METHOD SHEET · DEEP UNDERSTANDING

The Feynman technique

If you cannot explain it simply, you have not understood it

THE ESSENTIALS

The Feynman technique, named after the physicist Richard Feynman, checks your understanding by explaining a concept in plain words, as if to someone who knows nothing about it. It has four steps: pick the concept, explain it out loud without jargon, spot where the explanation stalls and go back to the course on those precise points, then rephrase it using an analogy. It is one of the fastest and most merciless comprehension tests there is.

- Four steps: pick, explain simply, spot the gaps, simplify.
- Jargon is banned: every technical term must be replaced with everyday words.
- Wherever the explanation hesitates is exactly the part of the course to rework.
- Ideal before an oral exam or a test on concepts.

The principles

1. Pick the concept
Write its name at the top of a blank page. One concept at a time: "the derivative", "the Krebs cycle", "the separation of powers".

2. Explain it as if to a child
Write or say the full explanation in plain words, without copying the course and without technical terms. As soon as a learned word appears, it must be translated.

3. Spot the gaps and go back
Hesitations, vague phrasing and "basically it's…" mark precisely what is not understood. Go back to the course on those points only, not the whole chapter.

4. Simplify and find an analogy
Rewrite the explanation more briefly, then look for an accurate comparison. A good analogy proves the structure of the concept is understood.

Example — An example: explaining the derivative without jargon

A student often recites "the derivative is the limit of the rate of change" without knowing what that means. Here is what the technique produces.

1. First attempt: "it's the limit of the rate of change as h tends to zero". Verdict: recited jargon, no understanding proven.
2. Forced translation: "it's the speed at which a quantity changes at a given instant".
3. Gap spotted: the student cannot say why h is made to tend to zero. That is where we go back to the course, five minutes, on that single point.
4. Final analogy: "a car's speedometer displays the derivative of the distance travelled". The concept is then available for an exercise — and for an oral exam.

How it is used in lessons

The student teaches, the teacher listens
Part of the lesson is reversed: the student explains at the board. It is the fastest diagnosis there is, and often the moment they finally understand what they thought they knew.

Preparing oral exams

Examiners penalise recited jargon. Forcing the candidate to explain without technical vocabulary, then to reintroduce the exact terms, produces a clear and solid oral.

Independent revision between lessons
The student records themselves explaining a concept, then listens back. The hesitations give the exact list of what still needs reviewing.

Concept-heavy subjects
Philosophy, biology, economics and social sciences, physics: anywhere a memorised definition can hide a complete misunderstanding.

Who is it for?

- Students who "know their notes" but collapse as soon as the question is rephrased.
- Candidates for oral exams and competitive interviews.
- University and preparatory-class students facing abstract concepts.
- Adults who must master a subject in order to present it.

Its limits, honestly

- It checks understanding, it does not create knowledge: you must have studied the course first.
- It does not remove the need to learn facts, dates and formulas.
- Alone, you easily forgive your own approximations: the exercise is worth most with a listener — or a recording.
- Over a whole chapter it is time-consuming: keep it for the key concepts and the stubborn ones.

Frequently asked questions

What are the four steps of the Feynman technique?
Pick a concept and write its name on a blank page; explain it fully in plain words, without jargon and without copying the course; spot where the explanation hesitates and go back to the course on those points only; finally rephrase it more briefly and find an accurate analogy.

Why does explaining a course help you understand it?
Because explaining forces you to rebuild the concept instead of merely recognising it. A reread course feels familiar; an explained course immediately reveals the missing links. It is a comprehension test and, at the same time, a session of retrieval practice — the most effective memorisation technique measured by research.

Is the Feynman technique useful for oral exams?
Yes, it is one of the best preparation tools. Examiners instantly spot recited jargon. Forcing the candidate to explain everything without technical vocabulary, then to reintroduce the exact terms, produces a clear, steady presentation that holds up under questions.

Can you use the Feynman technique on your own?
Yes, provided you record yourself or write the explanation down: spoken and untraced, you forgive your own approximations. The exercise remains more effective with a listener who pushes back as soon as the explanation becomes vague.