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Program aims to stir interest in science, math

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by Meghan Mullan
Staff Writer

Inside a basement classroom at the University of Maryland, College Park, a group of middle schoolers drop cabbage leaf juice from a pipette into Dixie cups to test the acidity of different fluids.

Maryland and Duke university students, acting as mentors, flank the children from behind, leaning in and peppering the kids with questions.

In one cup, ammonia changes to a lime color when the purple juice hits it.

“Wooooo!” cheers Shima Makkawy, 11, who will be a Cabin John Middle School sixth-grader this fall.

“So it’s a basic,” said Josh Lindsay, 13, of Potomac. Josh, in a Tommy Hilfiger jersey and cornrows, examines the liquid with the intensity of seasoned scientist and jots his findings in a notebook. He is engrossed—too busy to be interviewed by a reporter and photographer in the room.

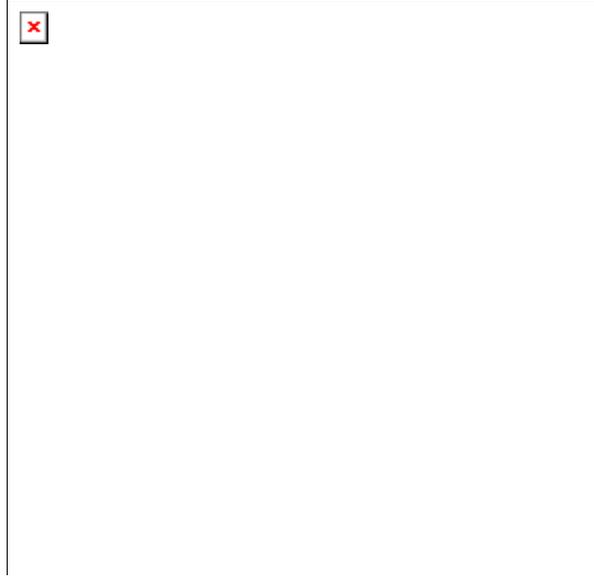
“I like science,” he manages to say, his eyes transfixed on William Hwang, a senior at Duke University, who is the mastermind behind InnoWorks, the free, one-week, science program being held in College Park this week.

William Hwang, a graduate of



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Christopher Anderson/The Gazette

Taylor Braxton (left), 11, and Kimberly Young, 12, both of Germantown use magnifying glasses Tuesday to count taste buds on their tongues during Innoworks science camp at the University of Maryland, College Park.



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the Montgomery Blair High School's Magnet Program for math science and computer science, dreamed up InnoWorks shortly after attending Duke.

Raised in a family of first generation Chinese immigrants, William Hwang spent much of his early years following his parents around on various volunteer projects.

As a toddler, he helped turn the score board at a basketball program for youth that his parents were helping out with, said his mother Yuan-Yuan Hwang.

“He always loved numbers,” she said.

William Hwang's love of numbers became a passion for math and science that he is intent on sharing. A top student at Duke, William Hwang is majoring in biomedical, electrical and computer engineering and physics. Additionally, he is a pre-medical candidate, and plans to become a medical researcher. But, in the meantime, as a rising senior at Duke, he is spending the last week of summer teaching at the InnoWorks camp he founded two years ago with friends from Blair. The goal of the program is to make science and math education fun for underprivileged middle school children.

William Hwang and a cadre of like-minded friends from Duke and Maryland developed a curriculum on robots last year, and held the first area camp at the Scotland Community Center on Seven Locks Road in Potomac.

Not to be outdone by robots, the group came up with a new curriculum on the five senses this year, and published a textbook with the help of grants from sponsors like Cisco Systems Foundation.

The InnoWorks textbook is a collaborative research paper by William Hwang and several of his classmates and friends that includes a chapter on mentoring, and several in-depth sections on the senses.

The book is filled with detailed scientific knowledge such as the workings of the inner ear and retinal cells. The material covered in InnoWorks is college-level material for middle school pupils that isn't watered down.

The InnoWorks instructors, all college students, like Matt Mian, a senior at Duke, treat the children seriously, on an even level.

In reality, the college mentors are five to eight years older than the middle school pupils, and they treat them as young compatriots.

The Montgomery County Recreation Department was responsible for recruiting the participants, many who are from single parent households, said Billie Wilson, manager of the western region of the Montgomery County Recreation Department.

The children were provided with transportation to the university and free lunches from the U.S. Department of Agriculture.

For William Hwang, who plans to come up with a new curriculum to expand the camp next year, the joy is all in the teaching.

“There is a big variety of different kinds of chemicals and they interact in a variety of ways,” he explains to the group in the basement classroom.

Then, before any child can lose interest, he brings out the hands on materials,

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including baking soda and ammonia.

“Let’s get started,” he says. Everyone moves forward excitedly to begin.

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