

Catholic Central student among aspiring chemists at BASF Academy



Haylee Begin-Dyck holds up a jar of the face wash product she made with a team of chemistry students at the BASF Science Academy at Fairleigh Dickinson University's New Jersey campus.

(Windsor, Ontario, Aug. 12, 2014) – When Haylee Begin-Dyck goes back to Catholic Central High School next month, she'll have a great head start, especially in chemistry class.

A soon-to-be Grade 12 student, Begin-Dyck recently returned from Madison, New Jersey where she spent two weeks in the BASF Science Academy at Fairleigh Dickinson University's (FDU) Florham campus.

Each year, the program accepts 20 high school seniors for an advanced science program that provides a preview of college life and an opportunity to learn more about chemistry.

Begin-Dyck, who had to write a short autobiography in order to be accepted, was the only Canadian student to attend. Students must have completed one year of high school chemistry, have a demonstrated record of academic excellence, and a strong interest in the sciences.

“Science is my thing,” said Begin-Dyck, whose father works at the BASF plant in Windsor. “Even when I was very young I always wanted to know how things worked. I was the one who was asking all kinds of questions.”

Following the curriculum theme “From Molecules to Marketplace,” students learned advanced level science from FDU professors and interacted with BASF scientists and business leaders through lectures, hands-on lab experiments and field trips. Besides basic scientific method, they studied polymerization, the analysis of chemical components, the properties of fragrances and colors, environmental science, product development, product marketing, and project management.

Working in teams, the students used BASF chemistry to formulate their own personal care products, for which they developed business and marketing plans they presented to a panel of BASF executives. Begin-Dyck’s team developed a face wash product.

“Our whole group had to test it, and it works really well,” she said. “I have very sensitive skin, so I was surprised that it didn’t irritate it. It’s pretty effective.”

Far more interested in the science of the product, Begin-Dyck expected the business side of the project might be boring, but was pleasantly surprised by how much she enjoyed that aspect of the camp.

“The point was to learn a lot about advanced chemistry, but also about the applications of science and marketing,” she said. “I was fascinated with how chemistry and business work together to create new products.”

As an on-campus residential program, the academy gives students a preview of college living. They used the university’s classrooms, labs, dining hall, dorms and received college-level instruction. BASF covered the full cost of the program including student tuition and travel and worked with the FDU staff to develop the course curriculum.

“BASF recognizes the importance of immersing students in science education, realizing they will be thinkers, innovators and leaders of the future,” said Guido Broche, site manager for BASF Canada in Windsor. “The Science Academy aspires to develop the technology based workforce of the future by exposing students to practical business applications and potential careers in chemistry. Haylee was the first Canadian student to participate in the program and we are hopeful that she will inspire others to apply next year.”

Former graduates from the program – which started in 2011 – have gone on to pursue their science studies at Fairleigh Dickinson University, Cornell University, Princeton University, Rice University, Stevens Institute of Technology, Lamar University, University of Alabama, Virginia State University and Clemson University among others.

“I learned a lot of new chemistry that is really going to help me out this year,” said Begin-Dyck, who hopes to be accepted into biochemistry at the University of Windsor in the fall of 2015. “I got to meet people from all over the United States, and I made a lot of lasting friendships.”

Hoping to pursue career in the sciences, Begin-Dyck said she feels well-prepared having being brought up through a Catholic school system.

“Going to a Catholic school was a great option for me,” she said. “I really like the Catholic environment. You share your faith with all of these people and that makes you feel connected with them.”

Being immersed in hard sciences, Begin-Dyck expects her faith is more likely to be questioned, but said she has studied with both science and religion teachers alike who provided her with a great deal of guidance on how to understand and reconcile the perceived contradictions between the two.