

Feynman at 100



In his years at Caltech, Richard Feynman—theoretical physicist, Nobel laureate, famed lecturer, bongo player—made an outsized impression on all who came into contact with him. Here, a hundred years after his birth, is a selection of reflections on the multifaceted scientific genius from his Institute colleagues and friends, many drawn from the Caltech Archives Oral History Project.

Feynman *the thinker*

Feynman played a very key role [in understanding the collapse of supermassive stellar objects]. He bumped into me one day, and he says, “Willy, you know those supermassive objects that you and Fred have been working on are unstable. They’ll collapse, due to general relativity.” ... So, he actually then gave a lecture in one of his classes and Icko Iben, who was a postdoc with me at the time, was attending Dick’s classes. Icko immediately began making numerical solutions of the problems, using the Caltech computer, and convinced me that Dick was right. I began to put general relativity in, but only in terms of the next approximation after Newton, and found right away that Dick was right, that the damn things would collapse.

William A. Fowler (1911-1995), Professor of Physics; Nobel Laureate

You know how Richard Feynman was once recruited by the University of Chicago, which offered to double his salary or something like that. He was asked, “Why wouldn’t you leave Caltech and take this offer?” and I think—to paraphrase—he said, “At Caltech, if I moved a meter or two, I would be in collision with somebody who will excite my interest.”

Ahmed Zewail (1946-2016), Linus Pauling Professor of Chemistry and Professor of Physics; Nobel Laureate

In his own words

The first principle is that you must not fool yourself—and you are the easiest person to fool. So, you have to be very careful about that. After you’ve not fooled yourself, it’s easy not to fool other scientists. You just have to be honest in a conventional way after that.

Richard Feynman, 1974 Caltech Commencement Address

Feynman *the teacher*

Once I asked him to explain to me, so that I could understand it, why spin-1/2 particles obey Fermi-Dirac statistics. Gauging his audience perfectly, he said, “I’ll prepare a freshman lecture on it.” But a few days later he came to me and said: “You know, I couldn’t do it. I couldn’t reduce it to the freshman level. That means we really don’t understand it.”

David L. Goodstein, Frank J. Gilloon Distinguished Teaching and Service Professor, Emeritus; Professor of Physics and Applied Physics, Emeritus; *Physics Today*, February 1989

He showed up in his informal outfit, and I remember that 3,000 kids sat outside on this big grassy knoll around the science center. ... He talked for about 40 minutes, and they were fascinated. They didn’t move. They were all looking at him. Gee, whiz. He had a way.

Harry Gray, Arnold O. Beckman Professor of Chemistry, recalling an impromptu talk by Feynman outside the California Science Center

I had Dick Feynman for mathematical physics. I used to go around to all his seminars when I was an undergrad, even. I couldn’t understand any of the mathematics at all, but every once in a while, he’d stop and he’d say, “What this really means is...,” and I could understand that.

Carver Mead, Gordon and Betty Moore Professor of Engineering and Applied Science, Emeritus

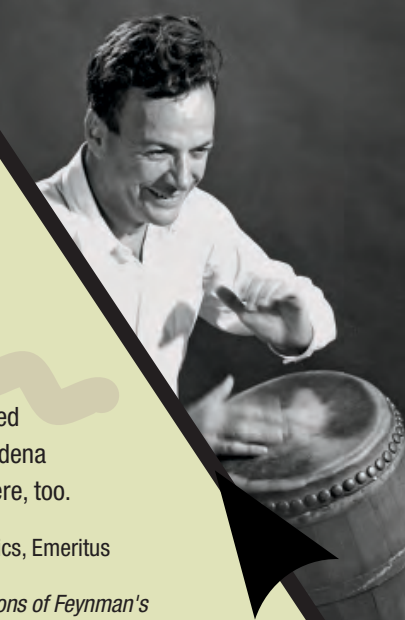
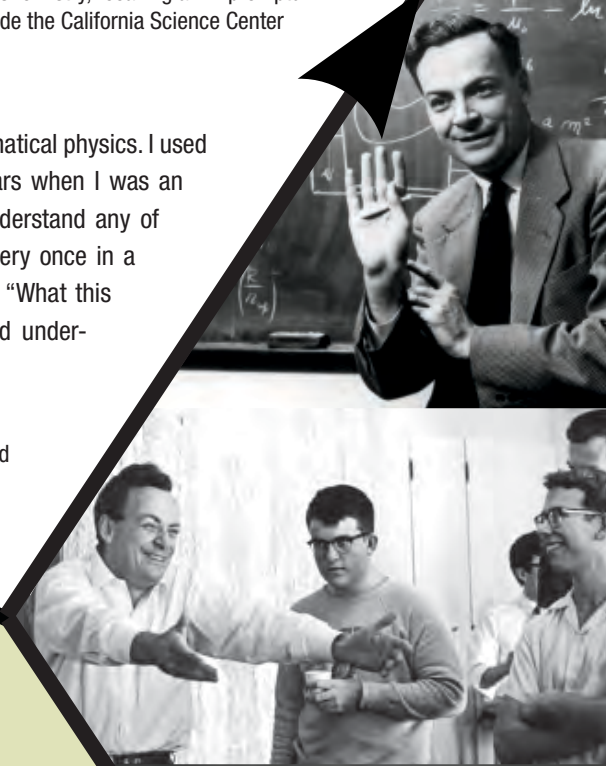
Feynman *the percussionist*

Feynman heard [my son] Ralph and his friends drumming at the other end of the house and, of course, he went in—he was more comfortable with kids anyway. He introduced himself and they invited him in to drum. And that led to rather regular drumming by Feynman, my son, and a couple of other drop-in friends. I myself was curious about Feynman’s drumming ability, so I asked Ralph one time, “Well, how good a drummer is Feynman?” He said, “Well, he picks up the rhythms all right, and he’s very fast but sometimes he has a hard time getting started. But for an old guy, he’s pretty good.” I informed Ralph that he had just spoken of the capabilities of possibly the one person in the world who knew more about how everything in the universe worked than anyone else on Earth at that moment.

Anyway, Ralph’s other musical friends gradually went off to college here and there, but Feynman and Ralph continued drumming together. The Feynmans would invite Ralph over to their home in Altadena quite often. He was teaching in Pasadena schools at the time. Sometime during this period the Feynmans bought a beach house in Baja, and they would drum there, too.

Robert Leighton (1919-1977), William L. Valentine Professor of Physics, Emeritus

Ralph Leighton is the co-author with Feynman of two collections of Feynman’s reminiscences: Surely You’re Joking, Mr. Feynman! (Adventures of a Curious Character) (Norton, 1985), and What Do You Care What Other People Think?: Further Adventures of a Curious Character (Norton, 1988).



Read more Feynman reminiscences at magazine.caltech.edu/post/feynman-at-100