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Ask AI Better Coding Questions

AI + Coding Starter Kit | Student Tool | Students

Purpose: I can explain what each important part of my code does.

Standards summary: This resource may support Tennessee Computer Science Foundations standards when used as part of AI literacy, computer science, programming, digital ethics, or cybersecurity instruction. Detailed standards connection appears at the end of this document.

Need	Better Coding Prompt
Understanding Code	Explain what this Python code does line by line like I am a beginner.
Debugging	Explain what this error means and point me to the line I should inspect first.
Hint First	Give me one hint that helps me find the bug without giving me the full answer.
Logic Check	Ask me questions that help me check whether my logic matches the goal.
Practice	Give me a similar problem so I can practice this concept on my own.
Reflection	Ask me three questions to check whether I really understand this code.

Before I Submit Coding Work

I can explain what each important part of my code does.

I can identify what AI helped me understand.

I tested the code or traced the logic.

I made the final decisions myself.

My work follows the teacher's directions for AI use.

Quick Reflection

One thing AI helped me understand: _____

One part of the code I still need to practice: _____

One way I verified my work: _____

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Detailed Tennessee Standards Connection

This handout supports standards when students ask better programming and debugging questions, explain code behavior, and use AI ethically as a learning support.

Standards source: Tennessee Department of Education, Computer Science Foundations (C10H11), May 2023. Confirm final alignment against local district pacing, approved course placement, and teacher directions.

This resource may support the following Tennessee standards when used as part of AI literacy, computer science, programming, digital ethics, or cybersecurity instruction:

- CSF 9.2 - Troubleshooting Process: Students use a structured process to identify a problem, gather information, isolate causes, test a solution, verify the result, and document what they learned.
- CSF 13.1 - Social, Legal, and Ethical Issues: Students identify responsibilities related to ethical technology use, academic integrity, copyright, appropriate AI use, and responsible programming support.
- CSF 16.1 - Programming Language: Students explore programming languages such as Python and explain how programmers use them to solve a variety of IT problems.

Main Idea

Good coding questions help you understand the program. Weak coding questions may get you finished faster but leave you unable to explain the code.

Use AI Like a Coding Coach

Ask AI to explain code line by line.

Ask AI to explain an error message in beginner-friendly language.

Ask AI what part of the code you should inspect first.

Ask AI for a hint before asking for a fix.

Ask AI for a similar practice problem after you understand the fix.

Ask AI to quiz you on what the code does.

Avoid Code Replacement Prompts

Do not ask AI to complete the whole assignment.

Do not submit code you cannot explain.

Do not paste private information, login credentials, or student data into AI tools.

Do not let AI rewrite your project so much that it no longer reflects your work.

Prompt Bank

Cautious guidance: Alignment depends on local district pacing, approved course placement, teacher directions, and how the resource is used as part of instruction.