



STUDENT WORKBOOK

AI for Science Students (No Coding)

5 days, 2 hours a day · Online across India, in person from Jaipur



AI Coaching India

This workbook belongs to _____

Batch code: _____

AI for Science Students (No Coding): Your Workbook

Dear learner,

This workbook is your lab manual for the next five days and your reference long after. It carries every prompt we use, space for your own results, and the verification habits that separate a careful scientist from a careless one. There is no coding in these pages, not one line, as promised. Use the workbook during class to follow along, and after class whenever a paper refuses to make sense or a lab report is due. Do not keep it pristine. Write in it, fold it, spill chai on it. Treat it like a real lab notebook: the messy ones hold the real work. And keep the course's one law close: your data is sacred, and AI never touches your readings.

With warmth,

Team AI Coaching India

Before day one

- Install the ChatGPT app (free) or bookmark chatgpt.com
- Install the Google Gemini app (free) or bookmark gemini.google.com
- Bookmark notebooklm.google.com and napkin.ai; free accounts are enough, and we set up together in class
- Make sure you can open Google Sheets with your Google account
- Bring one research paper PDF from your field (any paper your teacher or guide has mentioned) and the readings from one recent experiment
- Bring a laptop if you have one; if not, tell us and we will pair you up, no extra cost
- One reassurance: there is no coding, no software to buy, and no formula to memorise. If you can use a browser, you are fully equipped.

Day 1: Papers you can finally read

What today was really about

The gap between "assigned a paper" and "understood the paper" is where most science students quietly give up. Today you closed it. Within 30 minutes, NotebookLM was summarising a real paper from your field, and you were interrogating it section by section like a patient senior. You also ran your first hallucination check and watched AI discuss a paper that does not exist. Useful and untrustworthy at the same time: that tension is the whole course.

Prompts we used

1. I have uploaded a paper on _____. Summarise the abstract, methods, and key results in plain language for a BSc student.
2. What question was this paper trying to answer, and did the results actually answer it?
3. Explain the methods section step by step. What equipment and technique did they use, and why?

4. What are the limitations the authors admit, and what limitations do they not mention?
5. Summarise the 2019 paper _____ by _____ (invent a plausible title). What were its findings?
6. Is paper ka main result kya hai? Simple Hinglish mein samjhao, phir main English mein khud likhunga.

Now you try

1. Upload a second paper and ask the three questions your guide would ask in a seminar. Best answer you got: _____
2. Run prompt 5 with a made-up paper title in your field. What happened, and what is your takeaway? _____
3. Write your rule for what you always read yourself versus what you delegate to AI: _____

Watch out

WATCH OUT

AI will summarise papers that do not exist and invent findings for real ones. NotebookLM is safer because it only uses the document you upload, but general chatbots freewheel. Never cite a paper you have not opened. And never upload unpublished lab data or anything your guide has not cleared for sharing.

My notes

Day 2: Lab reports without the dread

What today was really about

Lab reports come back covered in red not because your science is wrong but because the writing hides it. Today you built a report skeleton you will reuse for years, drafted the aim, procedure, and discussion with AI as your editor, and turned rough observations into clean scientific sentences. And you obeyed the course's one hard law: AI never touches your readings. It can polish your prose; your data enters exactly as measured, errors and all, because that is what honest science looks like.

Prompts we used

1. Give me a standard lab report skeleton for a _____ (physics, chemistry, biology) experiment: the sections in order, with one line on what belongs in each.
2. Here is my rough aim: _____. Rewrite it as one precise sentence in proper scientific style.

3. Here are my rough observations: _____. Help me express them as clear scientific sentences. Do not change any values or add anything I did not observe.
4. Here is my discussion draft: _____. Critique it like a strict examiner: is the reasoning sound, are claims supported by my data?
5. Question me about possible sources of error in this experiment: _____. One question at a time, and be tough.

Now you try

1. Rebuild the report for your most recent experiment using the skeleton. Which section improved most? _____
2. Run prompt 5 and list the two sources of error you had not considered: _____
3. Write the one law of this course in your own words: _____

Watch out

WATCH OUT

The temptation will come, some late night, to let AI smooth a messy reading or fill a gap in your observations. Do not. Fabricated data is the one unforgivable sin in science, and it starts small. AI edits your words, never your numbers. If a reading is odd, report it and discuss why. That honesty is worth more marks than fake perfection.

My notes

Day 3: Seeing the concept

What today was really about

Some topics refuse to make sense as text. Today you attacked yours from three directions: you explained it back to AI until the gaps in your understanding showed, you asked for three different analogies and kept the one that clicked, and you turned it into a diagram with Napkin and a revision one-pager in Canva. Explaining a concept to AI, badly, and letting it show you exactly where you went wrong is one of the fastest ways to actually learn it.

Prompts we used

1. I will explain _____ in my own words. Point out every gap or mistake in my understanding, gently: _____
2. Give me 3 different analogies for _____: one from daily life, one from cricket or cooking, one visual.
3. Break _____ into a step-by-step flow I could draw as a flowchart, maximum 8 steps.

4. What do students most commonly get wrong about _____, and what is the correct picture?
5. Make me a 10-question self-test on _____, from easy to hard, with answers at the end. I will check the hard ones against my textbook.

Now you try

1. Pick the topic that troubled you most this semester and run prompt 1. What gap did AI find?

2. Which of the three analogies actually clicked, and why? _____
3. Show your one-pager to a classmate tonight and let them find one thing to improve:

Watch out

WATCH OUT

Analogies simplify, and every simplification lies a little. AI sometimes smooths a concept until it is wrong at your syllabus level, especially in physics and chemistry. After the analogy clicks, go back to the textbook definition and confirm they agree. The analogy is the ladder; the textbook is the floor you stand on.

My notes

Day 4: Your data, organised in Sheets

What today was really about

Messy data wastes more student hours than hard theory ever will. Today you built a clean data table in Google Sheets, asked Gemini, the free chat, for the formulas you needed, averages, standard deviation, unit conversions, and pasted them in yourself. You made a properly labelled chart, built a reading tracker for papers, and did the sanity check that separates scientists from spreadsheet victims: verifying one calculated value by hand.

Prompts we used

1. I have experimental data with columns _____ (list them, with units). Suggest a clean table layout and what I should never mix in one column.
2. Write me a Google Sheets formula for the average and standard deviation of values in column _____. Tell me exactly where to paste it.
3. My readings are in _____ (unit) and I need _____ (unit). Give me the conversion formula for Sheets and one worked example I can check by hand.

4. What chart type suits this data: _____ (describe it)? How should I label the axes, with units, so it looks professional?
5. Design a simple reading tracker for research papers: suggest columns for what I read, what it claimed, and where to find it again.

Now you try

1. Pick one calculated value from your sheet and verify it by hand. Did it match? _____
2. Ask Gemini to explain your standard deviation formula in plain words. Write the explanation in one line: _____
3. Add three papers to your reading tracker tonight: _____

Watch out

WATCH OUT

A formula that is slightly wrong looks exactly like a formula that is right. Always sanity-check one calculated value by hand before trusting a column of results. And keep the raw data untouched in its own sheet; calculations happen in a copy, so a mistake can never eat your original readings.

My notes

Day 5: Posters, seminars, and the nonsense detector

What today was really about

Today you packaged the week: your literature summary became a seminar poster in Canva, your talk got an outline and speaker notes in Gamma, and you practised the two-minute explanation with AI as your audience. Then the finale: a live hallucination hunt through AI answers seeded with scientific errors, which you caught. You leave with something rarer than any tool skill: a personal verification checklist and the instincts of the person in the lab who checks.

Prompts we used

1. Turn this literature summary into a poster outline: title, introduction, methods, findings, conclusion, maximum 40 words per section: _____
2. Build a 10-minute seminar talk outline on _____ with speaker notes that sound like a person, not a textbook.
3. I will explain my topic in two minutes. Time me, then tell me what was unclear and what I should cut: _____
4. Act as a curious but skeptical audience member at my seminar. Ask me 5 questions about my topic, one at a time.

5. Give me 5 confident statements about _____ where at least 2 contain scientific errors. I will find them, then you tell me the answer.

Now you try

1. Run prompt 5 on your own subject. How many planted errors did you catch? _____
2. Practise your two-minute explanation twice with AI, once with a human. Who asked the harder question? _____
3. Write the first three items of your personal verification checklist: _____

Watch out

WATCH OUT

The scientific-sounding sentence is AI's most dangerous product: correct grammar, confident tone, plausible mechanism, wrong fact. Your protection is the checklist you built today: check the claim against your textbook, check the reference exists, check the number by hand. Run it every time, especially when the answer is exactly what you hoped to hear.

My notes

Your complete prompt library

Day 1: reading papers

1. Summarise the abstract, methods, and key results of this paper in plain language.
2. What question was this paper answering, and did the results answer it?
3. Explain the methods step by step: equipment, technique, and why.
4. What limitations do the authors admit, and which do they not mention?

Day 2: lab reports

5. Give me a standard lab report skeleton for a _____ experiment.
6. Rewrite my rough aim as one precise scientific sentence: _____
7. Express my observations as clear scientific sentences without changing any values:

8. Critique my discussion like a strict examiner: _____
9. Question me about sources of error in this experiment, one at a time: _____

Day 3: concepts and visuals

0. I will explain _____ in my own words. Point out every gap in my understanding.
1. Give me 3 different analogies for _____.

2. Break _____ into a flowchart of maximum 8 steps.
3. What do students most commonly get wrong about _____?
4. Make a 10-question self-test on _____, easy to hard, with answers.

Day 4: data in Sheets

5. Suggest a clean table layout for data with columns _____.
6. Write a Sheets formula for average and standard deviation of column _____.
7. Give me the _____ to _____ unit conversion formula with one hand-checkable example.
8. Which chart suits this data, and how do I label the axes with units?
9. Design a reading tracker for research papers.

Day 5: presenting and verifying

10. Turn my literature summary into a poster outline, 40 words per section max.
11. Build a 10-minute seminar outline with human-sounding speaker notes.
12. Time my two-minute explanation and tell me what was unclear.
13. Ask me 5 skeptical audience questions about my topic, one at a time.
14. Give me 5 confident statements about _____ with 2 hidden errors for me to find.

Your safety card

- Never upload unpublished lab data, your guide's unshared work, or anyone's personal details to any AI tool.
- The one law: AI never touches your readings. It edits words, not numbers. Fabricated or smoothed data is the line no scientist crosses.
- Never cite a paper you have not opened yourself. AI invents papers, authors, and findings with perfect formatting.
- Sanity-check one calculated value by hand before trusting any formula's output.
- Free plans cover this entire course. Nobody needs a paid tool for any exercise here, whatever an upgrade banner suggests.

Keep going: your 30-day plan

- Week 1: run every assigned reading through NotebookLM with your interrogation prompts. Verify one claim per paper against the actual text.
- Week 2: write your next lab report with the skeleton and editor workflow. Data entered exactly as measured.
- Week 3: make one concept one-pager for the current toughest topic and self-test on it.
- Week 4: update your Sheets tracker with every paper you touched this month, and hand-verify one calculation in your latest data.

- Every week: one hallucination hunt in your own subject. Stay the person who checks.
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Plain-words glossary

- **AI chatbot:** a program that answers in fluent language by predicting likely words, without actually understanding science.
- **Prompt:** the instruction you give an AI. Specific beats vague every time.
- **Hallucination:** AI confidently stating false things: fake papers, wrong mechanisms, invented numbers.
- **Verification:** checking AI's claims against your textbook, the actual paper, or a hand calculation.
- **NotebookLM:** a free Google tool that answers questions using only the documents you upload.
- **Abstract:** the short summary at the top of a research paper, written for busy readers.
- **Literature summary:** a short document capturing what several papers say about one topic.
- **Standard deviation:** a number describing how spread out your readings are around the average.
- **Sanity check:** verifying one result by hand to confirm a formula or tool is behaving.
- **Raw data:** your original readings, kept untouched in their own sheet forever.
- **Napkin:** the text-to-diagram tool we currently use. If it ever changes, Canva shapes or any similar tool does the same job.
- **Gamma:** the AI presentation maker we currently use; it turns an outline into designed slides. If it ever changes, any similar AI slide maker works the same way.
- **One-pager:** a single-page revision sheet that captures one concept completely.
- **Fabrication:** inventing or altering data. The unforgivable sin in science, however small it starts.