

INSTRUCTIONS

About this training

Here's a quick intro to help set the scene for this slide deck.

What is this training?

An interactive session designed to **introduce university professors to Google Gemini**, and how to use it effectively and ethically in academic settings.

Who is it for?

The primary target audience is **Educators from colleges and universities**

What does it cover?

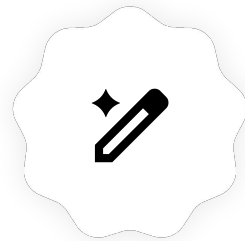
- **What AI is** and why Google is developing AI.
- **Tips for using AI ethically** and with integrity at university.
- **What Gemini is** and where it can help.
- **Effective prompting** techniques (TCR framework)
- **Live demos** of helpful features for studying, writing, and more.

Questions? geminiacademy@google.com



Gemini Academy

for Faculty





Welcome to

Program overview



01 An Introduction to Artificial Intelligence

02 Amplify Your Teaching with Gemini

03 Use AI Safely and Responsibly

04 Collaborate with Gemini

05 Cognitively Explore with NotebookLM

06 Program Reflection and Review

Module

01

An Introduction to Artificial Intelligence

What you need to know about using Gemini for Education



Gemini for Education is a version of the Gemini app built for the unique needs of the educational community. Built with Gemini 2.5 Pro, the world's leading model for learning, Gemini for Education provides default access to our premium AI models, with significantly higher limits than what consumers get at no cost, plus enterprise-grade data protection and an admin-managed experience — all included in your Workspace for Education plan free of charge. With enterprise-grade protection, your data is not reviewed or used to train AI models, and your experience is [governed by the Google Workspace for Education Terms of Service](#).

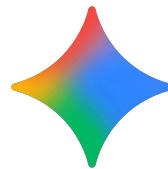


Admins can easily manage who has access to Gemini [Learn how here](#).
Note: Gemini is available to users of all ages.



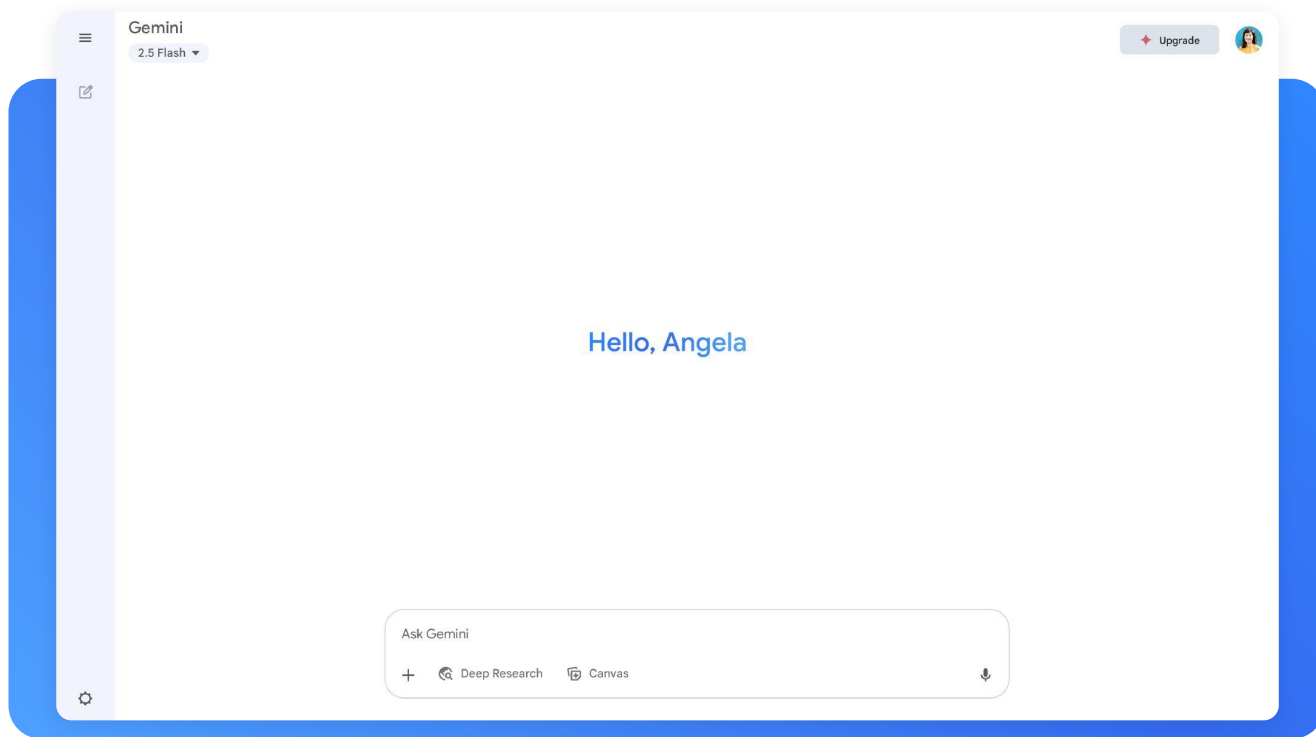
It's important to note that generative AI is a work in progress; it can make mistakes and may even make things up – known as hallucination. Always check information that's presented as fact. When in doubt, double check the response.

What is taking you
the most **time**
right now?



Meet Gemini

Your personal, proactive, and powerful AI assistant from Google.



gemini.google.com ↗

Prompt PARTS



Persona

Identify who you are in relation to the task.

Knowing your persona helps genAI tailor the output to your specific role.

‘Act as an expert sustainability researcher and learning designer.’

‘You are an experienced mentor to graduate students.’

‘Act as a highly creative instructional designer.’



Aim

State your objective clearly. What do you want genAI to achieve?

A clear aim provides genAI with a focused direction.

Describe the task in clear and direct language.

It is recommended you break down large tasks into smaller chunks.



Recipients

Specify the audience you're targeting.

Are you writing for undergrads, graduate students, or the general public?

Knowing your audience helps genAI adjust the tone and complexity of the output.



Theme

Describe the desired style, tone, and any relevant parameters.

Do you want student facing instructions, a formal report, or an engaging case study?

Adding details about the theme guides genAI towards the appropriate style and content.



Structure

Note the format you expect for the output.

Are you looking for a short paragraph, a detailed list, a table, or a complete script?

Specifying the structure helps genAI format the information accordingly.

Chain **multiple prompts** together to get to your desired output



01 You're a Digital Marketing professor. Generate an example of a creative brief for an skincare product launch.

02 How do I craft an example of a campaign that is appropriate and relatable for first year college students?

03 Given what you've identified, can you give me innovative and creative ideas that would appeal to the target audience?

04 Of these options, which three ideas should I use that best illustrate the effectiveness of digital marketing in a campaign launch?



Your turn!

Let's practice
prompting

gemini.google.com ↗

Basic prompt



Generate two highly engaging discussion activities for a [lab on enzyme kinetics].



PARTS prompt



Act as a biochemistry professor designing engaging lab activities.

Persona

Generate two discussion activities that will actively involve students in understanding enzyme kinetics concepts.

Aim

Undergraduate students taking a biochemistry lab.

Recipients

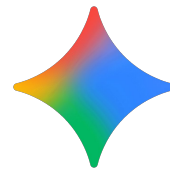
The activities should be highly engaging, promote critical thinking, and reinforce the practical application of enzyme kinetics.

Theme

Provide a clear description of each activity, including objectives, materials needed (if any), and suggested discussion questions.

Structure

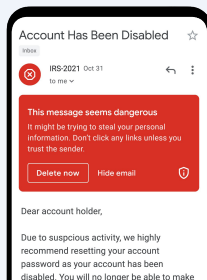
How did it feel
engaging with
Gemini?



AI is all around us

Gmail

Gmail uses AI to filter spam, detect phishing attempts, and recommend smart replies and reminders based on message content.



Google Search

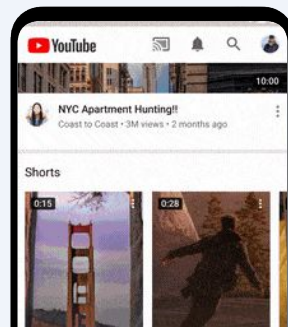
AI algorithms analyse search queries and match them to indexed web pages, considering word proximity, page authority, and user location.



YouTube

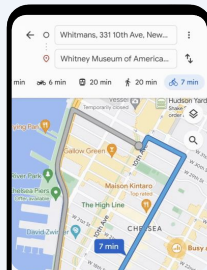
Features on YouTube like auto-generated video chapters, subtitles, and summaries use natural language processing (NLP).

Recommendations are personalised via machine learning models.



Maps

AI helps optimise routes in Google Maps, considering real-time traffic data. Computer vision analyses Street View imagery.



Translate

Google Translate uses neural machine translation to convert text between languages.



2 common ways chatbots generate inaccurate information

01

Invented facts

Chatbots may **invent statements, statistics, or details** that were not actually in their training data.

They "fill in the gaps" by making up facts to try to seem more complete or coherent.

02

Faulty logic

The reasoning chatbots use to generate responses can be flawed.

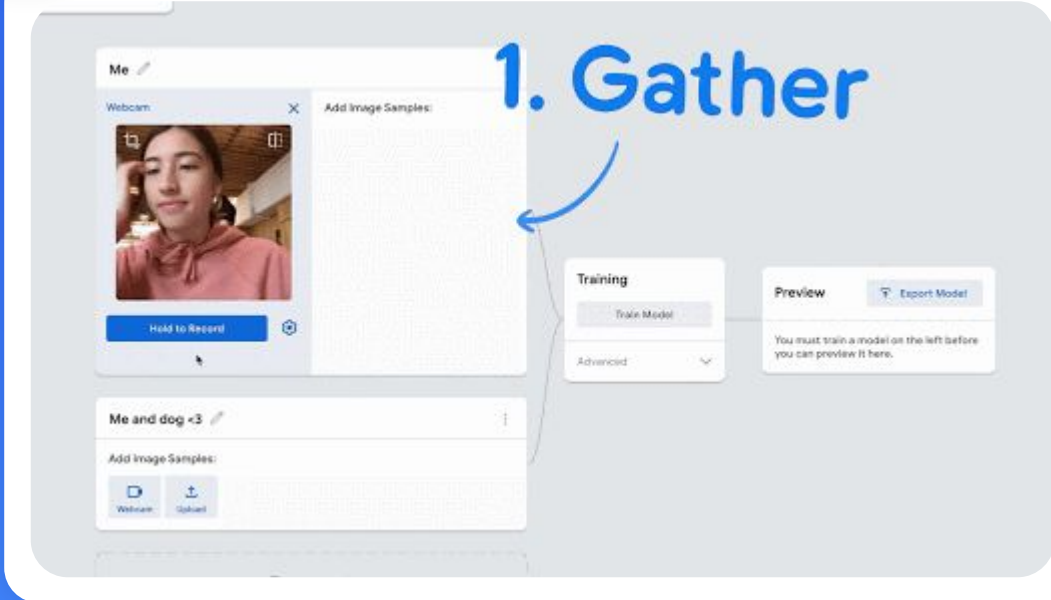
They **may make unsupported leaps between premises** or fail to consider evidence that contradicts their arguments.



Demo 01

Teachable Machine

How to: Google “Teachable Machine”, and click ‘Get started” with a standard image model and follow the instructor directions.



teachablemachine.withgoogle.com ↗

Understanding the types of AI

Machine Learning, Large Language Models, and Generative AI

Machine Learning (ML)

A method of teaching machines to learn and improve autonomously from massive amounts of data, without being explicitly programmed.



input ↗

Large Language Models (LLMs)

Trained to understand, predict, and generate human language.

Generative AI (Gen AI)

Trained to create new content similar to the data it was trained on, like text, images, code, audio, and videos.

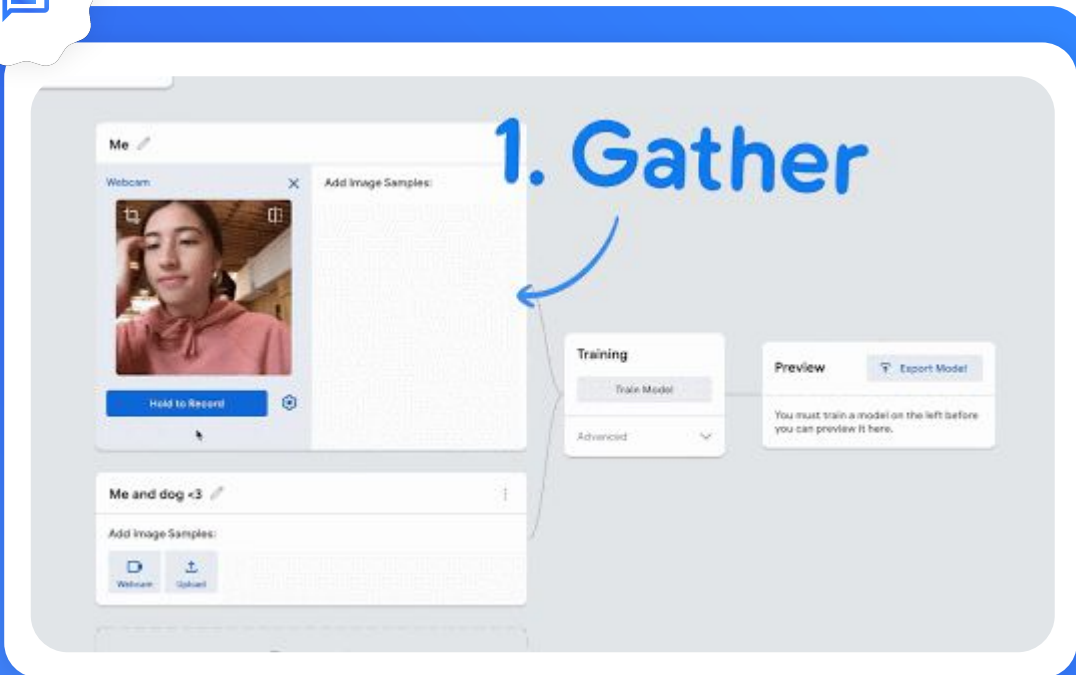




Demo 01

Trade with your neighbor

How to: Google “Teachable Machine”, and click ‘Get started’ with a standard image model and follow the instructor directions.



teachablemachine.withgoogle.com ↗

Bias and fairness

01 Like any new technological development, **AI needs to be evaluated for potential biases** that could negatively impact students and teachers.

02 AI systems reflect biases in their **training data**. Chatbot models are trained on vast published datasets that reflect societal biases around race, gender, culture, and more.

03 Biased AI systems could lead to **unequal educational experiences**, such as students getting different types of recommendations or responses.

04 **Educators play a crucial role** in identifying and mitigating algorithmic bias in the classroom.



Module

02

Amplify Your Teaching with Gemini

Demo 02

Summarize readings

Imagine you have a stack of complex reading to get through and need to quickly get to grips with the key arguments and feel confident on the subject.

Gemini's Long Context Window allows you to upload several PDFs and even dive into them in unique ways –like generating Audio Overviews! With a context window of 1 million tokens, Gemini can process up to 1,500 pages of text or 30K lines of code simultaneously.

Guided Learning mode is another way for students to interact with readings and materials, while having Gemini guide the conversation and answer follow-up questions.



Demo 02

Long context window

How to: Click on the “+” sign in the prompt bar and then click on “Upload files”

Prompt

- ◆ As a [university professor] preparing for a class, summarize the key points from this article and highlight key insights. Present the summary in clear bullet points, grouped by theme or section.

 Measuring the environmental impact of delivering AI at Google Scale.pdf



◆ Show thinking ▼

As a psychology professor, I've summarized the key points from the provided journals on behavioral psychology, social learning theory, and social cognitive theory. This summary is designed for second-year college students to help you grasp these fundamental concepts and their distinctions.

Key Concepts in Behavioral Psychology

Behavioral psychology, or behaviorism, focuses on how observable behaviors are learned and changed. It shifts away from internal mental processes, emphasizing that only what can be seen and measured should be studied scientifically.  

• Foundational Figures:

- **John B. Watson:** A pioneer who argued that behavior could be studied objectively through experiments, focusing on stimulus-response relationships. 
- **B.F. Skinner:** Developed the concept of **operant conditioning**, explaining how consequences shape behavior. Behaviors followed by positive reinforcement are likely to be repeated, while those followed by punishment are less likely to recur. Skinner's work highlighted the importance of environmental factors and introduced ideas like reinforcement schedules.  
- **Ivan Pavlov:** His experiments led to the discovery of **classical conditioning**, where an association is formed between a stimulus and a response. 
- **Core Idea:** Behaviorists believe that all behaviors are learned habits. If a behavior is

Ask Gemini



Deep Research



Canvas



Gemini can make mistakes, so double-check it



Your turn!

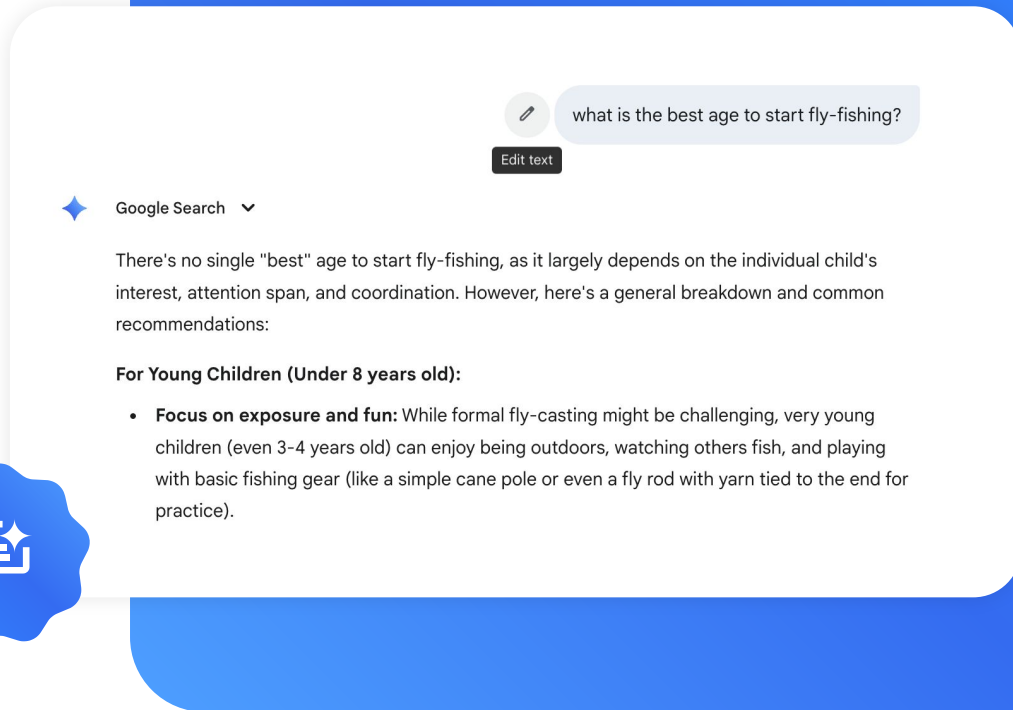
Let's practice
prompting

gemini.google.com ↗

Edit your prompt

If you want to revise your prompt to Gemini, you can edit it, and Gemini will regenerate the response.

1. To the right of your prompt, click Edit text
2. Edit your prompt
3. Click Update



Export your answer

Once you have your answer, you may want to use it in a document you're working on or share it with others.

Click on the “[Share & export](#)” button for an efficient way to copy your response from Gemini directly into your Gmail, Google Docs or Sheets, or as a shareable link so that others can seamlessly view your prompt and Gemini's response.



enjoying the fresh air, scenery, and wildlife.

By following these tips, you can help your daughter discover the joy of nature and create lasting memories together.



Enter a prompt here (English only)

Citations

The citation feature in Gemini is designed to increase the transparency and trustworthiness of its generated responses.

When Gemini provides a factual claim that it sourced from an external website, it will include a gray arrow or a footnote-like reference next to the statement.

Clicking on this reference reveals the source link, allowing you to verify the information.

This is particularly useful when you prompt Gemini to analyze or summarize documents, such as PDFs. The citation feature is designed to link the response directly back to the original text within the file.



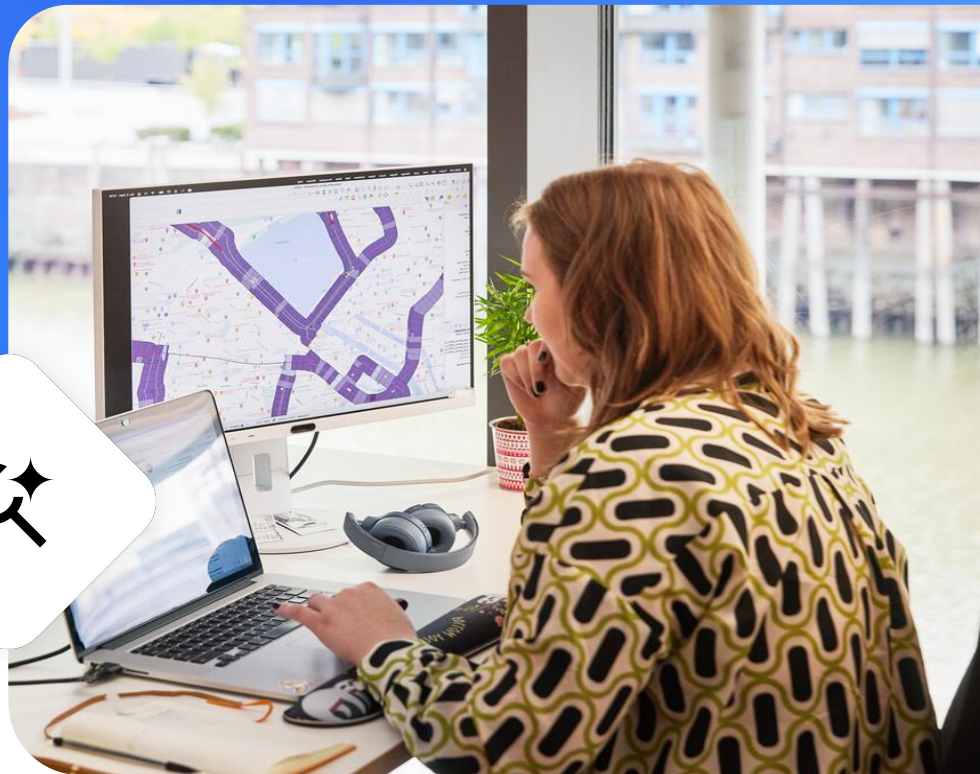
Demo 03

Save hours of time with Deep Research

Imagine you've been asked to teach a new course at the last minute, and all you have is the course catalog description. You need materials, text book suggestions, articles, and other content fast. Use Deep research to help you cut through the noise and get your course up and running.

Gemini Deep Research is designed to tackle complex research tasks by breaking them down, exploring the web to find answers, and synthesizing findings into comprehensive results.

Up to 5 reports / month using 2.5 Flash



Demo 03

Deep Research in Gemini

How to: Click on the “Deep Research” Chip in the prompt bar and submit your prompt.

Prompt

✦ I am a [Professor] tasked with teaching a new course on [Topic]. Here is the course description: [Course Description]. The audience are [undergraduate students]. Find potential textbooks, materials, and other relevant content for this course. Provide your outputs as a proposed course outline with topics and materials.

☰ Gemini University - Course Descriptions

✦ Don't just read, listen!

You can generate an audio overview of your Deep Research reports – a podcast-style narration of the key findings. It's a fast, accessible way to listen to your research findings while you multitask.



Writing's Cognitive Enhancement Potential

Contents Export Create X

The Profound Link: How Writing Shapes and Enhances Thinking and Cognition

1. Introduction

Writing, frequently perceived as a fundamental means of communication or a simple record-keeping activity, is increasingly recognized within cognitive neuroscience and educational psychology as a dynamic process that actively shapes and enhances human thinking. This report delves into the intricate connections between writing and various cognitive functions, moving beyond a superficial understanding to explore the underlying theoretical frameworks, empirical evidence, and neurological mechanisms that underpin this positive relationship. The subsequent sections will systematically examine the theoretical foundations of writing and cognition, specific cognitive benefits derived from writing, the neurological distinctions between handwriting and typing, and important contextual factors influencing writing's cognitive impact, culminating in a synthesis of findings and implications for practice and future research.

2. Theoretical Foundations of Writing and Cognition

Understanding the cognitive processes involved in writing requires a robust theoretical lens. The seminal **Flower & Hayes Cognitive Process Theory of Writing (1981/1980)** stands as a cornerstone in this field, positing writing not as a linear progression but as a complex, goal-directed, and recursive process. This theory shifts focus from merely the written product to the dynamic mental operations writers engage in.

The model delineates three primary interactive components:

- **Planning:** This foundational stage, which can consume approximately 40% of a writer's time, involves generating ideas, setting clear goals (such as identifying the audience, purpose, and desired style), and organizing thoughts. It is critical for establishing a hierarchical network of objectives that guide the entire writing endeavor.
- **Translating:** Accounting for roughly 20% of the writing time, this is the act of converting conceptual ideas into tangible written text. It involves crafting sentences and paragraphs and meticulously choosing appropriate words to convey meaning.
- **Reviewing:** This crucial stage, also estimated to take around 40% of the time, encompasses reading the drafted text, evaluating its effectiveness against the established goals, and making necessary revisions. It extends beyond mere grammatical correction to ensure the writing effectively communicates its intended message and meets the initial objectives.

A defining characteristic of the Flower & Hayes theory is its emphasis on the **recursive nature** of writing, where writers fluidly move back and



Your turn!

Let's practice
prompting

gemini.google.com ↗

Module

03

Use AI Safely and Responsibly

Our **AI** principles

01

Be socially
beneficial

02

Avoid creating or
reinforcing unfair bias

03

Be built and
tested for safety

04

Be accountable
to people

05

Incorporate privacy
design principles

06

Uphold high standards of
scientific excellence

07

Be made available for uses that
accord with these principles



In 2018, Google was one of the first companies to establish AI Principles as part of our commitment to developing technology responsibly.

Find out more at ai.google



Transform education with the help of Gemini



Save time

Speed up time-consuming tasks so you can focus on what matters most.



Make learning more personal

Captivate each student with content that's tailored to their needs and interests.



Inspire creativity

Get fresh ideas and inspiration for new approaches with your AI assistant.



Learn confidently

Empower students with AI-guided support to help them learn with confidence.



While keeping your data private and secure



Help students use **AI** responsibly with these 5 tips:

01 Remember AI is technology, not human.

AI is a machine learning model. It can't think for itself, or feel emotions, it's just great at picking up patterns, known as training. Since AI is not a human, it can't and shouldn't make decisions for you or replace important people in your life.

02 AI should enhance skills, not substitute them.

AI can help you kickstart the creative process, but it's not there to do the work for you - that's your role as the creator. For example, you might use AI to summarize several research articles on a topic for an essay, before you synthesize the information and write your own analysis.

03 Always critically evaluate AI's output.

Generative AI can make mistakes, and may even make things up, known as hallucinations. Always check information that's presented as fact. Like every useful technology, there may be people who try to take advantage of AI to deceive or defraud others. For example, they may generate misinformation or fake photos and videos that seem real. If something seems unusual, take caution.

04 Keep private information private.

Never enter personally identifiable information into generative AI systems. Generative AI products are a work in progress - data like your conversations, feedback, and ratings are used to improve the models that power the product.

05 Access Gemini Academy for Students for detailed learning curriculum

In order to help elevate AI literacy in the classroom, we've designed a series of 5 engaging lessons for teachers like yourself to enable your students. Find instructions on how to leverage this content [HERE for high school educators](#) and [HERE for higher education educators](#)



AI can never replace the expertise, knowledge, or creativity of an educator – but it can be a helpful tool to enhance and enrich teaching and learning experiences.

Reference: [The Google for Education Guide to AI in Education](#)

Module

04

Collaborate with Gemini

Demo 04

Curriculum planning

Curriculum planning is a complex and vital undertaking, shaping the learning experiences and academic journeys of countless students.

Gemini Canvas allows for interactive collaboration right within Gemini. From brainstorming new course structures to refining learning objectives and assessment strategies, Gemini can offer intelligent support and innovative ideas to help you develop engaging and effective curricula.



Demo 04

Refine drafts with Canvas

How to: Click on the “Canvas” Chip in the prompt bar and submit your prompt.

Prompt

✦ I am a [Professor], tasked with teaching a course on this topic: [Course Description]. Write a course syllabus that follows the university guidelines provided and best practices. The course is geared at undergraduate students. Include a course structure, materials covered, and any other required syllabus sections from the guidelines.



Gemini University - Syllabus Guidelines.pdf



Gemini University - Course Descriptions



Introduction to Computer Science Curriculum...



Heading 2



Create



Introduction to Computer Science: Curriculum Outline

This document outlines a comprehensive and engaging curriculum for a high school Introduction to Computer Science course, designed to provide students with foundational knowledge and practical skills in the field.

Course Title

Introduction to Computer Science

Target Audience

This course is designed for high school students (grades 9-12) with little to no prior experience in computer science or programming. It aims to serve as a foundational course for students interested in pursuing further studies in STEM fields, as well as those who simply wish to develop computational thinking skills applicable to various disciplines.

Context

In an increasingly digital world, understanding the fundamentals of computer science is crucial for all students, regardless of their future career paths. This course will demystify computing, foster problem-solving abilities, and equip students with the basic literacy needed to navigate and contribute to the technological landscape. It will emphasize hands-on learning and real-world applications.

Potential Challenges

- **Varying Prior Knowledge:** Students may come with diverse backgrounds, from complete novices to those with some self-taught experience.
- **Abstract Concepts:** Some computer science concepts (e.g., algorithms, data structures) can be abstract and challenging to grasp initially.
- **Debugging Frustration:** Programming involves frequent debugging, which can be discouraging for beginners.





Your turn!

Let's practice
prompting

gemini.google.com ↗

Upload images & video in Gemini

You can upload images and videos alongside text in your conversations with Gemini, allowing you to dig into these media in completely new ways!

Whether you need more information about an image, inspiration for a caption, or help summarizing a long video meeting recording, Gemini has you covered.



 Tell me what ingredients are in this dish:



Show drafts  

✦ Sure, based on the image you sent, the dish appears to be shakshuka. It is a North African and Middle Eastern dish made with eggs poached in a tomato sauce with spices. Here is a list of the ingredients:

- Eggs
- Tomato sauce
- Onions
- Bell peppers
- Chili peppers
- Garlic
- Olive oil
- Salt
- Pepper
- Spices, such as cumin, paprika, and turmeric

Other ingredients that may be added include:

- Feta cheese

Enter a prompt here (English only)



Go live to chat with Gemini

- ✓ State-of-the-art model, trained to be more conversational and concise with its responses
- ✓ Perfect for when you're on the go or multi-tasking
- ✓ Share your camera or screen to get real-time responses on what you see



How would you go about solving this equation?



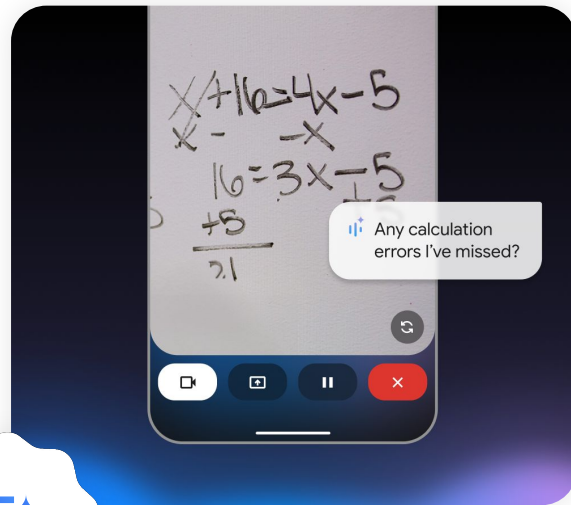
Interview me about my project so you can help me create custom materials.



Help me explain photosynthesis to a 5 year old



How does the moon affect the tides across the globe?



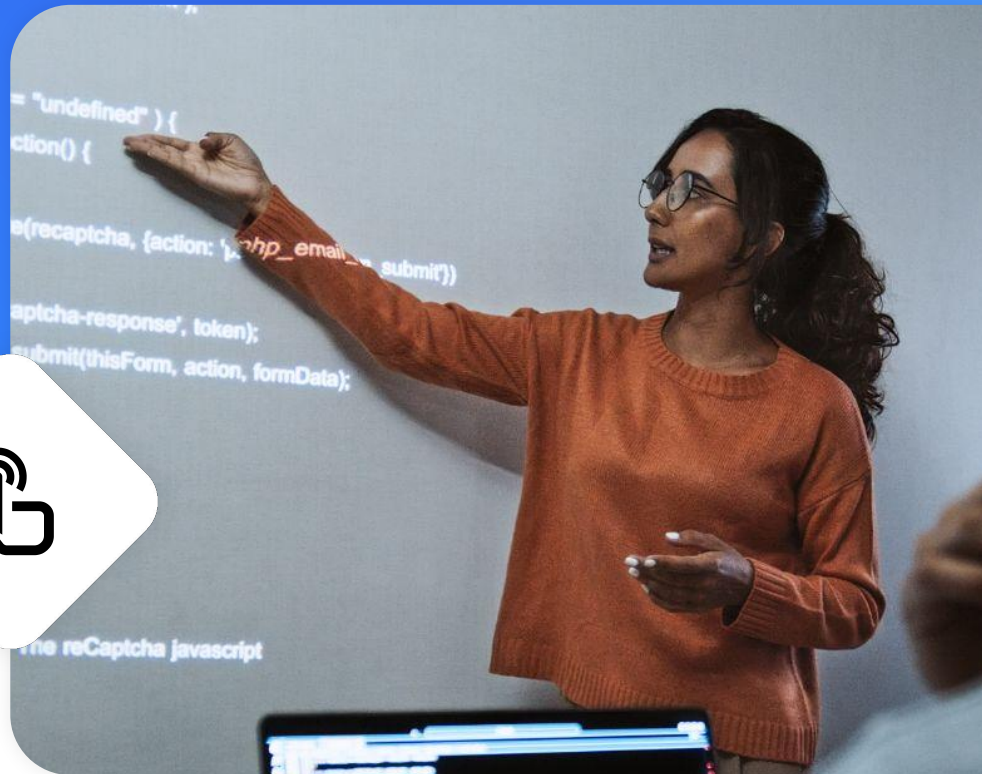
Scan QR code
to download

Demo 05

Vibe coding an app

Imagine you're looking to introduce a complex topic in a fun and engaging manner –using a digital game infographic or an app.

Gemini Canvas can help you make any content memorable for your peers or students. This approach provides intelligent support and introduces material in an innovative way –that can be applied to any audience.



Demo 05

Coding with Canvas

How to: Click on the “Canvas” Chip in the prompt bar and submit your prompt.

Prompt

- ◆ I am a [Professor of Electrical Engineering]. Create an app to [help students' understanding of circuit analysis in preparation for their final exam]. I would like it to show [visual representations of using circuit components with all analysis techniques]. Example: [visually demonstrate nodal and mesh analysis and showing equivalent circuits]. I would also like algorithms showing the steps in applying Kirchhoff's laws and other analysis methods, as well as algorithms for simplifying circuits. Create a separate problem-solving section and a conceptual understanding section.



The screenshot shows a web browser window with the title 'Circuit Analysis Tutor'. The page has a dark theme and features a navigation bar with 'Code', 'Preview' (selected), and 'Share' buttons. The main content area is titled 'Interactive Circuit Analysis Tutor' with the subtitle 'Visualize, Learn, and Master Electrical Circuits'. Below this, there are two tabs: 'Conceptual Understanding' (selected) and 'Problem Solving'. The 'Conceptual Understanding' tab displays a section titled 'Nodal Analysis'. On the left, there is an 'Example Circuit' diagram showing a voltage source V_s , resistors R_1 , R_2 , and R_3 , and a current source I_s . A ground symbol is labeled '0V'. On the right, there is a text box titled 'What is Nodal Analysis?' explaining the technique. Below this, there is a section titled 'Algorithm Steps' with 'Previous' and 'Next' buttons, and a progress indicator showing 'Step 0 of 4'.



Your turn!

Let's practice
prompting

gemini.google.com ↗



Module

05

Cognitively Explore with NotebookLM

Demo 06

NotebookLM: Your personalized AI expert

- ✓ **Get to the point**
Summarise and get quick insights from your own sources
- ✓ **Transform your content**
Create audio overviews, video overviews, mind maps and more
- ✓ **Collaborate seamlessly**
Build shared notebooks for projects, research, and more.



 notebooklm.google.com



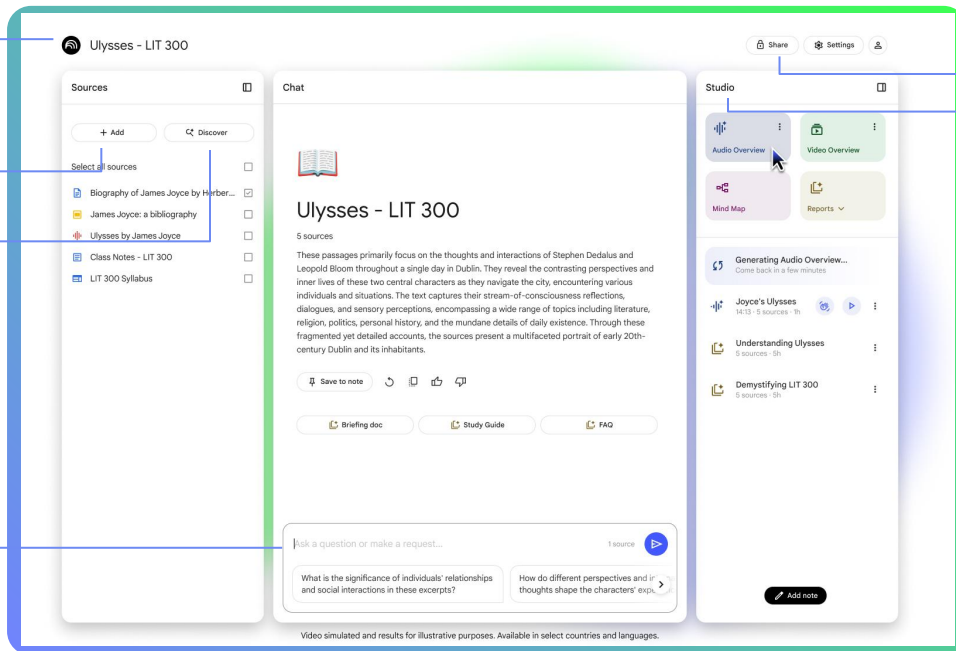
Anatomy of NotebookLM

Give your notebook a name

Upload your sources

(Optional)
Discover new sources

Ask questions of your sources



(Optional) Share your notebook with colleagues or students

In the Studio panel, generate a podcast-style audio overview, video overview, mind map, study guide, FAQ doc, and more





Your turn!

Let's make a
notebook

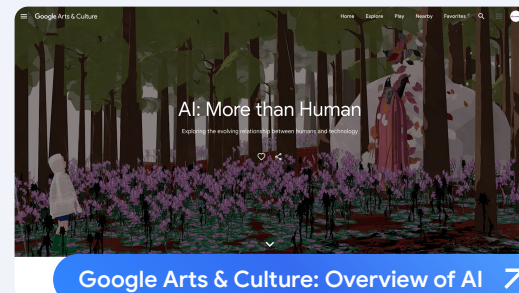
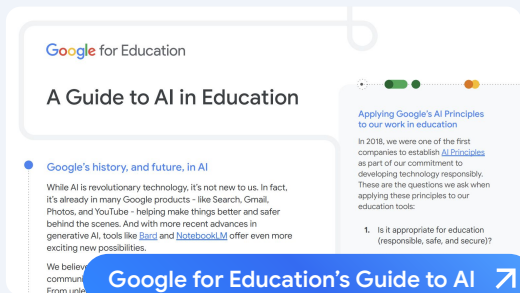
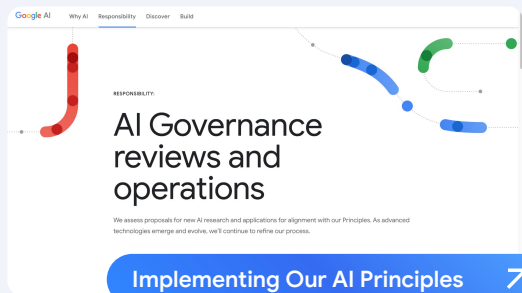
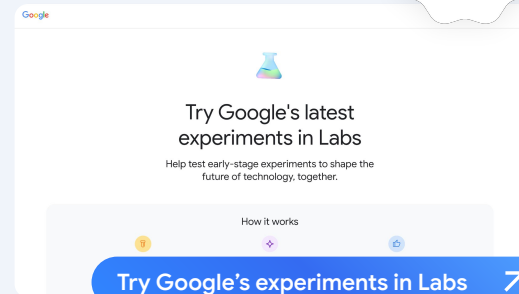
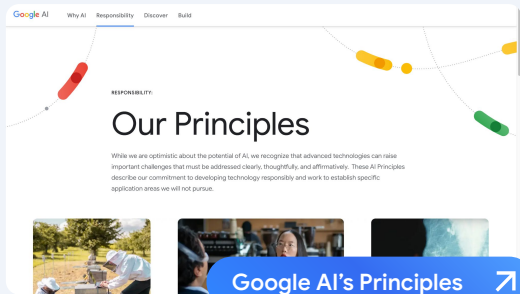
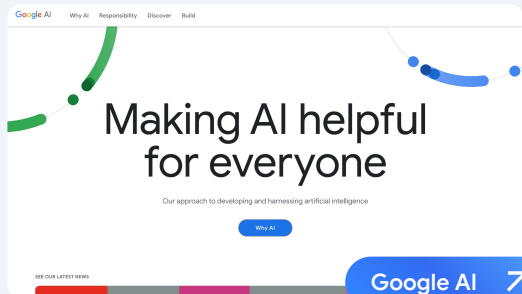
➔ notebooklm.google.com

Module

06

Program Reflection and Review

Learn more about Google's AI



Further your learning



Generative AI for Educators

As a teacher, we know your time is valuable and student needs are broad. With Generative AI for Educators, you'll learn how to use generative AI tools to help you save time on everyday tasks, personalize instruction, enhance lessons and activities in creative ways, and more.



[Get started](#)

[Generative AI for Educators](#)

Google AI Essentials

New to AI? With Google AI Essentials, you'll discover how you can use AI to assist, empower, and inspire you. Learn how to use generative AI tools to help speed up daily tasks, make more informed decisions, and develop new ideas and content.

[Get started](#)

[Google AI Essentials](#)

Google Prompting Essentials

Ready to get more out of AI? Google Prompting Essentials will teach you how to design prompts that work in 5 easy steps. Learn how AI can help you save time when tackling complex tasks, analyzing data, and summarizing information.

[Google Prompting Essentials](#)

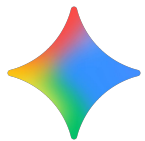
Here's your guide to learn AI & machine learning



How it'll help

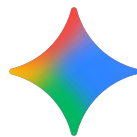
Create scalable AI systems to offer meaningful services and develop self-improving solutions to help businesses grow.

[Grow with Google: AI & ML courses](#)



**We would
love your
feedback!**





Thank you for joining us

Participant Resources & More Information

Access the Gemini app for free

✓ Free of charge

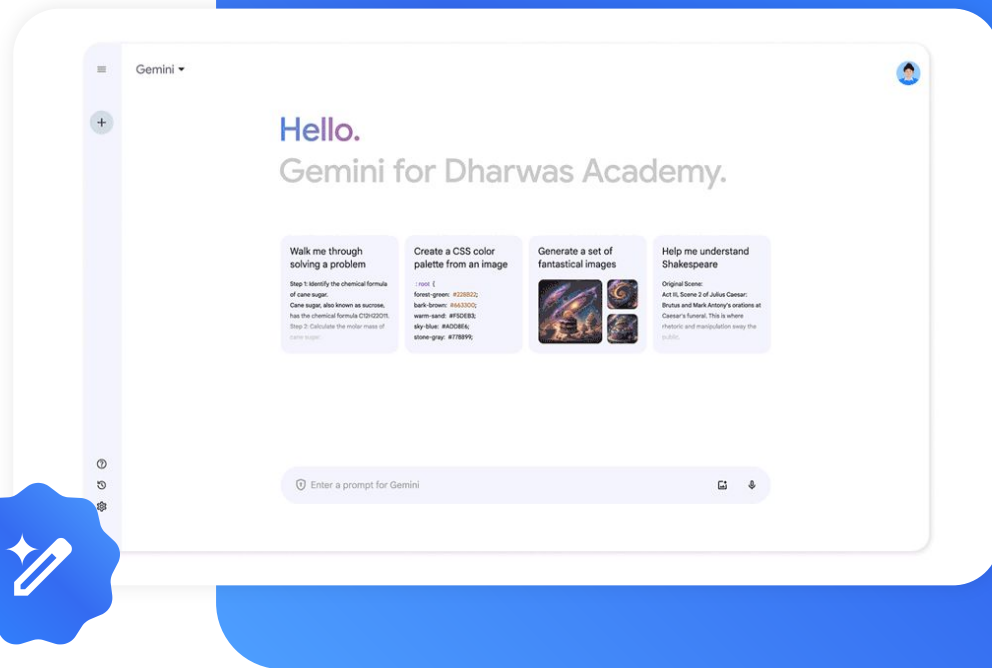
The Gemini app is included with all Google Workspace for Education editions and can be accessed at gemini.google.com

✓ Added data protection

When using the Gemini app with your school account, your chats will not be reviewed by human reviewers or otherwise used to improve generative AI models. Coming soon, it will be a Core Service for Education Plus and Standard users.

✓ Available globally

Gemini is available in over [40 languages](#) for educators and students 18 and older, and is coming soon to teen students



What is Artificial Intelligence (AI)?

Artificial intelligence (AI) is **the science of teaching machines to mimic intelligent human behaviours**.

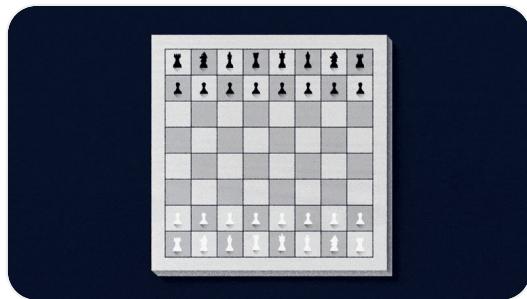
AI systems are taught and trained using computer programming that learns and adapts.

The Dartmouth conference in 1956 brought together scientists and is considered the founding event for artificial intelligence as an academic discipline. They wanted to lay out a framework to better understand human intelligence.

The term **Artificial Intelligence** is attributed to the convener of the conference Professor John McCarthy.



Teaching computers how to recognize speech



Teaching a computer Go

Unlocking Gemini with prompts



What is a prompt?

An instruction or question you write to interact with a chatbot. The prompts you write play a key role in shaping the responses.

How to approach prompting

- 01 Create prompts from scratch using PARTS framework
- 02 Build on prompts as you go
- 03 Use questions and ideas to go further

Don't forget:

For best results, craft prompts well and provide clear context

Demo 05

Deepen understanding with Learning Coach Gem

How to: Click “Explore Gems” in left navigation side panel. Select “Learning coach” among the list of Gems.

Prompt

- ✦ I'm trying to understand the concept of [a derivative in calculus]. Can you break it down for me in a clear way, using a real-world analogy, and then create a few practice problems that test my understanding of the core idea, not just memorizing formulas?
- ✦ Tip: Have your students mention what they've already learned or where they're stuck, so the Learning coach can tailor its explanation even better.
- 🔥 Great for grasping fundamental principles in math and science, building conceptual understanding beyond rote memorization, and practicing targeted problems.



Learning coach

That's a fantastic goal! Understanding derivatives is like unlocking a superpower in calculus. At its heart, a derivative helps us figure out the **rate at which something is changing** at any given moment. Think of it like this:

Imagine you're driving a car. Your speedometer tells you your **instantaneous speed** – how fast you're going right at this second. A derivative is like that speedometer reading for *any* changing quantity. If you plot your car's distance traveled over time on a graph, the derivative at any point on that graph would tell you your exact speed at that precise moment. It's not just your average speed over a long trip, but your speed *right now*.

Let's break down the concept of a derivative into a learning plan:

Learning plan:

1. What is a Derivative?
2. Basic Differentiation Rules
3. Applications of Derivatives

By the end of this plan, you'll have a solid grasp of what derivatives are, how to calculate them for basic functions, and why they're so incredibly useful in various fields.

Ready to dive in and get your calculus superpower?

👍 🔄 ⏮ ⏪ ⏩ ⏭

Ask Gemini

+ 📄 Canvas



Gemini can make mistakes, so double-check it

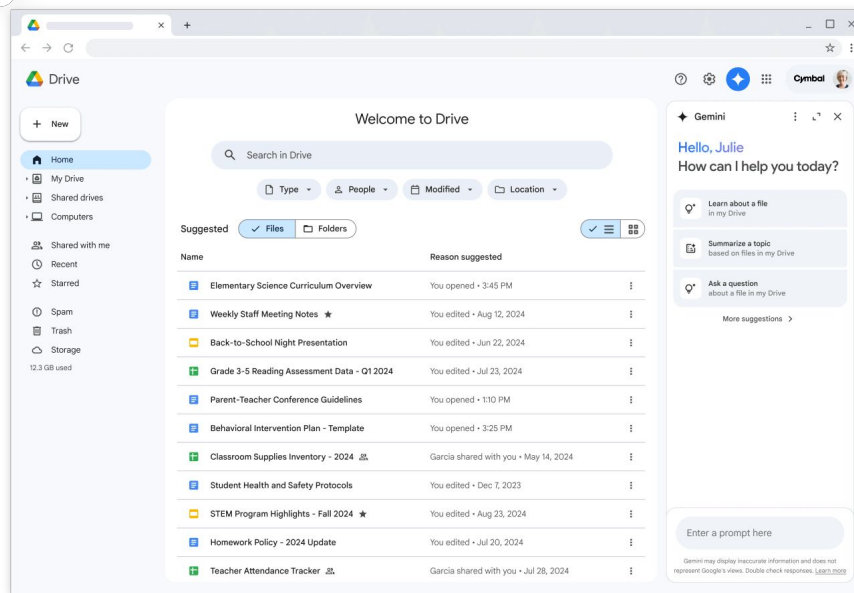
Demo 06

Paid Feature



Improve productivity with Gemini in the Side Panel

- **Unlock the power of your Drive files:** Through the side panel, Gemini can assist you with summarizing, analyzing, and generating content by using insights gathered from your emails, documents, and more.
- **Access Gemini from wherever you're working:** Quickly get help from Gemini right in the side panel of your apps – all without switching applications or tabs.
- **See suggested prompts and automatic summaries:** Gemini automatically summarizes the content you're working on and provides contextually relevant prompts to help you get started.



What you need to know about using Google Workspace with Gemini



Designed in close collaboration with education experts and institutions — we're also bringing **Google Workspace with Gemini to Education**, introducing a new and powerful way of working, teaching, and learning with generative AI and **enterprise-grade data protections in Gemini**.



Workspace with Gemini unlocks access to Gemini, your AI assistant across Google Workspace for Education: **Gemini is built right into the Google tools you already know and love, like Gmail, Docs, Slides, Sheets, Classroom, and Meet**. It also provides a premium version of Gemini, an enhanced chat experience using our most capable AI model widely available today, generating insightful and expert responses with the capability to easily double check responses with Google Search.



For education customers using Gemini as part of these add-ons, **your conversations are not used for advertising purposes, reviewed by human reviewers or otherwise used to train generative AI technologies**. In fact, all of our [commitments to data privacy, confidentiality, and security](#) apply to Gemini Education. Administrators can manage Gemini access via the Google Workspace for Education Admin console.

Hallucinations and accuracy

Gemini has limitations and **won't always generate accurate responses.**

When you are interacting with chatbots remember they can be confidently wrong.

Despite an answer or response sounding plausible, the details may be inaccurate.

For example when prompted to generate a range of citations for a topic, you might receive inaccurate yet plausible looking references.



I can't seem to keep my plants alive! What are a couple of easy, indoor plant options?

Show drafts



Keeping plants alive indoors can be tricky, but don't give up! There are many easy-care options that are perfect for beginners. Here are a few ideas:

1. Snake Plant (Sansevieria): This popular plant is known for its tolerance for neglect. It thrives in low light and infrequent watering, making it ideal for forgetful plant parents. Plus, it comes in a variety of shapes and sizes to fit your space.



2. ZZ Plant (Zamioculcas zamiifolia): Another low-maintenance option, the ZZ plant is known for its glossy, dark green leaves. It can tolerate a wide range of light conditions and watering schedules, making it a versatile choice.

In this response, Gemini got some things wrong, like the scientific name for the ZZ plant — actually Zamioculcas zamiifolia, not Zamioculcas zamioculcas.



We know the responses from chatbots are fallible, have limitations and won't always get it right. **The errors in the responses are called hallucinations.** When you use AI tools like Gemini, remember to **check the accuracy and appropriateness of responses.** Stay in the loop and check your results carefully.

Critical evaluation of responses

Accurate, Appropriate, and Aligned

Use the **AAA** Framework to check your responses.



Accurate

- Does the response contain factual errors or misinformation?
- Can you verify the statements made using reliable sources?
- Is the logic and reasoning sound, or do they make unsupported claims?



Aligned

- Does the response directly address the question or prompt you entered?
- Is it on-topic and relevant to your task?
- Does it move the dialogue forward in a meaningful way?



Appropriate

- Is the response suitable for the educational context?
- Does it use language that is professional and aligns with educational norms?
- Are the ideas or examples provided context and age-appropriate?



Other Tips

- Ask follow-up questions or rephrase to double-check consistency.
- Use the 'double check response' feature in Gemini, to check accuracy
- Consult traditional references and experts to validate critical points.
- Consider the limitations and training data of the particular chatbot.

Data accuracy and privacy

Related content within Gemini's responses

In Gemini's responses, you can access citations by tapping the gray chip to see where the information was corroborated from the web.

These links show up at the end of a paragraph to help you dig deeper on topics that interest you

This isn't limited to websites: If Gemini's response references information found using the Gmail extension, you'll also see inline links to relevant emails.



Your data literacy



Data literacy is an important consideration when using AI chatbots.

Pause and evaluate if you are following recommended data privacy guidelines.

Here are three helpful questions about the information in your prompts and chats:

01

Is it anonymized?

Has all **personal information** been removed or replaced with pseudonyms to break the link to individual identities?

02

Is it minimised?

Are you only using the **minimum data necessary** for your purpose?

03

Can it be reverse-engineered?

Can the data be **de-anonymized** even if anonymized using cross-referencing or inference attacks?

It is recommended you use secure AI models if using any sensitive data and follow the guidelines from your local education authority.

Unlocking Gemini with prompts



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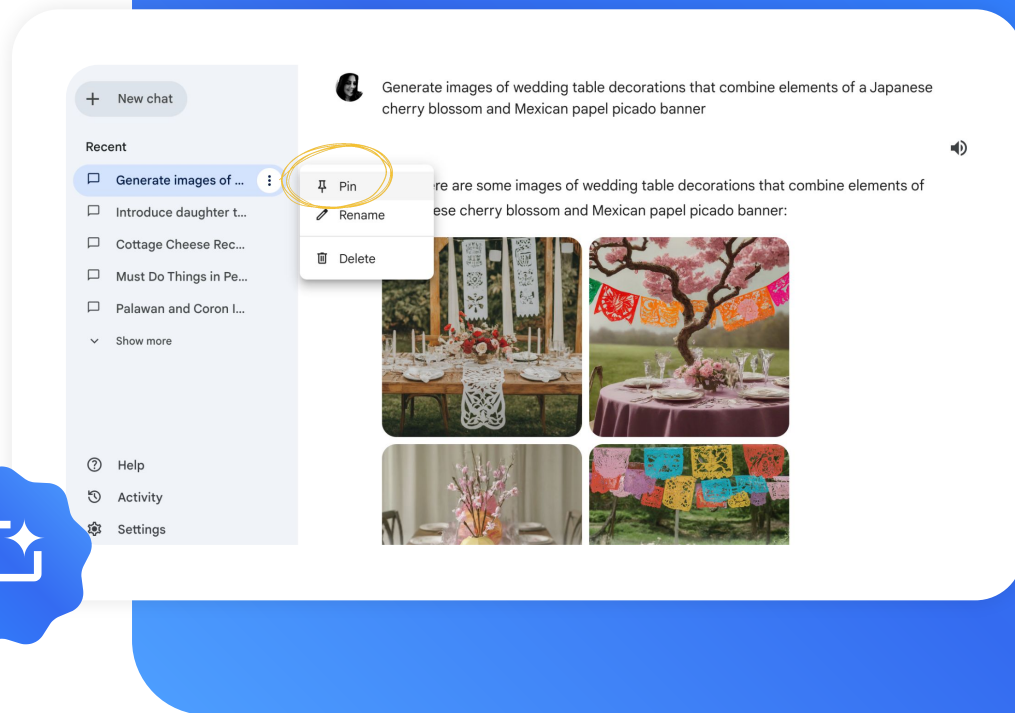
Don't forget:

For best results, craft prompts well and provide clear context

Pin your conversation

The best ideas take time, sometimes multiple hours or days to create. Keep your threads and pin your most critical threads to keep your creative process flowing.

You can now pick up where you left off with your past Gemini conversations and organize them according to your needs. We've added the ability to **pin** conversations, rename them, and have multiple conversations going at once.



Demo 01

Audio Overview

How to: Click on the “+” sign in the prompt bar and then click on “Upload files”.
Click on “Generate Audio Overview”

Prompt

✦ Generate an audio overview of:

 Banduras Social Learning Theory and Social cognitive learning theory.pdf



Banduras S...ing theory

 PDF

Generate Audio Overview

✦ Show thinking ▼

Sure, here is your Audio Overview.

Bandura's Breakthrough: How Social Learning Shapes Your Beliefs and Actions

Gemini-generated audio overview



Ask Gemini

 Deep Research Canvas

Gemini can make mistakes, so double-check it

How Gemini can enhance teaching & learning



Facilitate research and critical engagement

- 📄 Explore diverse sources
- 📖 Summarize materials
- 💡 Generate varied ideas
- ✅ Double-check accuracy
- 💡 Brainstorm lesson ideas

Enhance academic writing

- 📄 Structure outlines
- 💡 Overcome writer's block
- ✍️ Refine your writing

Enable personalized learning and assessment

- ☰ Simplify complex topics
- ❓ Provide analogies
- 📖 Design study aids
- ❓ Formulate assessments

Power prompts to summarize content



- ◆ Analyze the [historical document/literary work] and summarize its central themes, key characters/figures, and the socio-historical context it reflects. Then, generate 3 discussion questions that would encourage critical thinking and deeper analysis among [high school / university students].
- ◆ Condense [academic article/chapter] into a set of 3-5 key takeaways that would be most relevant for [undergraduate] students encountering this topic for the first time. For each takeaway, provide a brief (1-2 sentence) explanation of its significance and one potential real-world application or example.
- ◆ Summarize the main arguments and supporting evidence presented [research paper], focusing on the sections most critical for understanding its methodology and primary conclusions. Identify any limitations or unanswered questions explicitly stated or implied by the authors. Structure as a concise summary of (approx. 250-300 words) for [high school / university students].

Power prompts for curriculum planning



- ◆ As an [elementary school English teacher], I need to understand the latest research on the impact of [project-based] learning on student engagement in [grades 4 and 5]. Generate a concise summary of key findings from the last 3–5 years, outline 2–3 evidence-based strategies related to this topic that I can consider for my class, and list 5 potential challenges or considerations for implementation. Organize this information with clear headings for each section.
- ◆ "As a [Professor of Organic Chemistry], develop a flexible [organic chemistry] support plan for a [sophomore undergraduate] student needing extra help with [reaction mechanisms]. Include learning goals, scaffolded tasks, reflection prompts, and checkpoints. Format it as a weekly plan with bolded key actions."
- ◆ As an [Introduction to Composition and Writing professor], revise this lesson plan on persuasive writing to support three [college] student profiles: [an English learner, a student with executive functioning needs, and an advanced writer]. Suggest changes to assignment instructions, pacing, and support strategies for each student profile.
- ◆ As a [high school science teacher], create a performance task for [10th grade environmental science] students focused on sustainability. Include a student-facing prompt, rubric criteria, and a peer/self-assessment checklist. Organize the content into clearly labeled sections.

Power prompts for coding with Canvas



- ◆ As a [social studies high school teacher], create an embedded interactive [historical timeline of the western expansion in the United States] using embedded iframes. Language should be appropriate for [15 to 17 year old] students.
- ◆ For [first year college students in an Introduction to Software Engineering course], create a simple [physics] simulation that shows [a ball falling under gravity]. Use [Python and show the process for how to adjust gravity, time, and object mass]. Explain what [each part of the code does].
- ◆ You are presenting at the professional development workshop day for the educators at your [elementary school]. Develop a creative digital game that helps educators understand 5 practical differentiation techniques they can utilize to support students with learning disabilities in an inclusive classroom. Present each strategy in 1-2 sentence bullet points using clear, straightforward language. The educators have diverse backgrounds, so focus on actionable strategies that can be readily implemented in [first to fifth grade] classrooms to better engage students with diverse needs.

Power prompts for Deep Research



- ◆ Act as an experienced [7th grade mathematics teacher] who wants to revamp their curriculum and lesson plans. Summarize 3–5 recent findings from peer-reviewed sources on examples and outcomes of project-based learning in [middle school mathematics]. Include APA citations and group findings into key themes.
- ◆ As a [new college professor], creating a syllabus, compare alternative grading systems in higher education such as: ungrading, mastery-based grading, and contract grading. Highlight research on outcomes, student engagement, and instructor workload.
- ◆ For a [fourth grade English teacher], research how graphic organizers support comprehension for multilingual learners. Include evidence-based examples across content areas and grade [levels 3 to 5].
- ◆ You are a [oceanography professor]. You have a strong interest in pedagogy and get to develop the curriculum for your classes and make textbook selections. Examine the body of research on the effectiveness of inquiry-based learning in science. Describe how research in this area has evolved, identify common study designs and their limitations, and summarize conclusions from recent meta-analysis or systematic reviews regarding the overall findings and their applicability.
- ◆ You are a [high school science teacher]. You want to support students' interest in pursuing a career in the [sciences]. To do this, research 3 career paths that combine [environmental science and technology]. For each career path, describe typical job responsibilities, required education, and future job outlook. Use language appropriate for [high school students].

Helpful phrases to add to prompts

+ Explain [topic] to me like I'm five

+ Give me an analogy for [topic]

+ What are the key topics to understand about [subject]

+ Give me pros and cons of [topic]

+ Create a plan with the top five areas to focus on to improve at [topic]

+ Transform the key points of [topic] into a story or narrative

+ Create a quiz to test me on my understanding of [topic]

+ Help me apply [topic] to a real-life situation

7 Gemini features to get the best out of your prompting experience



-  Edit your prompts
-  Use citations to double-check
-  Pin conversations
-  Export and share Gemini responses
-  Upload images and video for analysis
-  Access high quality information
-  Speak naturally with Gemini Live

Go further with prompts using questions and ideas



Ask Gemini to ask you **questions** to help improve relevance of responses

“Ask me for any extra info you need to give a more tailored response”



Ask Gemini for **ideas** for brainstorming and open-ended discussion

“Think outside the box and give ideas that may not be obvious”

“Propose 5 different unconventional approaches”

How can educators address bias?



Critically evaluate AI systems for **fairness** in every interaction –as underlying models change often.



Promote **inclusivity** in the teams who evaluate your AI products.



Teach students to **think critically** about potential AI biases.

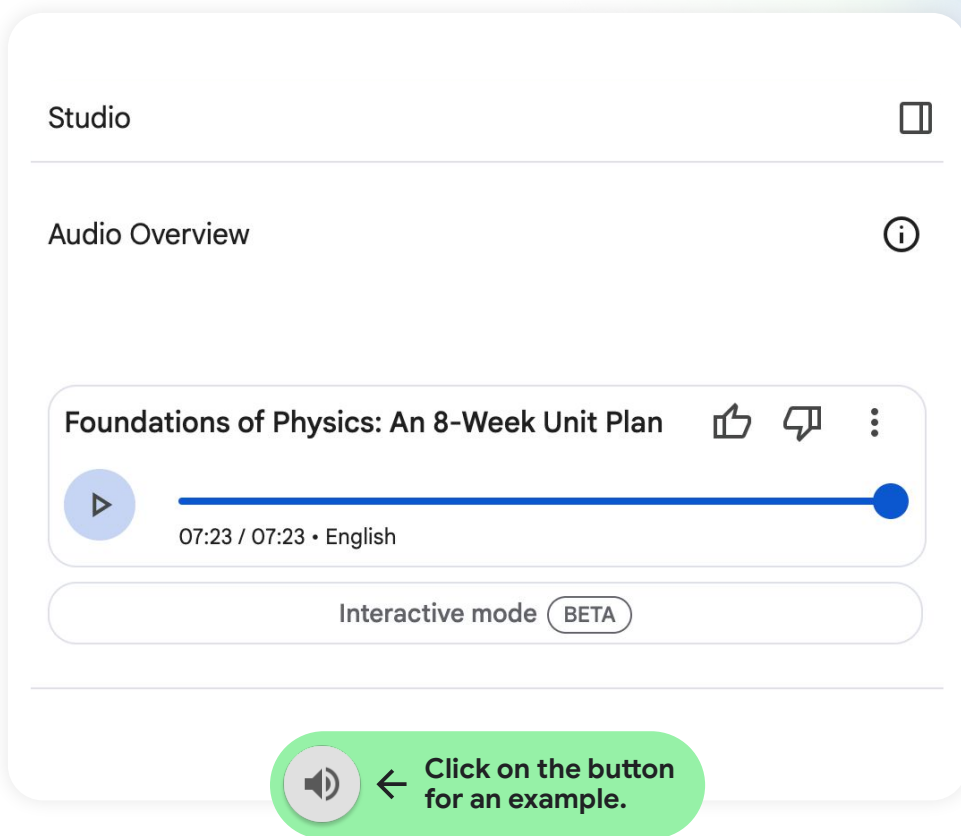


Advocate for greater **transparency and accountability** around AI.

Listen and learn on the go with Audio Overviews

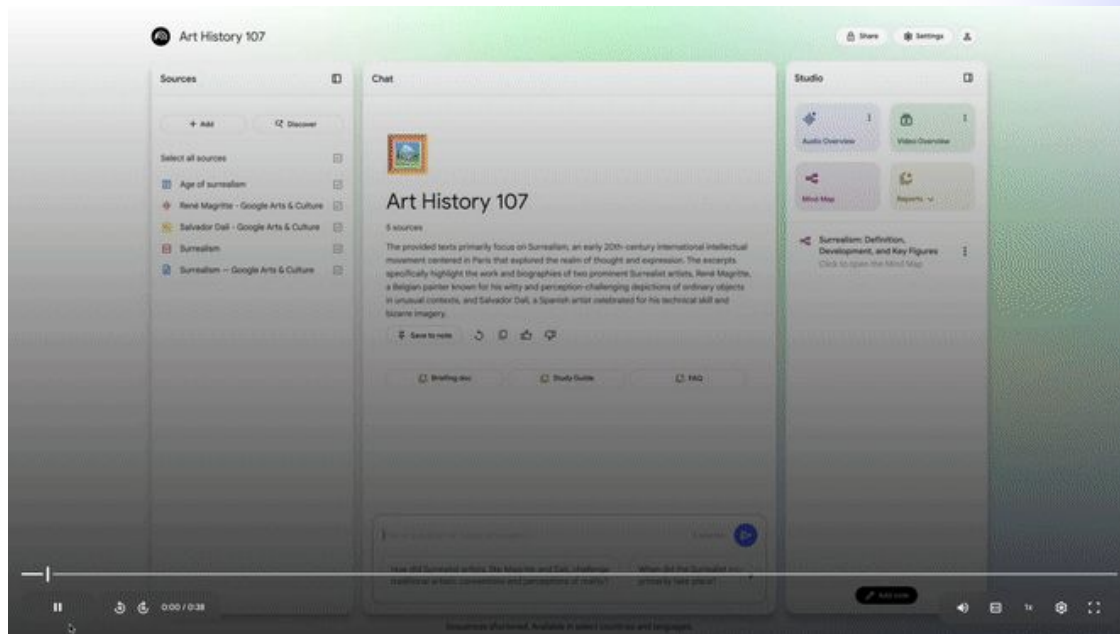
Audio overviews turn your sources into a podcast-style summary, voiced by two AI hosts. It's a fast, engaging way to absorb your materials, and it's perfect for multitasking or auditory learning.

With just one click, NotebookLM summarizes your notes, lesson plans, documents, research, articles, website links, or videos into a conversational audio file. And with the Customize feature, you can guide the hosts to focus on what's most important to you.



See and learn on the go with Video Overviews

Video Overviews transforms dense information from source documents into digestible, narrated video essays. These videos, presented by an AI voice, will include visuals like images, diagrams, and key quotes pulled directly from the sources. Users can customize Video Overviews by topic, learning goals, and target audience.



Visualize connections across sources with Mind Maps

- Instantly create a map that organizes your sources for easy browsing
- Grasp the overall structure and key themes of your source materials more easily
- Surface conceptual relationships across texts and weeks (e.g., supports sequencing, transfer with connecting related ideas).

Double click to get a summary of any topic

- or subtopic, with precise citations

Supports student review and educator

- planning for reteaching or pre-teaching moments.

The screenshot shows the NotebookLM interface for a unit plan titled "Foundations of Physics: An 8-Week Unit Plan".

- Sources Panel (Left):** A list of selected sources, including "10th Grade Physics - Student La...", "8-Week Physics Unit Plan.pdf", "HS-PS2-1 Motion and Stability: F...", "Honors Physics Matter and Energy", "KINEMATICS | Physics Animation", "Science Raps: GCSE Physics - E...", "Thermal Physics", "Week 1 lessons_ Introduction to ...", "Week 2_ Dynamics - Forces and ...", "Week 3_ Work, Energy, and Pow...", "Week 4_ Momentum and Collisio...", and "Week 5_ Thermal Physics_ Unit Plan".
- Chat Panel (Center):** Displays the title "Foundations of Physics: An 8-Week Unit Plan" with a brain icon. Below the title, it states "15 sources". The main text provides a summary: "This text outlines an 8-week physics unit plan designed for 10th-grade students, providing a structured approach to teaching foundational physics concepts. Each week is dedicated to a specific theme, beginning with kinematics (describing motion) and progressing through dynamics (forces), work, energy, and power (energy transfer), and momentum and collisions (interactions). The plan also covers thermal physics (heat), waves, light and optics, and introduces electricity and magnetism. Suggested lesson topics and relevant formulas are included for each week, offering a comprehensive guide for educators to cover these core areas of physics." At the bottom of the chat panel, there is a text input field with "Start typing..." and a "15 sources" indicator, and a button to "How do foundational physics concepts describe and explain the physics of..."
- Studio Panel (Right):** Contains an "Audio Overview" section with a "Generate" button and a "Notes" section. The "Notes" section includes a "Deep Dive conversation" card and a list of topics: "Principles of Light and Optics", "Study Guide: Light and Optics", "Refraction of Light Choice Board", "Light Refraction Assessment Questions", and "Light Refraction Lab Guide".

Quickly generate a study guide

NotebookLM helps you organize your notes, class materials, or uploaded resources into a structured study guide, instantly. Everything you want your students to review is grouped in one place.

Click 'Study guide' in the Notes panel to generate a study guide that includes:

- Quiz questions with answer keys
- Practice essay prompts
- A glossary of key terms

Share it with students to review before a test, or use it as a resource to allow them to reflect on what they've learned, at their own pace.

The screenshot displays the NotebookLM interface for a study guide titled "Foundations of Physics: An 8-Week Unit Plan". The interface is divided into three main panels: Sources, Chat, and Studio.

Sources Panel: Lists various resources used to generate the study guide, including "10th Grade Physics - Student L...", "8-Week Physics Unit Plan.pdf", "HS-PS2-1 Motion and Stability: ...", "Honors Physics Matter and Ene...", "KINEMATICS | Physics Animation", "Science Raps: GCSE Physics - ...", "Thermal Physics", "Week 1 lessons_ Introduction t...", "Week 2_ Dynamics - Forces an...", "Week 3_ Work, Energy, and Po...", "Week 4_ Momentum and Collisi...", "Week 5_ Thermal Physics - Hea...", and "Week 6_ Waves - Properties an...".

Chat Panel: Displays the title "Foundations of Physics: An 8-Week Unit Plan" with a brain icon. Below the title, it states "15 sources" and provides a summary of the content: "These texts collectively outline a comprehensive high school physics curriculum, particularly focusing on fundamental concepts for 10th grade. They cover topics including kinematics (describing motion with equations and graphs), dynamics (forces and Newton's Laws), work, energy, and power, momentum and collisions, thermal physics (heat, temperature, and energy transfer), waves and sound, light and optics, and an introduction to electricity and magnetism. One source provides a structured eight-week unit plan with detailed lesson objectives, essential questions, and activity suggestions, emphasizing a gradual release of responsibility model and connecting concepts to the real world. Another source presents excerpts from a student lab book, detailing the importance of the book and outlining a practical experiment on measuring the acceleration due to gravity, aligning with the kinematics unit. The remaining sources offer overviews or specific details on individual physics topics like kinematics, energy, thermal physics, and the Next Generation Science Standards for forces and motion, particularly referencing Newton's second law." Below the text, there is a "Save to note" button and a "Start typing..." input field.

Studio Panel: Features an "Audio Overview" section with a "Create an Audio Overview in more languages! Learn more" link. Below this, there is a "Deep Dive conversation" section with "Two hosts" and buttons for "Customize" and "Generate". The "Notes" section includes an "Add note" button and a list of generated notes: "Study guide", "Briefing doc", "FAQ", and "Timeline". The "Notes" list includes: "Foundations of High School Physics", "10th Grade Physics: Foundations of Physics - Briefing Document This briefing document...", "Introductory Physics: Motion and Forces Unit...", "10th Grade Physics Curriculum Overview", "Principles of Light and Optics", "Study Guide: Light and Optics", and "Refraction of Light Choice Board".

At the bottom of the interface, a disclaimer states: "NotebookLM can be inaccurate; please double check its responses."

An expert on your **trusted information**

NotebookLM can turn your sources into study guides, podcast-style audio overviews, and more.

