Sindh Governor House Free AI Summer School 2026

Course & Session Plan for a One Month Program

Four 2-hour sessions · Four Sections · For students of Class 6 and above (ages 11–17)
Students bring their own Laptop with them

Class Timing

Section	First Class	Second Class	Third Class	Fourth Class
Monday Section Time: 6 pm - 8 pm	June 22	June 29	July 6	July 13
Tuesday Section Time: 6 pm - 8 pm	June 23	June 30	July 7	July 14
Wednesday Section Time: 6 pm - 8 pm	June 24	July 1	July 8	July 15
Thursday Section Time: 6 pm - 8 pm	June 25	July 2	July 9	July 16

This plan sets out what is taught across the AI Summer School. The programme runs for a month for four two-hour sessions. **It teaches AI Prompting in 2026** teaches students to get high-quality work out of any modern AI assistant. The table below shows each session and the learning outcome for students.

Programme	AI Summer School 2026: An introduction to working with AI.
Who it is for	Students of Class 6 and above (ages 11–17). No prior AI experience required.
Structure	4 sessions of 2 hours each (8 contact hours).
Delivery	One unified cohort, attendable on-site. Reading material will be provided.
Textbook for the Course	https://agentfactory.panaversity.org/docs/ai-prompting-2026
Outcome	A working prompt vocabulary, and a mental model for thinking in the AI era.

Programme at a Glance: Four Sessions

Each session is 2 hours including a short break. Module timings are approximate and adjustable by the instructor.

Class	Content	Learning outcome
First Class AI Prompting in 2026 *Part 1: How AI knows things*	**Theme: How AI Actually Works** **Orientation & first accounts** What the programme is and why AI literacy (LLM, Agentic AI) now sits beside reading, writing and arithmetic. Students open a free account on ChatGPT, Claude or Gemini. The big idea: the model	**By the end, students can:** Explain that AI is “stateless” and learns from text, not experience; judge when a pretrained answer can be trusted versus when it needs web search or human

Class	Content	Learning outcome
	has no memory of its own. It answers only from what is in front of it. **Novice vs. power user** The gap between a weak prompt and a strong one is a handful of habits, not cleverness. Brief AI like a smart, motivated new colleague: give it context, constraints and a clear ask. **Pretrained knowledge** AI learned by reading the internet, so it is strong on common topics, weak on rare ones, and blind to anything private or very recent. Confidence is not proof of correctness; check important facts against a primary source. **The three retrieval modes** Pretrained answers vs. live web search vs. deep research: how the wording of a prompt steers which one fires, when to use AI instead of Google, and how to get trustworthy web results (name your sources, ask for citations, flag the unverified).	verification; steer AI between its three retrieval modes; and write a first context-rich prompt.
Second Class AI Prompting in 2026 *Part 2: Talking to AI well*	**Theme: Talking to AI Well** **Context is the whole game** The context window is AI's working memory for a single answer. A pre-send checklist of what to attach; "context rot" and the rule "when the topic changes, start a new chat"; and using Projects / Notebooks to load context once instead of every time. **Reasoning, or "think hard"** How to switch a model into extended-thinking mode for multi-step problems, and when not to (quick lookups and casual questions). **Sycophancy & how to neutralise it** AI is biased toward telling you what you want to hear. Neutral framing, rubric prompts, and forcing a 1–10 score per criterion turn flattery into honest feedback.	**By the end, students can:** Assemble the right context before prompting; invoke reasoning mode when a problem deserves it; remove bias with neutral framing and scored rubrics; and run the brainstorm-iterate loop to pull non-generic, high-quality work out of any modern AI.
Third Class **Module I** AI Prompting in 2026 *Parts 3 & 4: Beyond text; working safely*	**Theme: Beyond Text & Working Safely** **Multimodal: images & audio** What AI sees and hears well versus poorly; turning photos, voice memos and meeting recordings into useful output; and the two-step recipe for designer-quality diagrams without a designer. **The brainstorm-iterate loop** The single highest-leverage habit: load context, demand 3–5 options, give explicit feedback, iterate, and only then expand the winner, plus "outline before drafting" and grade-and-fix. **Building small apps with one prompt** Goal / Input / Output: building a timer, game or tool that runs in the chat as an "artifact" you can iterate on, share and publish. What is easy versus still hard.	**By the end, students can:** Use AI for brainstorming, images, audio, and app-building

Class	Content	Learning outcome
Fourth Class AI Prompting in 2026 *Capstone Project Included at the end of this document.*	**Checking: Grading of the Capstone Project** **Students will show their projects to the instructors.**	By completing this project, students will learn how to use AI responsibly to create a clear mini textbook chapter on one school topic. They will practice giving AI the right context, writing better prompts, asking for options, improving drafts, checking facts from named sources, and submitting a final corrected learning resource instead of simply copying AI's answer.

Assessment & What Students Take Home

- Hands-on practice in every session, with each student applying the day's habits to a real task or decision of their own.
- A working prompt vocabulary for school, research and creative work.

Capstone Project

AI Mini Textbook

Use AI to create, improve, source-check, and verify a short learning chapter on one school topic

Student Handout

Field	Write here
Student name	_____
Class / Section	_____
Subject	_____
Chosen topic	_____
AI tool used	_____
Submission date	_____
Main idea The mini textbook is the product. Your prompt log, sources, checking table, and reflection are the proof that you know how to use AI responsibly.	

1. Project Overview

Your mission is to choose one specific school topic and use AI to create a short mini textbook chapter that teaches the topic clearly to students your age.

You are not allowed to simply copy AI output. You must guide AI with good prompts, use sources, improve the draft, check important facts, and submit evidence of your process.

What you will learn

- how to give AI clear context and instructions;
- how to choose the right mode: pretrained answer, web/search answer, or source-based answer;
- how to ask for options before asking for the final draft;
- how to use AI to explain, simplify, quiz, critique, and improve;
- how to use a Project, Notebook, or organized chat to keep context clean;
- how to check AI answers against notes, textbooks, teacher guidance, and named sources;
- how to create a useful learning resource without blindly copying AI.

Final submission: two parts

Part	What it contains
Part A: Mini Textbook Chapter	Your polished learning chapter for one school topic.
Part B: AI Process Notebook	Your topic brief, context package, source list, prompt log, checking table, rubric scores, and reflection.

2. Choose One Specific Topic

Choose one specific topic from your schoolwork. A small topic is better than a whole subject.

Too broad	Better topic
Biology	Photosynthesis (Don't select this topic because the sample project is given to you at the end of this document)
Mathematics	Fractions and percentages
Physics	Electric circuits
English	Writing a strong essay introduction
History	Causes of the 1857 War of Independence

Local example ideas

- Electric circuits during load-shedding
- Photosynthesis in Karachi heat
- Percentages using shopping discounts
- Water cycle and monsoon rainfall
- English grammar using a school announcement
- Budgeting a class event using ratios and percentages

3. Set Up Your AI Workspace

Do not keep one messy chat for the whole project. Long chats can become confusing. Use a clean workspace so AI keeps the right context.

Option	What to do
Best option if available	Create a Gemini Notebook, Claude Project, ChatGPT Project, or similar workspace. Upload your notes, textbook photo, or teacher instructions there.
If Projects/Notebooks are not available	Create one folder in your files and start a new chat for each major step: planning, outline, draft, checking, final improvement.
Minimum requirement	Keep your context, sources, and final prompts clearly labeled in your AI Process Notebook.

Workspace rule

Start a new chat when the answer becomes mushy, repetitive, confused, or when you move from brainstorming to final writing. Paste only the clean context needed for that stage.

4. Source and Retrieval Plan

AI has different ways of answering. For this project, you must show which mode you used and which sources you named.

Mode	When to use it	Example instruction
Pretrained mode	For simple explanations, analogies, and practice questions.	Explain this topic in simple words for Grade 8.
Source-based mode	When you want AI to use your notes, textbook page, worksheet, or teacher instructions.	Use my uploaded notes first. Do not add extra facts unless you label them as extra.
Web/search mode	When your tool supports web search and you need current or external information.	Use web search and compare two named sources. List the sources you used.

You must include at least two named sources. At least one should be from your class material if possible.

Source type	Example
Class source	Textbook page, teacher notes, worksheet, class slides, or a photo of a textbook paragraph.
Trusted learning source	Khan Academy, Britannica, teacher-approved website, official curriculum material, or another reliable educational source.
If web search is not available	Use your textbook and teacher notes as named sources. Write that your AI tool did not have web search.

Important
Do not invent sources. If AI gives sources, open and check them when possible. If you cannot verify a source, mark it as Needs checking.

5. Build Your Context Package

Before asking AI to write, give it useful context. The model only knows what is in the current chat, Project, or Notebook.

- a typed textbook paragraph;
- a clear photo of a textbook page or worksheet;
- a photo of a diagram or handwritten class note;
- teacher instructions or syllabus points;
- important vocabulary your teacher wants you to use;
- your own explanation of what you already know and what confuses you.

Privacy rule
Do not upload private personal information, passwords, home address, phone number, private family details, or private photos.

6. Part A: Your Mini Textbook Chapter

Your mini textbook should be written for students your age. It should be clear, simple, accurate, and useful for revision.

Section	What to include	Suggested length
1. Title and audience	Topic title, subject, grade level, and who this chapter is for.	Half page
2. Learning goals	3 to 5 things the reader should understand after reading.	Short list
3. Simple explanation	Explain the topic in easy language. Use headings and short paragraphs.	1 to 2 pages
4. Key terms	At least 5 important words with simple definitions.	Table
5. Examples	At least 2 examples, worked steps, or real-life examples.	Half to 1 page
6. Common mistakes	At least 5 mistakes students make and how to avoid them.	List or table
7. Diagram or visual idea	A simple diagram, flowchart, mind map, or labeled visual description.	1 visual
8. Flashcards	10 flashcards: question on one side, answer on the other.	Table
9. Quiz	5 quiz questions with answer key.	Short quiz
10. 7-day revision plan	A simple study plan for one week.	Table

7. Part B: Your AI Process Notebook

This part proves that you used AI properly. It shows your prompts, sources, improvements, checking process, and reflection.

B1. Topic Brief

- What topic did you choose?
- Why did you choose it?
- What is difficult about this topic?
- Who is your mini textbook written for?
- What should the reader understand by the end?

B2. Source List

Source name	Type	How I used it
	Textbook / notes / website / teacher guidance	
	Textbook / notes / website / teacher guidance	
	Textbook / notes / website / teacher guidance	

B3. Required Prompt Log

You must include at least 8 prompts. These prompts should show the full prompting process, not just the final answer.

Prompt type	Purpose	Completed?
1. Weak prompt	Show what a basic prompt produces.	
2. Context prompt	Give AI your grade level, topic, notes, textbook photo, or teacher instructions.	
3. Source-named prompt	Tell AI which named sources to use and what retrieval mode is needed.	
4. Options prompt	Ask for 3 different outline or explanation options. Do not expand yet.	
5. Feedback prompt	Choose one option, reject the others with reasons, and ask for revised outlines.	
6. Think-hard drafting prompt	Ask AI to carefully build the full chapter from the best outline and your notes.	
7. Rubric scoring prompt	Ask AI to score the draft 1-10 on clarity, accuracy, age-fit, and usefulness.	
8. Verification prompt	Ask AI to list factual claims and mark what needs checking.	

Prompt log table

#	My prompt	What AI gave me	What I changed next
1			
2			
3			
4			
5			
6			
7			
8			

B4. Rubric Scoring Table

Ask AI to grade the draft, but do not accept the grade blindly. Use it to improve the chapter.

Criterion	AI score 1-10	AI reason	Smallest edit to improve it	My decision
Clarity				
Accuracy				
Age-fit				
Usefulness for revision				

B5. Checking Table

Choose 6 to 10 important AI statements and check them. Do not trust important facts without checking.

AI statement	My decision	Evidence / reason	Correction if needed
	Accept / Reject / Modify / Needs checking		
	Accept / Reject / Modify / Needs checking		
	Accept / Reject / Modify / Needs checking		
	Accept / Reject / Modify / Needs checking		
	Accept / Reject / Modify / Needs checking		
	Accept / Reject / Modify / Needs checking		

B6. Reflection

Write 150 to 250 words answering these questions:

- What did AI help you understand?
- What did AI get wrong, unclear, or incomplete?
- Which prompt worked best and why?
- What did you change in the final mini textbook?
- What will you do differently next time you use AI?

8. Step-by-Step Workflow

1. **Pick a specific topic:** Example: photosynthesis, not the whole subject of biology.
2. **Set up your workspace:** Use a Project, Notebook, or separate organized chats for each major step.
3. **Add your context package:** Upload or paste notes, textbook photo, worksheet, vocabulary, or teacher instructions.
4. **Name your sources:** List at least two named sources and tell AI which ones to use first.
5. **Start with a weak prompt:** Save it so you can compare it with stronger prompts later.
6. **Ask for 3 options:** Ask for 3 different ways to explain or outline the topic. Do not ask for the full chapter yet.
7. **Give feedback and iterate:** Pick the best option, reject the others with reasons, and ask for improved outlines.
8. **Build the full chapter:** Use the best outline and your sources to create the first full mini textbook draft.
9. **Score the draft:** Ask AI to score clarity, accuracy, age-fit, and usefulness from 1-10 with one improvement for each.

10. **Verify facts:** Check important statements against notes, textbook, teacher guidance, or named sources.
11. **Create the final version:** Revise the chapter using your checks and corrections.
12. **Submit your Process Notebook:** Include prompt log, source list, rubric scoring table, checking table, and reflection.

9. Required Starter Prompts

You may copy and adapt these prompts. Replace the blanks with your own topic, grade level, and sources.

Prompt	Copy/adapt this	Why it matters
1. Weak prompt	Explain ___.	Use this first only to show the difference between weak and strong prompting.
2. Context prompt	I am a Grade ___ student. I am learning about ___. Here are my notes / textbook photo / teacher instructions: ___. Use this context first. Explain what is clear, what is missing, and what I may misunderstand.	This teaches the model what is inside your stack.
3. Source-named / retrieval prompt	Use these named sources first: Source 1: ___. Source 2: ___. If web search is available, use it only to check these sources or add one teacher-approved source. If web search is not available, say so and use only the sources I gave you.	This prevents fake or vague sourcing.
4. Options prompt	Give me 3 different ways to explain ___ to a Grade ___ student. Do not expand into the full chapter yet. For each option, give a title, structure, strengths, and weaknesses.	This forces brainstorming before drafting.
5. Feedback and revision prompt	I choose option ___ because ___. I reject option ___ because ___. Revise the outline into 3 improved versions and make them more suitable for my class context.	This shows that you are directing AI, not just accepting the first answer.
6. Think-hard drafting prompt	Read my notes and chosen outline carefully. Think hard about clarity, accuracy, and age-fit. Now build the full mini textbook chapter for Grade ___ students. Use simple language, short paragraphs, examples, common mistakes, flashcards, quiz, and a 7-day revision plan.	This asks for careful work after the planning loop.
7. Rubric scoring prompt	Grade the chapter from 1-10 on four criteria: clarity, accuracy, age-fit, and usefulness for revision. Justify each score in one sentence. Then tell me the smallest edit that would raise each score the most.	This turns critique into measurable improvement.
8. Verification prompt	List 6 to 10 important factual claims in the chapter. Mark each claim as supported by my notes, supported by a named source, needs checking, or unsupported. Do not pretend you verified something if you did not.	This supports honest checking.

10. Example: From Topic to Mini Textbook

Stage	Example
Chosen topic	Electric circuits during load-shedding for Grade 8 Physics
Class context	Teacher notes on battery, switch, bulb, current, complete circuit, and short circuit.
Named sources	Textbook page photo + Khan Academy article/video on electric circuits.
Options prompt	Ask for 3 ways to explain circuits: water-flow analogy, home-lighting analogy, and drawing-based explanation.

Stage	Example
Selected option	Choose home-lighting analogy because students in Karachi understand load-shedding and backup power.
Final product	A mini textbook chapter with simple explanation, key terms, circuit diagram idea, common mistakes, flashcards, quiz, and 7-day revision plan.

11. AI Safety and Academic Honesty Rules

- Do not share private information. Do not enter home address, phone number, passwords, private photos, or family details.
- Do not copy blindly. AI can make mistakes. You must check important facts.
- Do not use AI to cheat. The purpose is to learn prompting and create a checked learning resource.
- Do not ask for unsafe help. Do not use AI for bullying, hacking, harmful instructions, or impersonation.
- Be honest about AI use. Your submission must show the prompts you used and the changes you made.
- Do not invent sources. If a source cannot be checked, mark it as Needs checking.

12. Grading Rubric

Category	What strong work shows	Points
Topic and learning goal	Clear topic, audience, difficulty, and learning goal.	8
Context package	Useful class notes, textbook text/photo, vocabulary, worksheet, or teacher instructions given to AI.	12
AI workspace discipline	Used a Project, Notebook, or clearly organized separate chats to avoid context confusion.	5
Named sources and retrieval mode	Included at least two named sources and clearly stated whether AI used pretrained, source-based, or web/search mode.	10
Prompt log and iteration	At least 8 prompts showing weak prompt, context, source naming, 3-option loop, feedback, draft, rubric scoring, and verification.	20
Mini textbook quality	Clear, organized, age-appropriate, useful, complete, and easy to revise from.	20
Checking table	Important AI claims were checked, corrected, or honestly marked as Needs checking.	15
Reflection	Honest explanation of what AI helped with, what needed correction, and what was learned.	10

13. Final Submission Checklist

Checklist item	Checklist item
☐ I selected one specific school topic.	☐ I wrote my topic brief.
☐ I set up a Project, Notebook, or organized chat workflow.	☐ I gave AI useful class context.
☐ I included a photo, PDF, typed notes, or teacher instructions where useful.	☐ I named at least two sources.
☐ I stated whether I used pretrained, source-based, or web/search mode.	☐ I asked for 3 options before asking for the final chapter.
☐ I gave feedback and asked for revised options.	☐ I included at least 8 prompts in my prompt log.

Checklist item	Checklist item
☐ I created a complete mini textbook chapter.	☐ I included key terms, examples, common mistakes, flashcards, quiz, and study plan.
☐ I asked AI to score the draft using a rubric.	☐ I checked at least 6 important AI statements.
☐ I corrected or marked anything uncertain.	☐ I wrote my reflection in my own words.
☐ I did not include private personal information.	

14. Final Reminder

Remember

The mini textbook is the product. Your sources, prompt log, rubric scores, and checking table are the proof that you know how to use AI responsibly. Your goal is not to show that AI is smart. Your goal is to show that you can guide AI, question AI, correct AI, and use AI to learn better.

Sample Completed Capstone Project

AI Mini Textbook: Photosynthesis for Grade 8

How green plants make their own food using sunlight, water, carbon dioxide, and chlorophyll

Field	Sample entry
Student name	Sample Student
Class / Section	Grade 8
Subject	Biology / General Science
Chosen topic	Photosynthesis
AI tool used	ChatGPT / Gemini / Claude
Submission date	Sample

Teacher note: This sample shows the expected structure and quality. Students should not copy it. Each student must choose their own topic, sources, prompts, checks, and reflection.

Part A: Mini Textbook Chapter

1. Title and Audience

Photosynthesis for Grade 8

This mini textbook chapter is written for Grade 8 students. It explains how green plants make their own food using sunlight, water, carbon dioxide, and chlorophyll.

2. Learning Goals

1. Explain what photosynthesis means.

2. Identify the main things plants need for photosynthesis.

3. Explain the role of sunlight, chlorophyll, water, and carbon dioxide.

4. Describe what plants produce during photosynthesis.

5. Avoid common mistakes about how plants make food.

3. Simple Explanation

Photosynthesis is the process by which green plants make their own food.

Plants do not eat food the way humans and animals do. Instead, green plants use sunlight to make food inside their leaves. This food is a type of sugar called glucose.

To make glucose, plants need sunlight, water, carbon dioxide, and chlorophyll.

Chlorophyll is the green substance found in leaves. It helps plants absorb energy from sunlight.

Plants take in carbon dioxide from the air through tiny openings in their leaves. They absorb water from the soil through their roots. Using sunlight and chlorophyll, the plant changes water and carbon dioxide into glucose and oxygen.

The glucose is used by the plant for energy and growth. The oxygen is released into the air.

A simple way to remember photosynthesis is: Sunlight + Water + Carbon Dioxide -> Glucose + Oxygen

Photosynthesis is important because it gives plants food and also produces oxygen, which humans and animals need for breathing.

4. Key Terms

Term	Simple definition
Photosynthesis	The process by which green plants make food using sunlight.
Chlorophyll	The green substance in leaves that absorbs sunlight.
Glucose	A type of sugar made by plants as food.
Carbon dioxide	A gas from the air that plants use during photosynthesis.
Oxygen	A gas released by plants during photosynthesis.
Roots	The part of the plant that absorbs water from the soil.
Leaves	The main part of the plant where photosynthesis takes place.

5. Examples

Example 1: A plant near a sunny window

If a plant is placed near a sunny window and is watered properly, it can make food through photosynthesis. The leaves absorb sunlight, the roots absorb water, and the leaves take in carbon dioxide from the air.

The plant uses these things to make glucose. This helps the plant grow.

Example 2: A plant kept in darkness

If a plant is kept in darkness for a long time, it cannot photosynthesize properly because it does not get enough light. Without enough light, the plant cannot make enough glucose. Over time, the plant may become weak.

This shows that sunlight is important for photosynthesis.

6. Common Mistakes Students Make

Mistake	Correction
Plants get all their food from the soil.	Plants get water and minerals from soil, but they make glucose in their leaves.
Photosynthesis happens in the roots.	Photosynthesis mostly happens in the leaves.
Chlorophyll is food for the plant.	Chlorophyll is not food; it helps absorb sunlight.
Oxygen is used to make food in photosynthesis.	Oxygen is produced during photosynthesis.
Plants do not need air.	Plants need carbon dioxide from the air for photosynthesis.

7. Diagram or Visual Idea

Draw a green plant with arrows:

- Sunlight arrow going to the leaves.
- Water arrow going from soil into the roots.
- Carbon dioxide arrow going from air into the leaves.
- Oxygen arrow going out from the leaves.
- Glucose label inside the plant as food made by the plant.

At the bottom of the diagram, write: Sunlight + Water + Carbon Dioxide -> Glucose + Oxygen

8. Flashcards

Question	Answer
What is photosynthesis?	The process by which green plants make food using sunlight.
What food do plants make during photosynthesis?	Glucose.
What gas do plants take in for photosynthesis?	Carbon dioxide.
What gas is released during photosynthesis?	Oxygen.
What part of the plant absorbs water?	Roots.
Where does photosynthesis mostly happen?	In the leaves.
What is chlorophyll?	The green substance that absorbs sunlight.
Why is sunlight needed?	It provides energy for photosynthesis.
Do plants get all their food from soil?	No, they make glucose through photosynthesis.

Question	Answer
Why is photosynthesis important for humans?	It produces oxygen and supports food chains.

9. Quiz

Questions

1. What is photosynthesis?
2. Name three things plants need for photosynthesis.
3. What is the role of chlorophyll?
4. What food is made during photosynthesis?
5. Why is photosynthesis important for humans and animals?

Answer Key

1. Photosynthesis is the process by which green plants make their own food using sunlight.
2. Plants need sunlight, water, and carbon dioxide. They also need chlorophyll to absorb sunlight.
3. Chlorophyll absorbs sunlight.
4. The food made is glucose.
5. Photosynthesis produces oxygen and helps plants make food, which supports life on Earth.

10. 7-Day Revision Plan

Day	Task
Day 1	Read the simple explanation and underline the key words.
Day 2	Learn the meaning of photosynthesis, chlorophyll, glucose, carbon dioxide, and oxygen.
Day 3	Draw and label the photosynthesis diagram.
Day 4	Review the common mistakes table.
Day 5	Test yourself using the flashcards.
Day 6	Answer the quiz without looking at the answers.
Day 7	Explain photosynthesis to a friend or family member in your own words.

Part B: AI Process Notebook

B1. Topic Brief

I chose the topic 'Photosynthesis' because it is an important topic in Grade 8 Biology. Many students find it difficult because they confuse the role of sunlight, water, carbon dioxide, oxygen, glucose, and chlorophyll. Some students also think plants get all their food from the soil. My mini textbook is written for Grade 8 students. By the end, students should understand how green plants make their own food and why photosynthesis is important for life.

B2. Source List

Source name	Type	How I used it
Grade 8 Science textbook section on photosynthesis	Textbook / class source	Used for the main definition and key terms.
Teacher notes on photosynthesis	Teacher guidance	Used to identify the important vocabulary: sunlight, water, carbon dioxide, chlorophyll, glucose, and oxygen.
Khan Academy or Britannica explanation of photosynthesis	Trusted learning source	Used to check the basic explanation and avoid incorrect claims.

B3. Required Prompt Log

#	My prompt	What AI gave me	What I changed next
1	Explain photosynthesis.	AI gave a general answer with some advanced words.	I realized the prompt was too weak and not written for Grade 8.
2	I am a Grade 8 student. Explain photosynthesis in simple words using sunlight, water, carbon dioxide, chlorophyll, glucose, and oxygen.	AI gave a clearer explanation using the correct key words.	I decided to add my textbook and teacher notes as context.
3	Use these named sources first: my Grade 8 textbook section and my teacher notes. If you add extra information, label it as extra.	AI focused more on the textbook vocabulary and avoided advanced details.	I asked for outline options before writing the chapter.
4	Give me 3 different ways to explain photosynthesis to a Grade 8 student. Do not write the full chapter yet. For each option, give a title, structure, strengths, and weaknesses.	AI gave three options: recipe analogy, factory analogy, and diagram-first explanation.	I chose the recipe analogy because photosynthesis is like using ingredients to make food.
5	I choose the recipe analogy because it is easy to understand. I	AI gave three better outlines with key terms,	I selected the outline that included a diagram and common mistakes.

#	My prompt	What AI gave me	What I changed next
	reject the factory analogy because it may feel too complex. Revise the outline into 3 improved versions.	common mistakes, flashcards, and quiz.	
6	Read my notes and chosen outline carefully. Think hard about clarity, accuracy, and age-fit. Build the full mini textbook chapter for Grade 8 students.	AI created a full first draft of the mini textbook.	I asked AI to score the draft using a rubric.
7	Grade the chapter from 1-10 on clarity, accuracy, age-fit, and usefulness for revision. Justify each score in one sentence. Then tell me the smallest edit that would raise each score the most.	AI scored clarity 8, accuracy 8, age-fit 9, usefulness 8.	I improved the diagram idea and made the common mistakes section clearer.
8	List 6 to 10 important factual claims in the chapter. Mark each claim as supported by my notes, supported by a named source, needs checking, or unsupported. Do not pretend you verified something if you did not.	AI listed claims about sunlight, chlorophyll, glucose, oxygen, water, and carbon dioxide.	I checked the claims against my textbook and corrected unclear wording.

B4. Rubric Scoring Table

Criterion	AI score 1-10	AI reason	Smallest edit to improve it	My decision
Clarity	8	The explanation is clear, but the process could be easier to remember.	Add a simple equation and diagram idea.	Accepted. I added both.
Accuracy	8	The main facts are correct, but the role of soil could be clearer.	Explain that plants get water and minerals from soil, but make glucose in leaves.	Accepted. I added this in common mistakes.
Age-fit	9	The language is suitable for Grade 8.	Keep paragraphs short and avoid advanced chemistry.	Accepted.
Usefulness for revision	8	The chapter is useful, but revision tools would improve it.	Add flashcards and a 7-day revision plan.	Accepted. I added both.

B5. Checking Table

AI statement	My decision	Evidence / reason	Correction if needed
Photosynthesis is how green plants make food.	Accept	Matches textbook and teacher notes.	No correction needed.
Plants need sunlight for photosynthesis.	Accept	Matches textbook explanation.	No correction needed.
Chlorophyll helps absorb sunlight.	Accept	Matches teacher notes.	No correction needed.
Plants take in carbon dioxide during photosynthesis.	Accept	Matches textbook and trusted learning source.	No correction needed.
Plants release oxygen during photosynthesis.	Accept	Matches textbook explanation.	No correction needed.
Glucose is the food made by plants.	Accept	Matches class notes.	No correction needed.
Plants get all their food from the soil.	Reject	Teacher notes say plants make glucose in leaves.	Corrected to: plants get water and minerals from soil, but make glucose during photosynthesis.
Photosynthesis mostly happens in the roots.	Reject	Textbook says photosynthesis mainly happens in leaves.	Corrected to: photosynthesis mostly happens in leaves.

B6. Reflection

AI helped me understand photosynthesis by explaining it in simple language and organizing the topic into key terms, examples, common mistakes, flashcards, and a quiz. My first prompt was too weak because it only asked 'Explain photosynthesis,' so the answer was general and not made for my class level. The best prompt was the one where I gave AI my grade level, textbook context, teacher vocabulary, and asked for a full mini textbook chapter.

AI helped me create a clear structure, but I still had to check the facts. One important correction was that plants do not get all their food from soil. They get water and minerals from soil, but they make glucose in their leaves during photosynthesis. Next time I use AI, I will give it my class notes first, ask for different outline options, and check important claims before using the final answer.

Final Reminder: This is only a sample. Students should not copy this project as their own work. Each student must choose a topic, use their own sources, show their own prompts, check facts, and write their own reflection.