



BILLY HILTON

“The skills students learn through the labs are tangible and practical skills that industry professionals use daily. For example, a workshop with Genentech scientists shared the lab skills they use at their daily job.”

Billy Hilton has been teaching science at a continuation school in Pleasanton, California for five years now, and each year he thinks about what else he can bring to his students that is new and different. After teaching physical and life science for a few years, two courses that are required for students to graduate, Billy was excited to add a biotech elective last year. Biotech was something he had been interested in and when he heard about Futurelab+ from a friend, it felt like the perfect opportunity.

This is Billy's second year using the Futurelab+ curriculum and professional learning tools since he was a part of the program in its pilot year. What brought him back for a second year? The simple fact that his students genuinely liked the lessons and he liked the support.

A Different Kind of Science Class

Compared to a typical high school biology course, Billy says his students find the [Futurelab+ lessons](#) to be refreshing, thought provoking, and modern. “It isn't like your traditional biology

or even biotech class. The curriculum's content all ties back to overarching storylines. Students learn about topics, real examples (case studies), and emerging technologies in the biotech field. The content is evolving and the questions that it brings up, there are new answers to them regularly,” he says.

Engaging Students in Bioethics Discussions

Billy recently completed the lesson where students look at the gene-editing tool, CRISPR, and discuss the controversial topic of modifying human embryos. In other words, editing an individual's DNA to eliminate certain genetic diseases, increase resistance to other diseases, and even select for specific traits like eye color and intelligence level. He said the students were enthralled to think about such a big scientific and ethical matter that society will have to make a decision on at some point.

Billy's students tell him about discussions they have with their friends about what

they are learning in his class, getting friends to open their minds about GMOs for example. His students referenced case studies they looked at in class – like the one about golden rice and its potential to help with Vitamin A deficiency, or the one about the rainbow papaya that helped save Hawaii's papaya industry—to help their friends see the possible benefits to genetic engineering technology. The students see how the lessons apply to the real world and they're hooked. And from Billy's perspective the students are learning skills they can do something with after high school. “We had one workshop where one of the scientists of Genentech shared their lab skills that they use on the regular, and when I shared that with my students, they were like, ‘oh yeah, I know what that is.’” The skills students are learning through the labs are tangible and practical skills that industry professionals use daily.

Continued

