I grew up in North Carolina, into a family of teachers. In a home where stories of classroom triumphs and challenges were dinnertime conversation, I witnessed the passion that went into teaching. It's no surprise that I felt drawn to teach as well.

I found my first experiences in the role of a teacher as an undergraduate student by tutoring students in molecular biology and organizing study groups for science courses. From these experiences I discovered that the best way to learn was to teach. To this day, I encourage my students to do the same: to form groups and study by explaining to each other the concepts of the course. By doing so, the limits of understanding become clear and learning is accelerated. It was also as an undergraduate student that I developed as a classroom instructor. During my junior year, I was selected as a co-founder of an organization to visit classrooms and teach about mental health resources available to university students. This taught me to create lesson plans and how valuable metaphors and humor are for creating engaging instruction. Learning is easiest when both the material and instructor are relatable.

These experiences proved valuable as a graduate student where I continued my journey to grow as teacher. Though I had fellowships and research assistantships available for the duration of my time in graduate school, I elected to postpone this support for a semester so that I could focus on teaching. I was fortunate to obtain a teaching assistant position for a senior level genetics course which offered the autonomy to develop my own lectures and practicums. Here I observed the effectiveness of connecting fundamental genetic concepts with real life topics, such as gene editing in crops, to inspire student's interest. I also hoped to instill a sense of responsibility at a time when genetic literacy is needed more than ever. These discussions saw input from students who might shy away from more technical topics, resulting in more engaged classrooms that ultimately facilitated the learning of key course material as well.

"Seek first to understand, then to be understood," wrote Steven Covey on leadership. I believe that this habit is also the starting point for excellent teaching. In the classroom, I apply this principle by beginning the semester with a questionnaire asking students to describe their background, goals, and interest in genetics. Later in the semester, another questionnaire is used for the students to provide feedback on my teaching approaches and to identify the concepts that students are struggling with. This practice reinforces the two-way nature of effective learning and allows me to personalize my teaching. At a finer scale, this principle is applied to addressing individual student questions, by first asking students to explain what they already know. By shaping my teaching approaches based on an understanding of my students, I am able to better ensure that the concepts of the course are understood in turn.

As a mentor, the principle of seeking first to understand is just as important. I was fortunate to experience this first hand as a mentee. When I met my PhD advisor John McKay for the first time, he began the conversation with an age-old question, "So, what do you want to be when you grow up?" I wanted to be a research professor and I knew that developing from a mentee into a mentor was an important part of my growth as a scientist. So, as I progressed through graduate school, I took note of my advisor's mentorship style. I realized that by trying to understand my goals, strengths, and interests, this opening question reflected a broader philosophy of mentorship based on seeking first to understand me that ultimately fostered my success and independence. In turn, I was a productive member of the lab. It is a win-win approach to mentorship and influences how I approach mentorship of students today.

By applying the principle of seeking first to understand my mentees, it has been immensely fulfilling to see them thrive, going on to earn authorship and awards for their successes.

Genomics is an accelerating field. Preparing students with the knowledge they need to be successful requires a variety of methods. I believe the use of technology can be a valuable tool. A striking image can inspire interest and a well-designed figure or video can make a complex point crystal clear. However, at other times I like the pace of teaching using a chalkboard and find it to be a perfect medium to articulate sequential molecular processes. Students who go on to be successful scientists will not be those that simply memorized a series of facts. Rather they are those who understand concepts deeply and can apply their knowledge in combination with critical thinking to address unforeseen problems. Therefore, to evaluate students, I believe the best questions are not the ones to which the answer can be known, but rather the ones to which the answer must be figured out. And the best teaching should prepare students to answer such questions.

I believe the best way to teach scientific material is through the scientific method. The history of science is fascinating. Every advance can be traced to an experiment performed by an eccentric cast of characters. The stories of these discoveries provide compelling narratives that make learning more interesting. By teaching science through these stories, students learn not only the "facts" but also how they were found through the scientific method. Critical thinking and reasoning are employed so that students are not asked to simply believe the information presented in their textbook. In a way, they get to experience the thrill of discovery for themselves. Whenever possible, implementing the scientific method directly in the classroom with hands-on learning is even better. At UC Davis I would love to teach a course called "Functional Plant Genomics," where students learn fundamental concepts of functional genomics including the molecular basis of epistasis and pleiotropy in experiments carried out by small groups using *Arabidopsis* knockout lines.

In addition to teaching scientific knowledge and cultivating critical thinking, I believe empowering students with practical skills is essential to their long-term success. It wasn't until years into graduate school and after teaching myself to code that I looked back on my experience as an undergraduate biology student and realized how peculiar it was that I never had to write a single line of code for a course. In my experience, data management and analyses are essential parts of science and coding teaches logic that is applicable across disciplines. And as an assistant instructor for Software Carpentry, I taught graduate students and post docs fundamental coding skills and saw first-hand how fun the process can be. At UC Davis, I would love to teach a course called "Practical Computing for Biologists," which teaches students not only how to code but *how to learn* to code for long term success.