
National Blue Ribbon Schools Program

EXCELLENCE IN EDUCATION SINCE 1982

The Charter School of Wilmington
Wilmington, Delaware

Video: Students Making Science

Shawn Clark, Math Teacher: Junior research starts in sophomore year where the students are introduced to the scientific process and they can start selecting their topics of what they're going to be doing for their junior research project. Then in their junior year they start meeting with a mentor, and they go along in the process of designing an experiment, getting the equipment that they need, collecting data, analyzing the results.

Jerry, CSW Senior: I feel like the Charter School of Wilmington does a really great job helping students tackle the rather intimidating process of junior research. For starters, we have a very great mentorship program in which students are matched with a mentor and who guides them through the process.

And we also have these workshops that we attended that basically outline what junior research is like. For example, I attended a presentation workshop that taught me the etiquette of giving your presentation, what to include and not to include in your slides. And I felt like that helped me a lot.

Jennifer Toner, Science Department Chair: So everybody here has a role. Every, all the faculty. Some of them will do workshops on presentations, how to do eye-catching posters, and then also technical writing. And so that, again, will show them how to write a paper just like they read those articles in scientific research, how to analyze the articles and use them.

Christine Donahue, World Language Teacher: I think that some teachers might hear science, junior research science project, and think how, how is this applicable to me if I am an English teacher, humanities teacher. And I think that it's important to recognize that there are different aspects of the project. Yes, it's based on, on science topics. But, the presentation, any teacher can instruct and help improve. So it's part of a process that opens up the possibilities to all teachers in any field.

Angeline Rivello, CSW Vice President: We understand that it's important for our scholars when they leave our walls to understand that all of the different disciplines come together in the world. And so it's just as important to be an effective writer as it is to be a scientist, and you can't do one without the other. And so we really focus on trying to make sure they see how all of those pieces fit together so that when they leave here, they can be successful in whatever it is they choose to do. And that's how our junior research project helps them.

Prasanna, CSW Junior: I think the fact that our school required a junior research project, um, helped some of us discover a passion for research or experience in the field that might not other, might not otherwise have had, just learning about it in a classroom, and having this hands on experience I think is an essential part of growing, uh, into whatever career you're hoping to eventually pursue.

Kyle Berger, Health/PE Teacher: One of the main challenges our students face is sometimes their experiments seem from their end to fail. From the mentor's perspective what we tell them is, it happens every day in the field of science and we can still use it as a learning experience.

A'Corra, CSW Junior: I learned that even if you don't get what you expected, like I didn't, our data wasn't proven. No, no research is wrong cause there, there can be many hidden treasures in your research that people who, who read it can find a hidden treasure and go further with the research. But also the experiences and the challenge that we have can transform into lessons that can go past Charter, such as in college or in our career.

Cyrus, CSW Junior: I think one of the reasons why I personally really enjoyed participating in this research project and why I think it's a great thing that the Charter School of Wilmington does it is that it gives students freedom to explore the things that they're passionate about in a more professional context, in a more scientific context. And I think that was a great opportunity. The big picture of our project was to design a wearable EpiPen.

At the end of the process the school holds an event where, local community members, scientists, teachers, they all come together and we present our findings, our process, our data and our research. And then, there are judges there to ask us questions and view our presentation and our poster.

Dr. Alan Goliaszewski, Community Member & Junior Research Project Judge: The students are not just collecting information and then spitting it back, but they actually are, have the ability to create a little bit of science. And most of the time, it's a project that's near and dear to their hearts, and that they can actually, you know, really get excited about, and they're emotionally attached to. They own it.

Corri, CSW Junior: So the big takeaway from this project is how I kinda like saw myself like actually have control and like take the lead in something that I'm interested in. And I think like that's the main purpose of junior research even though many students probably do not see that yet. But once you realize that you have control, you can literally research anything, it was really worth it.

Michael Katz, Science Teacher: A lot of the projects that really have stood out to me over the years, I would say, have to do with, real world problems, whether it's, you know, diseases, problems with our, climate, or energy, world hunger, you can tell it's, it's not a project for them. It's a project for, you know, for the world.

Corri: Our title of our project was the Conversion of Oil to Biodiesel. The reason why we chose it is transportation and human activities in general are the largest source of greenhouse gas emissions. So we wanted to find a solution or investigate ways we can use everyday products like oils to convert it into biodiesel.

Dr. James P. Capolupo, CSW President: Our scholars have the ability, in my belief, to cure the common cold, cure cancer, invent something, change global warming, get us out of fossil fuel... in fact, invent a new system of energy. That's what I want them to do.