Enriching Student Learning Through Cross-Disciplinary Collaboration

It's Friday afternoon, the last period of the last day before our week-long February break. Twelve students sit facing each other in the center of my classroom, their desks arranged in a circle. The other 13 students in the class sit in a larger circle around the outside, taking notes on particular facets of the conversation that I assigned them to monitor. Only one student is absent; he will be in Mexico with his family for the next two weeks.

For the past 11 minutes, the students in the center circle have been discussing the extent to which they feel that genetically-modified crops should be regulated. They ask each other questions that they prepared before coming to class today, and they support their claims with evidence from the documents that they have analyzed over the past two class periods.

Andrea pulls an Odwalla juice bottle out of her backpack and addresses the group. "I was drinking this at lunch today, and I noticed that it says 'GMO-free' on the label. That made me wonder, how much do you guys care if your food is GMO-free? Do you think you would go out of your way to buy foods that weren't made with genetically-modified ingredients?"

Sitting in a desk toward a back corner of the classroom, I smile and make a note about Andrea's question on my grading sheet. Posing questions to the group is part of the requirements for participation, but I'm so impressed with the connection she just made.

"To me, it doesn't matter if my food is made with genetically-modified plants," Jocelyn says, flipping to the third page of her document packet. "According to

Document C, scientists have found from multiple studies that genetically-modified foods are no more likely to cause allergies or health problems than regular foods."

I left school that day feeling prouder and more fulfilled than I had ever felt at the end of a long week of teaching. But the success of this Socratic seminar does not belong to these 25 students alone, and it certainly doesn't belong to me. This triumphant moment in my classroom resulted from teachers at my school working together across departments to achieve the literacy goals laid out by our school administration and by the **Common Core State Standards**.

In January of the previous school year, a colleague and I were developing a unit on genetically modified organisms (GMOs) for our freshmen students in Honors Biology. Our district had been working to implement Common Core for three years, and our principal was frequently reminding the staff of our school-wide goal to create rigorous curriculum for all students with a focus on literacy development. We were designing our unit to target Common Core's expectations for students to **analyze informational texts** and **write evidence-based arguments** about scientific ideas. We wanted our students to analyze documents about GMOs and write an argumentative essay, but neither of us had ever taught students to read or write in the way that we were planning for this assignment.

I reached out to a few humanities teachers who I knew were working hard to emphasize Common Core literacy skills in their courses. After meeting with two social studies teachers to learn more about the historical document analysis tasks that they use, my colleague and I relied heavily on their graphic organizers, rubrics, and task structure in designing our GMO lesson. I also paid a visit to one of the lead freshman English teachers, and she shared the outlining documents and rubrics that her team developed to help all of the freshmen students write an argumentative essay in the fall. When I passed out slightly modified versions of these handouts to my students, they looked at each other with confidence and said, "Isn't this basically the same as what we did in English class?" They were able to dive into the task without hesitation, as they realized that they could successfully use familiar tools across different disciplines.

A year later, I was the only one in my department teaching Honors Biology. I taught my students about GMOs using the curriculum that my colleague and I created together, but I decided to have my students do a Socratic seminar instead

of an essay at the end of the unit. I had learned about how teachers at my school use Socratic seminars from a presentation that English and History teachers did during a staff meeting, and I wanted to try it out in my science class. I visited a different English teacher to learn how she conducts Socratic seminars, and the handouts I gave to my students were adapted directly from the resources that she shared with me during that meeting.

My students were ready to talk like scholars when they came to science class on that Friday in February, but it wasn't because I alone taught them how. Formal and informal collaborations among teachers at my school have led to the ubiquitous use of words like "claim" and "evidence" across the disciplines and the development of common strategies to help students read, write, and speak academically throughout the school day. Because of this, many of the complex communication skills needed in a Socratic seminar had already become second nature for some students, and they were able to focus on making sense of science content at a high level. Argumentation is an essential component of all academic subjects, and it is heavily emphasized in the Common Core standards. Rather than trying to separately invent distinct literacy strategies for English, social studies, math, and science, teachers can strategically leverage each other's methods of literacy instruction when they collaborate and support each other across disciplines. This kind of cross-disciplinary collaboration allows teachers to create rigorous learning opportunities that enable students to reach their own goals, as well as the high expectations for achievement established by state standards and school administrators.