

## Education & Learning

Generate low-stakes retrieval practice quizzes with plausible distractors, answer explanations, and adaptive follow-ups based on learner performance patterns.

Difficulty: Intermediate

Model: GPT-4 / Claude / Gemini

Use Case: Test Preparation, Spaced Repetition, Formative Assessment

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Why This Prompt Exists

Most AI-generated quizzes fail because they test recognition instead of recall.

You get:

- questions with obvious distractors
- no explanation of why wrong answers are tempting
- no connection to previously learned material
- no adaptation to learner struggle patterns
- quizzes that feel like busywork, not learning

But retrieval practice is not assessment.

It is a learning mechanism.

- The struggle to recall strengthens memory more than restudying
- Plausible distractors reveal where thinking goes wrong
- Explanations are the real learning event
- Connecting new questions to old material builds durable knowledge

Without retrieval psychology, quizzes become measurement without growth.

This framework forces AI to think like a cognitive scientist designing desirable difficulty.

## The Prompt

Assume the role of a cognitive psychologist specializing in retrieval practice, desirable difficulty, and spaced repetition.

Your task is to generate a low-stakes quiz that strengthens memory through active recall.

Before generating, analyze:

- the key concepts most likely to be forgotten
- plausible misconceptions that could surface as wrong answers
- connections to prior material in the learning sequence
- appropriate difficulty level for the learner

Then generate:

1. A quiz with three question types:

- 3 multiple choice questions (with plausible distractors)
- 2 short answer questions
- 1 "explain it to a peer" question

2. For each question after the learner answers:

- Correct answer
- Why each distractor is wrong but tempting
- One follow-up question connecting this to a previously learned concept

3. A performance tracker that notes which question types the learner struggles with

## INPUTS:

Topic:

[INSERT TOPIC]

Difficulty Level:

[BEGINNER / INTERMEDIATE / ADVANCED]

Previous Topics Covered (for connection questions):

[INSERT LIST OR "NONE"]

Question Style Preference:

[STANDARD / SCENARIO-BASED / APPLICATION-FOCUSED]

Number of Questions:

[5 / 10 / 15]

## RULES:

- Multiple choice distractors must be plausible, not silly
- Short answer questions cannot be answered with one word
- The "explain to a peer" question requires a full sentence
- Follow-up questions must reference actual prior material
- Track performance to adapt future quizzes

## How To Use It

- Administer quizzes 24-48 hours after initial learning, not immediately.
- The explanation of distractors is more valuable than the correct answer — spend time here.
- If a learner struggles with short answer but nails multiple choice, they have

recognition without recall.

- Use the performance tracker to adjust spacing (struggled = revisit sooner).
- Low stakes means no grading — the quiz is a learning event, not an evaluation.

Example Input

**Topic:** The French Revolution (causes and early phases)

**Difficulty Level:** Intermediate

**Previous Topics Covered:** The Enlightenment, The Old Regime, Estate system

**Question Style Preference:** Scenario-based

**Number of Questions:** 6

Why It Works

Most quizzes fail because they confuse recognition with learning.

This framework improves outcomes by forcing:

- plausible distractors that reveal thinking patterns
- explanations as the learning event
- connections to prior material (spacing)
- performance tracking for adaptive spacing
- desirable difficulty without frustration

Great quizzes don't just measure what you know — they change what you'll remember tomorrow.

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