In some cases, this effort has impelled Losick to move past the classroom entirely. When a few students, like Jillian Spangler '06, entered BS 52 with previous laboratory experience, Losick allowed them to skip the weekly course lab sections and do research, in his own laboratory, that generated new and valuable data. They were doing science, rather than simply learning it—all while getting to see what their professor did outside the lecture hall. “It gave me a very good chance to get to know him,” says Spangler, who plans to begin doctoral work in organic chemistry this fall at Princeton. “We became very good friends.”

She also took advantage of other research opportunities that Losick has helped to organize within the curriculum. Spangler enrolled for the inaugural semester of Molecular and Cellular Biology 100, a course Losick designed with Robert Lue, who is executive director of undergraduate education in molecular and cellular biology. MCB 100 is a course based entirely on research: students pick a topic that interests them and pursue it, in groups, as part of a larger faculty project. It’s an opportunity many might not otherwise see until graduate school. Unlike a graduate research track, though, MCB 100 offers an overview of several different projects; each group shares its progress with the class as a whole. Students make their own schedules and conduct most of their work in Harvard’s teaching laboratories, newly renovated and equipped with a combination of University and HHMI funds. The students learn, in effect, how to teach themselves science.

Losick’s program for disadvantaged students rests at the point where this new pedagogy meets the world outside Harvard’s gates. He actively recruits freshmen every fall, drawing a list of possible candidates from the College admissions office and identifying students who are interested in science but have performed poorly on their placement exams. He advertises the