(Blair Academy, Blairstown, New Jersey)

Epidemiology Class Puts Students a Step Ahead in College & Beyond

In 2011, Blair Academy incorporated into its curriculum a class focused on epidemiology, an area of study that few U.S. colleges – and even fewer high schools – touch upon during normal coursework. Now in its second year, Blair's epidemiology course takes a unique approach to science and math by teaching kids about health-related outcomes and patterns of human disease. Over the course of a year, students learn how to design a scientific study, collect and measure data, and perform statistical analyses.

"Even if students don't end up pursuing a career in science or medicine, this class teaches them to think critically and to become more analytical in how they approach problems," said Blair's Dean of Faculty and course instructor Rachel Stone. "By the end of the year, kids will have the skills to read and analyze any academic journal article, understand the specifics of the topic in question and then apply that knowledge to the bigger picture."

Mrs. Stone, an alumna of Columbia University Mailman School of Public Health, integrates classroom work with field trips to university-level presentations on epidemiology. In November 2011, she took five students to New York City to attend Columbia's Epidemiology Grand Rounds-Howe Memorial Lecture, at which global leaders in epidemiology shared their groundbreaking work.

Although the class has featured mostly individual coursework to date, in the spring, students will form two teams, each of which will design and run an epidemiological study on campus. After determining what exposure they will examine and identifying outcomes, the students will collect data, crunch numbers and present their findings to their peers.

This emphasis on public health is just one example of the diversity of Blair's science electives. "For the student who likes science, but doesn't know what in what direction to go, Blair is an ideal fit because the school allows kids to try many different versions of the subject before they ever get to college," said Mrs. Stone. "Most of their peers won't have even had the option to take this kind of class in high school, which puts them ahead of the curve."

Moreover, the course opens doors to careers in math and science of which students may be completely unaware. "Some of my students were surprised to learn that epidemiologists practice in a wide range of professions and that they don't have to become doctors or scientists to use the skills they are learning," Mrs. Stone continued. "That's one of my goals: to not only teach kids about different ideas, but also how to apply them in different industries."

"I never thought I was a science person, but somehow epidemiology clicked," said ***Emma Moore '12***, a senior who is taking the class as an elective during her final year at Blair. "Unlike biology or chemistry, epidemiology presents you with mysteries to solve, not equations to balance. In every case, the epidemiologists are trying to find the culprit (the exposure) and its motive (how or why the disease spreads). Epidemiology has taught me to look for patterns and to question events in completely new ways – not just in class. It is this whole piece of the science world that works in the same the way as my mind. Before taking this class, I did not know it even existed, so I am so glad to have had this experience."