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SUMMER ENRICHMENT PROGRAMS

GWU Hosts Math and Science Academies Sponsored by Stonecutter Foundation in Spindale, N.C.

BY OFFICE OF UNIVERSITY COMMUNICATIONS ON JUNE 30, 2021



High Schoolers Learn to Apply Math and Science in Real-World Scenarios

BOILING SPRINGS, N.C.—Teenagers from area high schools spent a week on the Gardner-Webb University campus recently applying math and science concepts in business, financial, biological, and forensic settings. The Math and Science academies are sponsored by the Stonecutter Foundation in Spindale, N.C.

For each session, the 18 students participated in instructional time along with hands-on activities. They also took field trips to industries where the concepts are used every day.

Jim Johnson, GWU assistant professor of mathematics, is the co-creator of the Math Academy. Thomas Andrews, chair of the math and physics department at Thomas Jefferson Classical Academy in Mooresboro, N.C., has served as the academy's co-director from the beginning.



• A student in the Math Academy learns how to create an object to make with a 3D printer.

The math students took field trips to the BMW plant in Spartanburg, S.C., and Clearwater Industries Inc. in Shelby, N.C., to see how these companies apply mathematics in manufacturing. They studied standard deviation and empirical rule, collected statistical data, designed and printed an object on a 3D printer, and learned about business math applications, such as stock market investments and risk assessment in insurance. Two professionals from Boiling Springs visited the class: Investment counselor Barbara Mull and insurance representative Teresa Huggins.

The director of the Science Academy is Jay Zimmer, assistant professor of biology. Helping him this year was GWU 2018 alumna Michaela Mays Matolka. "I fell in love with forensics, and I started doing the activities when I was in college," she reflected. "When Mr. Zimmer asked me to come back to get to share what I love with people who are younger, I thought it was a cool opportunity. They are so smart. They have taken to everything we have taught them."

Throughout the week, the students were presented with forensic evidence from several crime scenes. Matolka, who works with the South Carolina Law Enforcement Division (SLED), showed the students how to make casts for footprint analysis, performed hair analysis, blood analysis, and talked about gathering evidence and other crime scene basics. Zimmer taught biotechnology and led the students through various activities, such as analyzing DNA. By the second day, students were already comfortable with the lab instruments.

To see practical applications of the techniques, the group visited Rutherford Regional Hospital (Rutherfordton), Rutherford County Sheriff's Office Forensics Department (Rutherfordton), and Cohesion Phenomics DNA lab in Spindale.



Students in the Science Academy prepare a DNA sample for analysis.

Participants

Science Academy:

Isaiah LaNave, Chase

Gracie Houser, Chase

Sadie McBrayer, Chase

Kayla Lee, Crest

William Stockham, Pinnacle

Haley Holden, R-S Central

Audrey Friedman, Thomas Jefferson

Stella Friedman, Thomas Jefferson

Sydney Evans, Thomas Jefferson

Math Academy:

Jaden Lee, Crest High School

Timothy Campbell, homeschool

Gabriel Orasing, R-S Central

Anjali Patel, Thomas Jefferson

MyeongKwon Oh, Thomas Jefferson, going to N.C. School of Science and Math in the fall

InKwon Oh, Thomas Jefferson

Seth Ferguson, Thomas Jefferson

Sophia Sidhu, Thomas Jefferson

Lillian Moore, Thomas Jefferson

About The Stonecutter Foundation:

The Foundation has sponsored the math academy at GWU since 2013 and the science academy since 2014. The Foundation, a non-profit established in 1945, has invested in numerous Rutherford County community institutions such as the town library and Isothermal Community College. Since its inception, the foundation has invested millions into the surrounding community.

About Gardner-Webb:

Located in the North Carolina foothills, Gardner-Webb University is a private, Christian, liberal arts university, Gardner-Webb emphasizes a strong student-centered experience and rigorous academics to prepare students to become effective leaders within the global community. Ignite your future at Gardner-Webb.edu.