

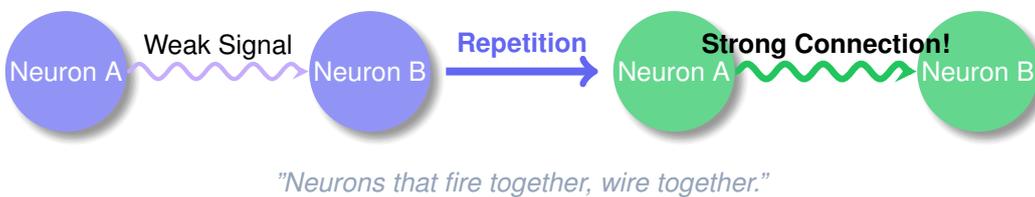


# Study Techniques Guide

Neuroscience-Backed Methods for Effective Learning

## 💡 How Your Brain Learns

Learning isn't just "absorbing" facts—it's a biological process of strengthening connections (synapses) between neurons. Repeated activation of a neural pathway makes it stronger, faster, and more efficient. This process is called **Long-Term Potentiation (LTP)**.



### Key Insight

Passive review (highlighting) creates weak paths. **Active recall** creates strong ones.

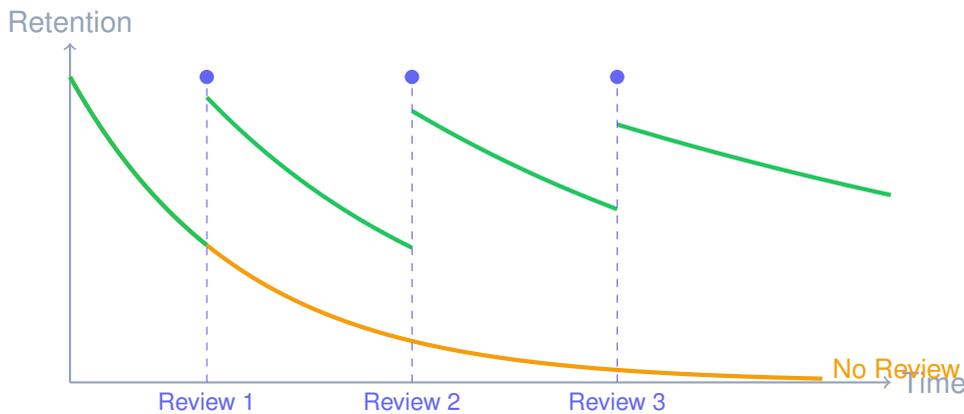
## 🔄 Technique 1: Active Recall

Most students study by reading their notes. This is low-effort and low-retention. **Active Recall** means forcing your brain to *retrieve* information from scratch.

- 📖 **The Book-Close Method:** Read a paragraph, close the book, and write down everything you remember. Check what you missed.
- 📇 **Flashcards (The Right Way):** Use Anki or Quizlet. Be honest—if you don't know it, mark it as "Again".
- 🗣️ **The Feynman Technique:** Explain a concept aloud in simple terms, as if teaching a 12-year-old. When you get stuck, that's your knowledge gap.

## 📅 Technique 2: Spaced Repetition

You naturally forget 50% of what you learn within 24 hours. This is the **Forgetting Curve**. By spacing out your reviews, you reset the curve and lock information into long-term memory.



**Optimal Schedule:** Day 1 (Learn) → Day 2 (Review) → Day 7 (Review) → Day 30 (Review).

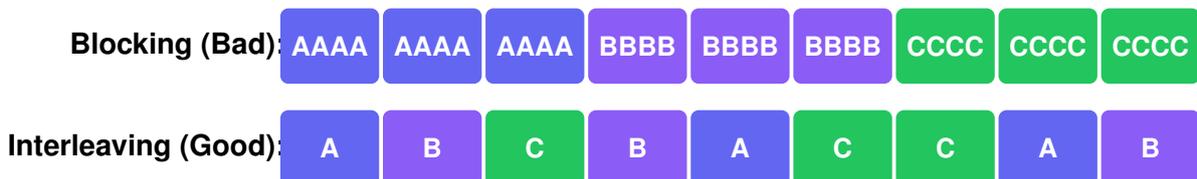
## 🕒 Technique 3: The Pomodoro Method

Focus is a finite resource. Working for hours without breaks leads to cognitive fatigue.



## 🔄 Technique 4: Interleaving

Don't "block practice" (doing one type of problem for hours). **Interleave** (mix) them up.



*Why? It forces you to choose the right strategy, not just execute it mechanically.*