

# The Feynman Technique : 4 Simple Steps To Learning Anything

*If you want to understand something well...explain it simply.*

Richard Feynman (1918-1988) was a world renowned Nobel Prize winning physicist and one of the greatest minds of our time. He was particularly well known for his contributions to quantum physics, quantum electrodynamics and particle physics, as well as quantum computing and nanotechnology.

He played an active role in the “Manhattan Project”, the wartime US Army project to develop an atomic bomb. Feynman also played a pivotal role in The “Rogers Commission” investigation of the 1986 Challenger space shuttle disaster.

Whilst teaching at Cornell and Caltech Feynman gained a reputation for his ability to explain complex elements of theoretical physics in an easily understandable way to his students and was sometimes referred to as “*The Great Explainer*”.

His long term friend Marvin Minsky once said of him:

*“When Feynman faces a problem, he's unusually good at going back to being like a child, ignoring what everyone else thinks...he was so unstuck – if something didn't work, he'd look at it another way”*

It's this concept of breaking down a problem into it's simplest (*almost child like*) form that is the basis for the Feynman technique of learning and was derived from Feynmans own study methods he used when attending Princeton University eventually earning his doctorate in Physics.

When you breakdown a subject into language that a child can understand you force yourself to understand the subject at a deeper level and simplify relationships between different ideas.

If you can teach a concept to a child you can teach it to anyone.

Feynman used this method to ensure he understood anything he studied better than anyone else.

Even though this technique was used primarily to teach complex Physics and Math it can be applied to any subject matter that you want to learn

There are four simple stages to the technique:

## **Step 1:**

Grab a sheet of paper and write the name of the concept you want to learn at the top.

## **Step 2:**

On the same piece of paper explain the concept as if you were teaching it to a young child.

Focus on using plain, simple language that a 10 year old could understand.

Remove any and all complicated language and technical jargon.

The simpler the language you use the better.

**Step 3:**

Review your explanation and identify any knowledge gaps.

Where you find gaps in your understanding hit the books and fill in the gaps.

Once again using simple child like language.

**Step 4:**

Review your work one final time now that all knowledge gaps have been filled.

If there are any areas in your explanation where you've used any technical terms or complex language, challenge yourself to re-write these sections in simpler terms.

The reason for removing overly complicated vocabulary is due to what Feynman described as "*knowing versus understanding*". He describes this in one of his many interviews:

*"See that bird? It's a Brown Throated Thrush, but in Germany it's called a Halzenfugel, and in Chinese they call it a Chung Ling and even if you know all those names for it, you still know nothing about the bird. You only know something about people, what they call the bird. Now that thrush sings and teaches its young to fly and flies so many miles away during the summer across the country and nobody knows how it finds it way"*

Just because we know the words to describe a concept does not mean that we understand that concept fully. People often confuse data (*in this case complicated descriptors and names*) with knowledge. We often talk in fact deficient generalities to hide a lack of understanding.

Feynmans method can be used to quickly learn new concepts, fill knowledge gaps, recall ideas you don't want to forget or to study more efficiently.