

Tutorials Help You Learn Anything

How to learn the information you need to create your specific project

Grade Level: Suitable for 6-12

Suggested Time: 1 Hour

Overview

Students use NotebookLM – a real AI research tool – to find sources on a topic of their choice, generate study aids from those sources, and then have a structured conversation with the AI to deepen their understanding. The lesson is hands-on from the first minute. Direct instruction is minimal and front-loaded so students spend the majority of class time actually using the tool.

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AI Learning Priorities

Humans and AI: Students communicate with an AI system through written prompts, experiencing firsthand how the phrasing and structure of their input shapes what the system produces.

Representation and Reasoning: Students see that AI outputs reflect statistical patterns in text rather than genuine comprehension, which explains both the tool's usefulness and its limits.

Machine Learning: Students experience how a model's knowledge is bounded by what it was trained on - in this case, only the sources they chose to provide.

Ethical AI: Students consider whose knowledge gets included or excluded when an AI system is used to curate and summarize information, and why that matters.

Societal Impacts of AI: Students connect AI-assisted research to changes in how knowledge work is done across industries, developing a realistic picture of what these tools can and cannot replace.

Knowledge and Skills Topics

- **Source Curation:** Find, evaluate, and select credible resources about AI in a chosen career field, and organize them using NotebookLM.
- **AI Tool Fluency:** Create and populate a NotebookLM notebook; generate AI-assisted study aids including Briefing Docs, Mind Maps, Flashcards, Quizzes, and Audio/Video Overviews.
- **Prompt Engineering:** Apply the BRIEF framework to write structured, purposeful prompts; iterate on prompts to narrow ideas and refine project thinking.
- **Career and AI Connections:** Identify real-world challenges in a chosen career field, articulate how AI could address a specific challenge, and connect personal interests to a potential AI application.
- **Collaboration and Communication:** Draft a structured project goal statement using the AI Opportunity + Challenge + Why I Care format.

Materials and Resources Needed

- ☐ Student devices with a web browser and internet access. This works best on a laptop rather than a phone or tablet.
- ☐ Whitelist link
 - ☐ NotebookLM - notebooklm.google.com

Curriculum Standards

- **ISTE 1.1.d (Empowered Learner):** Students understand fundamental concepts of how technology works, demonstrate the ability to choose and use current technologies effectively, and are adept at thoughtfully exploring emerging technologies.
- **ISTE 1.3.b (Knowledge Constructor):** Students evaluate the accuracy, validity, bias, origin, and relevance of digital content.
- **CSTA 2-IC-20:** Compare tradeoffs associated with computing technologies that affect people's everyday activities and career options.
- **CSTA 3A-IC-24:** Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.
- **AI4K12 Big Idea 4 (Natural Interaction):** Students understand that while AI can interact naturally, it lacks human-level understanding and can produce biased or incorrect information.

Differentiation Suggestions

- For students who need support
 - a. Pre-select 2–3 high-quality sources on a career topic and have them ready for students to import, bypassing the independent search step.
 - b. Provide a sentence starter for the project goal: "AI could be used to _____ because _____ is a challenge in _____ and I care about _____ because _____."
 - c. Offer a simplified BRIEF prompt with fewer variables, such as: "Ask me 3 questions about challenges in [career]."

- d. Pair students with a partner for Activity 2 so they can discuss AI responses before forming their goal.
- For English Language Learners
 - a. Pair with a supportive peer.
 - b. Allow students to test prompts and search for sources in their home language.
- For students who are ready to go further
 - a. Ask the AI: “What voices or perspectives are missing from this batch of resources?” Discuss why that matters.
 - b. Generate both a Briefing Doc and a Mind Map, then compare what each one emphasizes. How does format change how you understand content?
 - c. Refine the goal into a 30-second pitch and deliver it to someone else.

Evidence of Understanding

- A NotebookLM notebook with at least 2 imported sources relevant to the student’s career of interest.
- Use of at least one study aid feature in NotebookLM (Briefing Doc, Mind Map, Flashcards, Quiz, or Audio/Video Overview).
- A written project goal statement that includes all three required components: an AI opportunity, a challenge to be addressed, and a personal connection (why they care).
- Ability to explain, in their own words, how AI could be used in their chosen career field (verbal or written).

Key Concepts

- NotebookLM: An AI-powered notebook tool (developed by Google) that lets users upload documents, articles, links, and videos, then ask questions and generate study aids grounded in those sources.
- Study Aid: A tool or output that helps a person learn and retain information. In this lesson: Briefing Docs, Mind Maps, Flashcards, Quizzes, and Audio/Video Overviews.
- BRIEF Framework: A structured approach to writing AI prompts. BRIEF stands for Background, Role, Input, End Goal, and Format.

- **Project Goal:** A focused statement defining the purpose of a student's AI project, with three parts: (1) AI Opportunity, (2) Challenge to be addressed, and (3) Personal Fit (why the student cares).
- **Source Curation:** The process of finding, evaluating, and selecting sources that are relevant, credible, and useful for a specific purpose.
- **AI Hallucination:** A common AI limitation where the model generates confident-sounding but inaccurate or fabricated information. NotebookLM reduces this by grounding responses in the user's actual uploaded sources.

Activity Overviews

Activity #1: Find Resources

Purpose: Add sources to NotebookLM and explore the Studio panel.

Task: Students will have 15 minutes to add sources to [NotebookLM](#) using 'Discover Sources' in the top right and checking the box next to useful sources, then clicking the blue import button. Sources should pertain to AI in [career]s. Students can also do a standard search or use an LLM to find sources. Then students will explore the Studio panel on the right and generate a study aid about their sources.

Activity #2, part 1: Chat with Your Resources

Purpose: Solidify what is most interesting regarding the selected topic.

Task: Students will have 15 minutes to 'chat' with the sources. Using the BRIEF framework, write a prompt to drop into [NotebookLM](#) to learn more about [career]. Students will prompt NotebookLM to ask them 5 questions to uncover challenges or pain points in this field, opportunities for AI to make an impact, and my personal interests or strengths. They should continue chatting to refine their project idea.

Activity #2, part 2: Build Your Goal

Purpose: Develop a goal based on what is most interesting to the student.

Task: Students will have 5 minutes to continue 'chatting' with NotebookLM to build a strong goal. A strong goal fits this formula:

AI Opportunity + Challenge + Why the Student Cares

Sequence, Session Flow, and Facilitation Prompts

Sequence

1. Opening & Hook
2. NotebookLM
3. Activity #1 – Find Resources
4. Debrief – Activity #1
5. Activity #2, part 1 – Chat with Your Sources
6. Activity #2, part 2 – Build Your Goal
7. Debrief & Share-out
8. Wrap-Up

Session Flow

1-Hour Class Period

Opening & Hook	0:00 - 0:02	Slides 1-2; Low stakes, engagement
NotebookLM	0:02 - 0:12	Slide 3-6; Direct instruction
Activity #1	0:12 - 0:24	Slide 7
Debrief – Activity #1	0:24 - 0:34	Slide 8 NOTE: This slide may look different than what NotebookLM is actually showing. Check first. Possibly update your slide deck.
Activity #2, part 1	0:34 - 0:44	Slide 9
Activity #2, part 2	0:49 - 0:56	Slides 10-11
Wrap-Up	0:56 - 1:00	Slide 12

45-Minute Class Period

Opening & Hook	0:00 - 0:02	Slides 1-2; Low stakes, engagement
NotebookLM	0:02 - 0:12	Slide 3-6; Direct instruction

Activity #1	0:12 - 0:24	Slide 7
STOP		SKIP TO Activity #2, part 1
Activity #2, part 1	0:24 - 0:39	Slide 9
Activity #2, part 2	0:39 - 0:44	Slides 10-11
Wrap-Up	0:44 - 0:45	Slide 12

Facilitation Prompts

[SLIDE DECK](#)

SLIDE 1 - Title Slide

Say: "Today's lesson is called Tutorials Help You Learn Anything - and I mean that literally. The tool we're using today is one that professionals actually use in real jobs, right now. By the end of this period you're going to know how to use it, and you're going to have used it to do real research on something that matters to you."

SLIDE 2 - Learning Doesn't Stop in School

Say: "Before I show you the tool, I want to make the case for why this matters outside of school - because it does.

Entrepreneurs use tools like this to upload market reports and spot trends before their competitors do. Researchers use it to load in ten different academic articles and ask questions across all of them at once - instead of reading each one separately. Employees use it to take a two-hour meeting transcript and turn it into a five-point action list in under a minute. And job seekers use it to study for interviews by loading in industry guides and having the AI quiz them.

The tool you're learning today is not a toy. It is a workflow. Real people use it to save hours of work. You're learning it now.

SLIDE 3 - What is NotebookLM?

Say: "The tool is called NotebookLM. Here's the single most important thing to understand about it before you use it:

Most AI tools - ChatGPT, Gemini, Claude - pull from everything they were ever trained on. Billions of pages of the internet. That means they can be confidently wrong. They make things up. Remember, we call that hallucination.

NotebookLM works differently. It only knows what you give it. You bring the sources - articles, PDFs, links, videos. NotebookLM reads all of them. And when you ask it questions, it answers only from what you uploaded. It can't make up a source that isn't there. It will actually tell you 'I don't see that in your sources.' That's a feature, not a bug.

This is why it's useful for research. You control what it knows.

SLIDE 4 - Three Parts of NotebookLM

Say: "NotebookLM has three panels. You need to know all three before you start.

On the left - Sources. This is where you add your material. You can upload articles, PDFs, paste in links, even add YouTube videos. There's a button called 'Discover Sources' that will actually suggest sources based on what you tell it you're researching. You check the boxes next to what you want, hit the blue Import button, and they show up here.

In the middle - Chat. This is where you talk to your sources. You ask questions, and the AI answers based only on what you imported. It will even show you which source each answer came from. This is where we'll spend most of Activity 2.

On the right - Studio. This is where it gets interesting. Once you have sources loaded, Studio will generate study aids for you automatically. Briefing docs, mind maps, flashcards, quizzes - we'll look at all of those in a moment.

One warning, and I need you to actually remember this: you can only generate three Audio or Video Overviews per notebook, and they take several minutes to make. If you burn through all three in the first two minutes, you're out of them. Choose wisely.

SLIDE 5 - The BRIEF Framework - Applied Here

Say: "Before you start chatting with your sources in Activity 2, you need to know how to write a good prompt. Remember the BRIEF framework? Let's connect it directly to what you're doing today.

B is for Background. Tell the AI who you are and what situation you're in. Don't just say 'help me' - say 'I am a high school student interested in healthcare.' That context changes everything about how it responds.

R is for Role. Tell it who to be. Today you'll tell it: 'You are an AI tutor helping students design AI projects.' It will respond differently than if you gave it no role at all.

I is for Input. Give it the relevant details. In this lesson, your input is the sources you uploaded. The AI already has access to them - but naming your focus area sharpens the answer.

E is for End Goal. Be specific about what a good answer looks like. 'Help me identify a project idea that connects AI to this career' is an end goal. 'Help me' is not.

F is for Format. Tell it how to structure the response. In Activity 2 you'll ask it to give you five numbered questions. That's format.

A weak prompt gets a generic answer. A BRIEF prompt gets something you can actually use. You'll see the difference today.

SLIDE 6 - NotebookLM

Say "This is what NotebookLM looks like and the areas I need you to pay attention to. There are three panels: on the left is Sources, on the right is the Studio, and in the middle is the chat. You will be using each of these panels today.

SLIDE 7 - Activity #1: Find Resources

Say: "Okay - Activity #1. Here's exactly what to do. (open a new tab and model as you explain)

Step one: Open NotebookLM and create a new notebook.

(write or display: notebooklm.google.com) - log in with your school Google account.

Step two: Click 'Discover Sources' in the top right corner. NotebookLM will ask you what you're researching. You can also open another tab and do your own search, or use any AI tool you'd like to find articles.

Step three: Search using one of the prompts on the right side of your screen. Pick a career and fill in the bracket. These are not hard - just type what you are interested in.

Step four: Check the boxes next to sources that look useful. Don't import everything - be selective. You want sources that actually say something. Then hit the blue Import button.

Step five: Once your sources are imported, go to the Studio panel and generate at least one study aid. A Briefing Doc is the fastest - it summarizes everything. Start there.

While you work, coordinate with the people around you. If someone finds a great source on the same topic, share it. You have 10 minutes. Go."

At 3 minutes: "Three minutes left - if you haven't hit the Studio and generated at least one thing, do that now.

SLIDE 8 - What Can You Generate?

Say: "Hold on - before we move to Activity 2, let's make sure everyone knows what they just had access to.

The Studio panel options are always changing because NotebookLM is always being updated.

A Briefing Doc - a prose summary of the key themes across everything you imported. This is the fastest way to get an overview.

A Mind Map - a visual diagram showing how ideas connect. Good if you're a visual learner or if you have a lot of sources that overlap.

Flashcards - question and answer pairs pulled directly from your sources. Useful for studying.

A Quiz - similar to flashcards but formatted as a test. It will ask you questions and check your answers.

And Audio Overview - NotebookLM will generate a podcast-style conversation where two AI hosts discuss your sources. These are surprisingly good. But - (pause) - you only get three. And they take several minutes to generate. I'm telling you again because every time someone runs out, and they're surprised.

Quick show of hands - how many of you generated a Briefing Doc? (pause) A Mind Map? (pause) Good.

SLIDE 9 - Activity 2: Chat with Your Resources

Say: "Now we move to the Chat panel. This is where you stop reading what the AI generated and start having a conversation with your sources.

I want you to copy the prompt on the slide exactly. Take a photo if that helps, or I'll leave it up.

Fill in the bracket with your actual career interest before you send it.

When it gives you the five questions, answer them. Actually answer them - don't skip. Your answers shape what comes next. After you respond, keep the conversation going. Ask follow-up questions. Use the questions on the next slide if you get stuck.

SLIDE 10 - Build Your Goal

Say: I want to make sure everyone understands what a project goal actually looks like - because this is what you're building toward.

A strong project goal has three parts. Every good one has all three.

Part 1: AI Opportunity. What could AI actually do in this field? Not 'AI could help' - something specific. What task, what problem, what process?

Part 2: Challenge to be addressed. What's the real problem you're trying to solve? What's broken, slow, unfair, or missing in this career field right now?

Part 3: Personal fit - why you care. This is the part students skip. Why does this matter to you? What connects this problem to something you actually care about?

At the bottom of the slide - that formula. Read it with me: AI Opportunity + Challenge + Why I Care. That's your goal. If any one of those is missing, the goal is incomplete.

SLIDE 11 - Questions to Sharpen Your Goal

Say: "If you've already got a goal drafted and you want to push it further, or if you're still searching for direction - use these questions. You can type any of them directly into the NotebookLM chat.

(Read through the six questions on the slide.)

The last one is the most useful if you're completely stuck: 'Based on these resources, what is one project a student like me could do to improve this field using AI?' Sometimes you need to just ask it directly. That's fine. Use the tool.

SLIDE 12 - Exit question

Say 'The next time you use AI for something - for school, for work, for anything - what is one thing you'll do differently based on what you practiced today?'

What If Scenarios

"The AI keeps saying it doesn't know the answer." That usually means your sources don't cover it. Either import more sources on that topic or rephrase the question. The AI can only answer from what you gave it - that's the design.

"My sources all say the same thing." Good observation - that's critical thinking. Ask the AI directly: 'What perspectives or voices are missing from these sources?' See what it says. That's a research skill.

"I can't find any good sources on my topic." Try a different search angle. Instead of searching for your career generally, search for a specific problem in that field. Or use 'Discover Sources' and let NotebookLM suggest - it's often better at this than a general web search.

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