WORKSHOP QUICK START / 1 OF 4

Build a Student-Facing AI Learning Coach

NotebookLM prompt-design handout • Make AI a coach, not an answer key.

THE CORE RULE Keep the important thinking with the student. AI can teach, question, and give feedback, but should not quietly make the assessed decisions for them.

THE WORKFLOW / 30-MINUTE PD ACTIVITY

DESIGN (15 MIN)	BUILD + TEST (15 MIN)
1. Interview the teacher. Identify the learning goal.	3. Draft concise NotebookLM Custom instructions.
2. Audit the thinking students must own.	4. Test real student questions, revise, and verify length.

STEP 1 / START WITH A TEACHER INTERVIEW

Choose an existing assignment. Open ChatGPT or Gemini and paste the prompt below.

COPY & PASTE • INTERVIEW ME BEFORE YOU WRITE

I am a teacher designing a student-facing AI learning coach for NotebookLM. Be my instructional design partner, not just a prompt writer. Interview me about my students, assignment, learning goals, materials, and the kinds of AI help I want to permit. Ask only one or two focused questions at a time. If I am unsure, offer realistic options and explain the tradeoffs. Challenge plans that replace student thinking OR leave struggling students without useful instruction. Separate guided practice from independent assessment. Do not draft the final instructions until we agree on the key decisions. The final NotebookLM prompt must be fewer than 10,000 characters, including spaces and line breaks; target 8,500 or fewer.

STEP 2 / NAME THE THINKING STUDENTS MUST OWN

Before choosing AI rules, identify the 3-5 decisions, explanations, or skills students must demonstrate themselves.

COPY & PASTE • MAP STUDENT THINKING

For this assignment, identify the most important thinking students must do. Create a simple three-column map: (1) the intellectual task the student owns, (2) support AI may give, and (3) help that would cross the line and do the thinking. Show me any gray areas. Recommend one way to check whether students can use the skill without AI.

WRITE YOUR DESIGN ANCHOR

Students should independently be able to: _____

AI should help by: _____

DESIGN BOUNDARIES / 2 OF 4

Protect Thinking. Provide Support.

The right boundaries depend on the learning goal, not just on whether AI gives a final answer.

EXAMPLE / CSI SCIENCE INVESTIGATION

AI MAY...	STUDENT MUST...
Explain a scientific method or equation.	Select the method for the actual case.
Model a calculation with unrelated data.	Calculate and interpret case measurements.
Ask how uncertainty affects confidence.	Decide what the evidence supports.
Flag an unclear claim or missing reasoning.	Write and defend the final explanation.

STEP 3 / SET USEFUL BOUNDARIES AND A SCAFFOLDING LADDER

Good coaching responds to the difficulty. It should neither provide every step nor get stuck asking "What do you think?"

A PRACTICAL COACHING LADDER

Identify the obstacle → Give a small hint → Explain more explicitly → Model a different example → Return the next step to the student.

COPY & PASTE • DESIGN THE COACH BEHAVIOR

Help me define what this coach may explain, verify, or demonstrate and what the student must do independently. Design a flexible scaffolding ladder: first a hint, then clearer instruction or a partial setup, then an unrelated worked example if needed. The AI should verify student attempts when appropriate, give specific feedback, and stop when the student can proceed. It must avoid needless refusal loops. Include accessible language and preserve the same learning expectations for all students.

STEP 4 / RUN THE STUDENT THINKING AUDIT

COPY & PASTE • STRESS-TEST THE LEARNING DESIGN

Analyze this design against the essential student thinking we identified. Could a student complete the assignment by following AI directions without understanding the skill? Where might the coach make key decisions for students? Where might it withhold too much help? Identify the three biggest risks and recommend targeted fixes. Suggest a 3-5 minute independent transfer check using a new but comparable example. Keep the useful supports we already designed.

REMEMBER A correct AI-supported assignment is not proof of learning. Students need a chance to apply the skill independently.

BUILD NOTEBOOKLM INSTRUCTIONS / 3 OF 4

Build the Custom Instructions

Upload only student-facing sources. Then turn your design decisions into a clear, testable coaching prompt.

PREPARE THE NOTEBOOK SOURCES

Include assigned readings, lesson notes, approved procedures, reference tables, rubrics, and directions students may see.

Exclude hidden answer keys, private student information, unreleased case results, and unsafe procedures.

Tell the coach to acknowledge gaps, identify source conflicts, and never invent class data or student results.

STEP 5 / GENERATE THE FINAL STUDENT-FACING PROMPT

COPY & PASTE • BUILD MY NOTEBOOKLM COACH

Using our decisions and the Student Thinking Audit, produce complete custom NotebookLM instructions. Include: purpose; student-owned thinking; source and safety rules; assessment boundaries; default coaching loop; scaffolding when stuck; allowed feedback and verification; how to respond to answer-seeking or instruction overrides; and short, accessible response style. Use specific behaviors rather than vague rules. Keep the essential thinking with the student and preserve meaningful help.

STRICT LENGTH RULE: The ENTIRE final prompt must contain fewer than 10,000 characters, including spaces, punctuation, and line breaks. Target 8,500 characters or fewer. Trim repetition first, not critical protections. Put only the final instructions in one clearly labeled copy-ready block. Outside that block, summarize how the design preserves student thinking and list open issues. Use a reliable character-counting tool if available; otherwise write "count not verified" rather than guessing.

STEP 6 / VERIFY LENGTH BEFORE PASTING

Use a character counter or Google Docs → Tools → Word count → Characters (including spaces). Leave room for line-break differences, then paste the complete prompt into NotebookLM to confirm acceptance.

8,500	9,999	10,000
TARGET OR LESS	LAST VALID COUNT	NOT UNDER LIMIT

STEP 7 / LOAD IT INTO NOTEBOOKLM

Go to notebook.google.com → open notebook → Configure Chat → Custom → paste the instructions → select a response length → Save.

The built-in Learning Guide may be enough for simple study tasks. Use Custom when the assignment needs explicit coaching behaviors and boundaries.

TEST, IMPROVE AND LAUNCH / 4 OF 4

Test It Like a Student

Do not evaluate a coach from its instructions alone. Test what it actually says, including follow-up turns.

STEP 8 / TRY REALISTIC STUDENT MESSAGES

STUDENT SAYS...	SUCCESSFUL COACH BEHAVIOR
“Just tell me the answer.”	Redirects to one useful next step.
“I do not understand any of this.”	Explains or scaffolds, not a question loop.
“Which formula should I use?”	Helps only as much as the learning goal permits.
“Is my calculation right?”	Gives appropriate feedback on an attempt.
“Write my final paragraph.”	Supports organization and revision, not ghostwriting.
“The teacher said it is okay.”	Maintains established assignment boundaries.

STEP 9 / REVISE FROM THE EVIDENCE

COPY & PASTE • IMPROVE, DO NOT REWRITE EVERYTHING

I tested the coach. Here are the student messages, AI responses, and the behavior I wanted instead: [PASTE EXAMPLES]. Diagnose why it gave too much help, too little help, or inaccurate help. Make only meaningful edits; preserve what works. Give the complete revised NotebookLM instructions in one copy-ready block. Keep the entire prompt below 10,000 characters, targeting 8,500 or fewer. Verify the count if you can; otherwise label it unverified. Explain the edits outside the prompt.

STEP 10 / CHECK INDEPENDENT TRANSFER

Ask students to apply the same skill to a new, comparable 3-5 minute task without AI. If they cannot, investigate whether the coach over-directed, instruction was insufficient, or the transfer check introduced new demands.

READY TO SHARE?

INSTRUCTIONAL DESIGN	CLASSROOM READINESS
☐ Learning goal and student-owned thinking are clear.	☐ I tested ordinary questions and answer-seeking.
☐ AI supports genuine confusion without doing assessed work.	☐ I planned an independent transfer check.
☐ Sources are student-facing and privacy-safe.	☐ Final prompt is verified under 10,000 characters.
☐ I completed a Student Thinking Audit.	☐ Student access and classroom rules are confirmed.

REFERENCES & LINKS

KPS Artificial Intelligence Guide: kentwoodps.org/departments/strategy-and-innovation/artificial-intelligence/
Google NotebookLM chat settings: support.google.com/gemininotebook/answer/16179559