

Critical Thinking Activities for the Age of AI

13 hands-on exercises based on Ennis's (2015) CT framework

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Activity	CT Skills	What Students Do	How to Run It
1 Push-Back Protocol	Analyze arguments, Evaluate assumptions, Ask clarification questions	Challenge AI output through structured questioning, demanding evidence and spotting gaps.	Prompt AI with a discipline question. Identify claims, then challenge each for evidence, assumptions, and missing perspectives.
2 Hallucination Detective	Judge source credibility, Recognize fallacies	Fact-check AI text filled with fabricated citations, wrong dates, and made-up statistics.	Present the Schwartz lawyer case. Distribute AI text with hallucinations. Students verify claims against reliable databases.
3 Human vs. AI Blind Comparison	Analyze arguments, Judge source credibility, Handle ambiguity	Read two unlabeled essays (one human, one AI) and identify which is which.	Prepare two essays on the same topic without labels. Students read, guess, document reasoning, then discuss distinguishing patterns.
4 AI Output Audit with Rubric	All six CT skills	Score AI text across all six CT standards using a structured rubric (Weak/Moderate/Strong).	Distribute AI text. Students score individually, compare in pairs, discuss disagreements, and identify AI strengths and blind spots.
5 Text Annotation Exercise	Analyze arguments, Evaluate assumptions, Recognize fallacies	Annotate AI text marking errors, unsupported claims, and hidden assumptions, then propose fixes.	Provide an AI essay. Students highlight issues by category and create a table: Original Text, Problem, Proposed Fix.
6 Google vs. ChatGPT Side-by-Side	Judge source credibility, Handle ambiguity	Search the same question on Google and ChatGPT, then compare verifiability and sources.	Pick a factual question. Search on Google and ChatGPT. Compare source counts, verifiability, and discuss convenience vs. credibility.
7 The Pricing Exercise	Evaluate assumptions, Judge source credibility, Ask clarification questions	Run a vague prompt, evaluate AI's confident but context-free answer, then rewrite with context.	Present scenario: "How should I price my business?" with no context. Students run vague prompts, evaluate, rewrite with constraints, compare.
8 Socratic Questioning with AI	Ask clarification questions, Analyze arguments, Evaluate assumptions	Ask a chatbot probing follow-ups across multiple rounds, tracking how its answers shift.	Ask ChatGPT a question. Follow up: "What evidence?" "What assumptions?" "What's missing?" Document how each round reveals gaps.
9 AI Debate / Multiple Perspectives	Analyze arguments, Handle ambiguity, Recognize fallacies	Fact-check and strengthen AI-generated arguments on both sides of a debatable topic.	Prompt ChatGPT FOR and AGAINST a topic. Give each side to a group. Groups fact-check, add evidence, then present and discuss.
10 Assignment Redesign Workshop	All six CT skills (applied to pedagogy)	Break down an existing assignment and redesign it with transparent AI guidance at each stage.	Bring one assignment. Break into steps. For each: Where is AI useful? Where restricted? Redesign with clear guidance. Get peer feedback.
11 Prompt Engineering for Quality	Ask clarification questions, Handle ambiguity	Compare outputs from vague vs. refined prompts to learn why specificity matters.	Show vague prompt + output, then refined prompt + output. Students write their own improved prompts and test live on ChatGPT.
12 Funhouse Mirror	Handle ambiguity, Evaluate assumptions, Recognize fallacies	Ask AI to explain your expert topic, then identify distortions, oversimplifications, and gaps.	Choose your area of expertise. Ask ChatGPT to explain it. Identify what's accurate, distorted, or missing. Discuss implications.
13 Critical Evaluation Checklist (The Reveal)	All six CT skills	Evaluate a text presented as a "student submission," then discover it was AI-generated.	Distribute AI text labeled as student work. Evaluate with a checklist. Reveal the AI source. Discuss: Did knowing change your assessment?