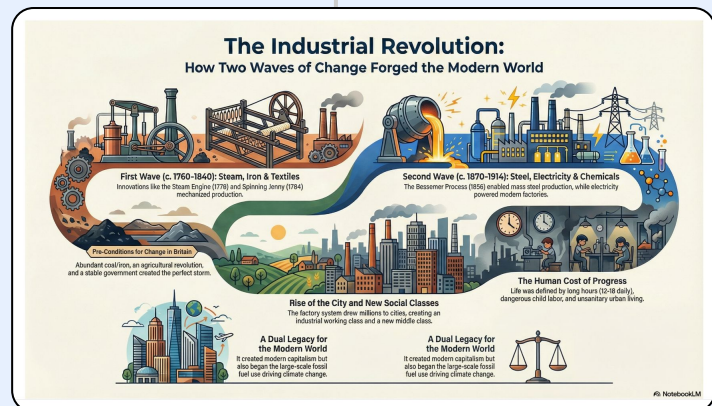
Choose the level of detail you would like your infographic to cover. Standard is selected by default.

Describe the style, focus, key topics, sources, that you'd like your infographic to focus on.

*Remember: Infographics will be based on the content from your uploaded sources*

Your Infographics will be saved in the Studio Panel.

You can view, share, rename, download, and delete your saved Infographics at any time.



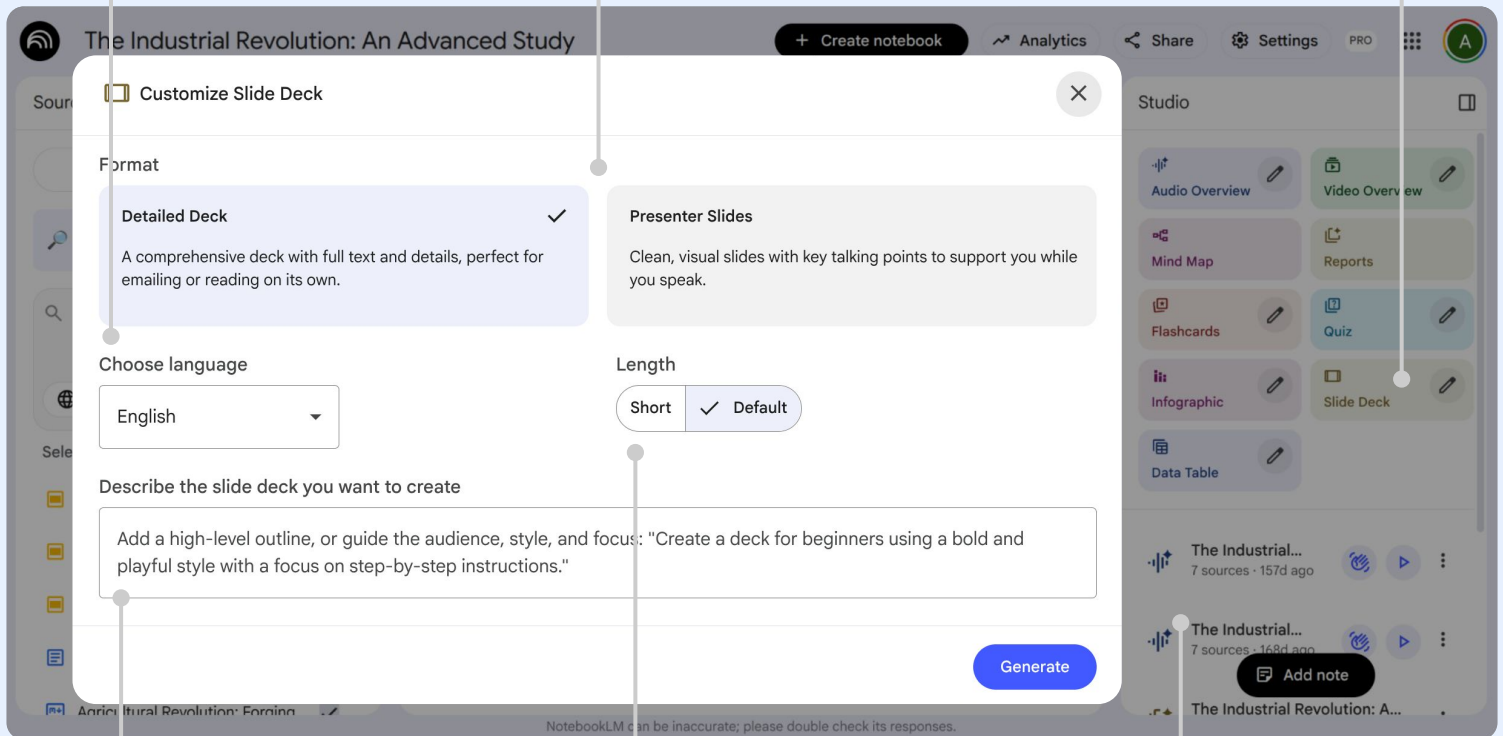
Transform your sources into a polished presentation by generating a Slide Deck

Select the language for your infographic

Choose between a detailed deck or a presenter deck for the format of your generated slides

Access Slides in the Studio Panel.

Choose the 'Edit' icon to customize the slides.



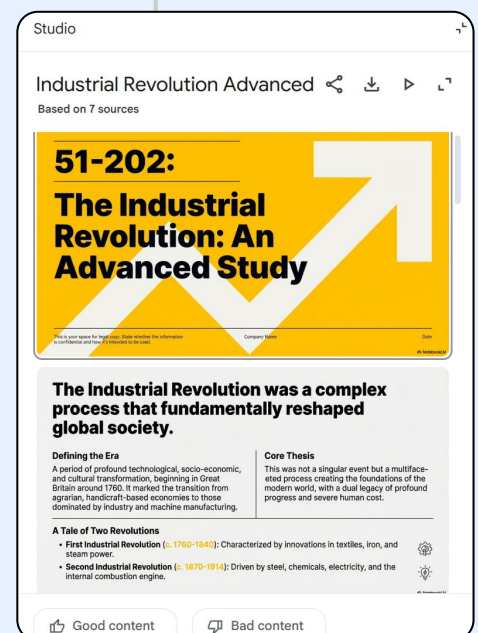
Describe the style, focus, key topics, sources, that you'd like your slides to focus on.

*Remember: Slides will be based on the content from your uploaded sources*

Choose the desired length of your generated slide deck

Your Slides will be saved in the Studio Panel.

You can view, share, rename download, and delete your saved Slides at any time.



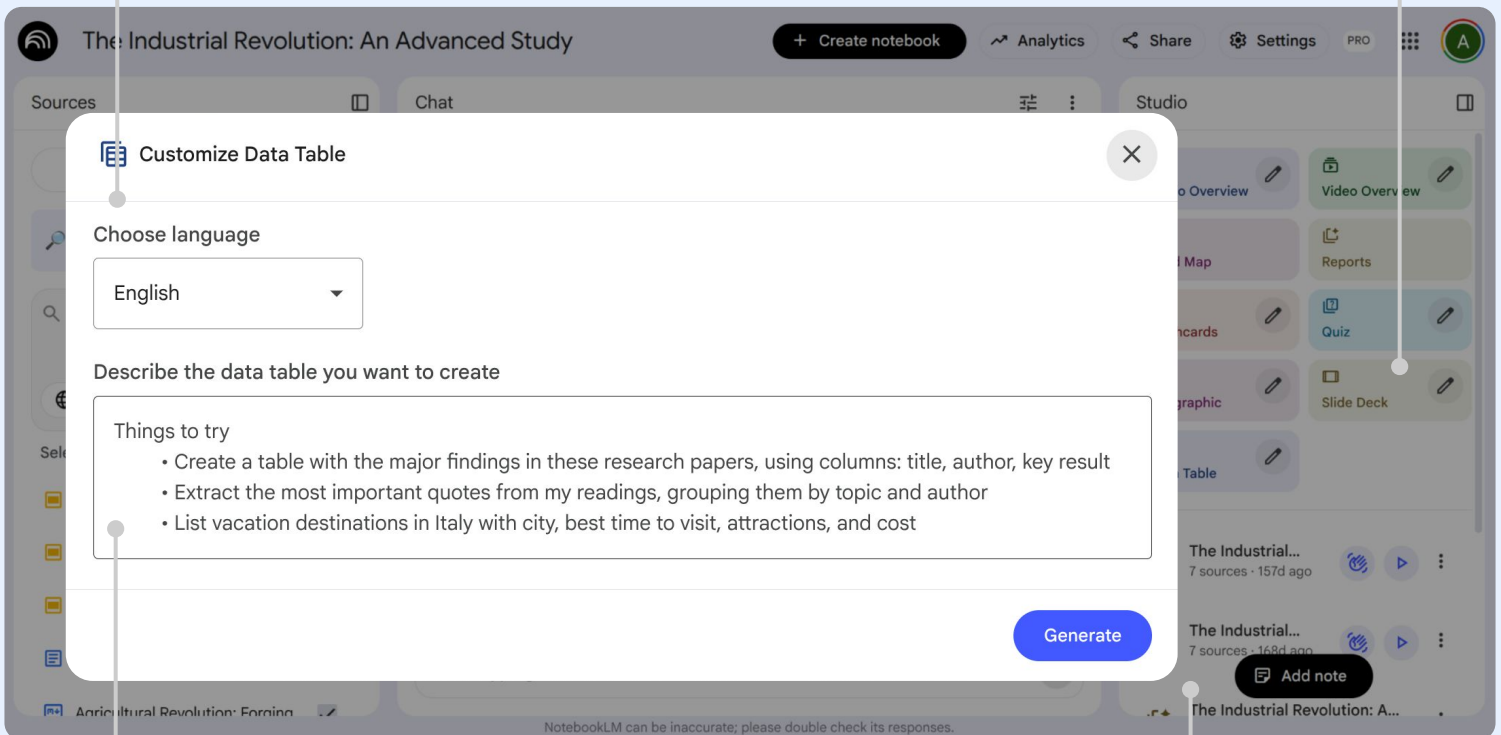
## Data Table

Synthesize your sources into clean, structured tables, ready to export to Google Sheets

Select the language for your data table

Access Slides in the Studio Panel.

Choose the 'Edit' icon to customize the data table.



Describe the style, focus, key topics, sources, that you'd like your data table to focus on.

**Remember: Data tables will be based on the content from your uploaded sources**

Your Data Tables will be saved in the Studio Panel.

You can view, share, rename download, and delete your saved Data Tables at any time.

Studio > Data Table

Industrial Revolution Innovations, Developments, and Key Figures

Based on 7 sources

Innovation or Development	Category	Associated Figure	Date or Era	Key Impact	Primary Resources Required	Inferred Industrial Wave	Source
James Watt's Steam Engine	Steam Power	James Watt	1776; c. 1760-1840	Became the workhorse of the revolution; revolutionized energy sources and powered the factory system, trains, and ships.	Coal, Water	First (c. 1760-1840)	51-202 Class 1 Industrial Revolution Advanced Study; [1]
Water Frame	Textile Manufacturing	Richard Arkwright	1769	Led to the factory system.	Water power	First (c. 1760-1840)	51-202 Class 1 Industrial Revolution Advanced Study
Spinning Jenny	Textile Manufacturing	James Hargreaves	c. 1764	Multiplied the amount of thread a single worker could produce.	Not in source	First (c. 1760-1840)	51-202 Class 1 Industrial Revolution Advanced Study
Power Loom	Textile Manufacturing	Edmund Cartwright	1785	Mechanized weaving, dramatically increasing cloth production.	Not in source	First (c. 1760-1840)	51-202 Class 1 Industrial Revolution Advanced Study

# Google

[grow.google/students](https://grow.google/students)