

Helping Students Use AI to Check Their Own Understanding

Students can use AI as a practice partner to test their own understanding when a teacher isn't available or when the teacher is encouraging independence through routines like "three before me." The prompts below show how to build effective questions across grade levels and subjects, helping students check their thinking, get feedback, and go deeper into a topic.

Prompting Basics

Different grade levels may benefit from age-appropriate versions:

- **Elementary (Grades 3–5)**
 - **Topic:** Say what it's about. *Example: "Plants."*
 - **Details:** Add a few things that matter. *Example: "We're learning how they grow in science class."*
 - **Task:** Say what you want the AI to do. *Example: "Quiz me about the parts of a plant."*
 - **Limits:** Give boundaries like length or format. *Examples: "Ask me 3 questions only." or "Ask me elementary school level questions."*

- **Middle School (Grades 6–8)**
 - **Subject:** State the topic. *Example: "The Civil War."*
 - **Context:** Add details like class or test prep. *Example: "For an 8th grade history test."*
 - **Intent:** Say whether you want a quiz, evaluation, or challenge. *Example: "Quiz me."*
 - **Constraints:** Set limits like number of questions or length. *Example: "5 questions only."*

- **High School (Grades 9–12)**
 - **Subject:** Name the specific focus (topic, concept, or skill). *Example: "Digital photography techniques."*
 - **Context:** Add class level or type of assignment. *Example: "High school visual arts project."*
 - **Intent:** Ask for evaluation, feedback, or structured reasoning. *Example: "Evaluate my photo and explanation of how lighting affects composition."*
 - **Constraints:** Set precise boundaries like format, word count, or style. *Example: "Give feedback in under 200 words and suggest one improvement I could try in my next photo."*
 - **Prompt:** *"I will upload a photo I took to show a photography concept (such as lighting or perspective) and write a short explanation of what I was trying to do. After I respond, give me feedback on whether my photo and explanation demonstrate the concept clearly, identify one strength and one area for improvement, and suggest a practical adjustment I could try in my next photo. If the platform allows, I will provide the photo as an attachment or link."*

(example prompts on next page)

Prompt Examples

Prompt Example 1: Math – Fractions with Work Shown

- **Subject:** Simplifying fractions
- **Context:** Practicing 5th grade math homework
- **Intent:** Evaluate my process using both my answer and my written work
- **Constraints:** Provide the fraction problem first, then review my screenshot and final answer
- **Prompt:** *"Give me a fraction to simplify. After I provide my answer and upload a screenshot of my work (as an image or file link, if the platform allows), check whether my solution is correct and if each step is valid. If I made an error, show me exactly where and explain the correct reasoning."*

Prompt Example 2: Science – Water Cycle

- **Subject:** The water cycle
- **Context:** Middle school science
- **Intent:** Evaluate my depth of understanding
- **Constraints:** Do not explain the water cycle yourself; only check my explanation
- **Prompt:** *"I will write my explanation of the water cycle in my own words. After I respond, evaluate how complete and accurate it is, identify any major gaps, and then give me two follow-up questions that would test deeper understanding."*

Prompt Example 3: Literature – Theme Analysis with Evidence

- **Subject:** Classical literature
- **Context:** High school AP English class
- **Intent:** Evaluate the strength of my evidence and reasoning
- **Constraints:** Keep the task structured to one theme at a time and require me to supply cited evidence
- **Prompt:** *"I'm reading ___(title) by ___(author). Search for defensible themes in this text and present one at a time. I will provide 3–5 examples with page or line numbers that support the theme. After I respond, evaluate how well my examples fit, point out gaps or misreadings, and suggest one additional example. Finally, ask me to convert one of my examples into claim–evidence–warrant format so you can evaluate the strength and accuracy of my argument and ask me if I would like to start over with a different theme."*