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# INSIDE-BOOSTER

NEWS OF LINCOLN PARK, LAKE VIEW, NORTH CENTER & LINCOLN SQUARE

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## 'There's nothing as wholesome as a fish' - especially one grown Aquaponically in a local school

### Mayor tours Lane Tech's Aquaponics and STEM labs

BY DEBAT MEDIA SERVICES

Departed Chicago Mayor Richard J. Daley once famously said that "There's nothing as wholesome as a fish."

Current Mayor Rahm Emanuel discovered that could be true when he recently took a spontaneous tour of Lane Tech College Prep High School to view the school's new state-of-the-art Aquaponics and STEM labs.

Lane Tech, 2501 W. Addison St., is the first high school in the city to offer an Aquaponics course for students. Aquaponics is the symbiotic cultivation of plants and fish in a re-circulating system.

In September, Lane Tech Principal Dr. Christopher Dignam, invited Mayor Emanuel to tour the new labs and learn about the variety of new STEM courses being offered at Lane, including robotics, engineering, and web design.

"In my 15 years as both an educator and administrator in this building, we have never had a visit by a mayor," said Dr. Dignam. "We are really appreciative that Mayor Emanuel took time to learn about the major initiatives we have going on at our school."

When Mayor Emanuel arrived on Friday, Nov. 2, he greeted students and staff members in the hallways. Several students lined up to shake the mayor's hand and welcome him to the school.

In the STEM labs, Mayor Emanuel interacted with Lane's Academic Center 7th graders in Ms. Emily Irwin's science class, as they worked on creating macromolecular models. Two students presented the mayor with a gift bag of Lane souvenirs. Lane Tech's administration said it was pleased by the visit from the mayor's office.

"Last summer, the Lane Tech Century Foundation donated



Mayor Rahm Emanuel recently toured of Lane Tech College Prep High School, to view the school's new state-of-the-art Aquaponics and Stem labs. Left to Right: Lane Tech Principal Dr. Christopher Dignam, Mayor Emanuel, Assistant Principal Damir Ara, and STEM Coordinator Cristen Lain interact in the lab. *City of Chicago Photo by Patrick L. Pyszka*

\$100,000 to get the labs started," noted John H. Schwan, chairman of the Lane Tech Century Foundation, which was established in March of 2004 by Lane Alumni.

Lane's new STEM wing consists of two multi-purpose laboratories and three lecture facilities, fitted with the latest technologies and computer resources. In addition, the STEM wing also boasts a new, state of the art Aquaponics facility. The Aquaponics and STEM labs are located near the main cafeteria in Rooms 122, 124 and 128.

At Lane Tech, large tanks of tilapia will provide recycled, nutrient-rich water to an array of organic vegetables, fruits, herbs, and other plants using an Aquaponics closed-loop system. Lane Tech's Aquaponic system will provide 7th-to-12th grade students with an experience that is not available to most urban students.

"The Aquaponics lab has space for two classes at one time with a total of about 90 students by utilizing the computer lab portion, lecture space, and each tank/growing bed systems," said Kathryn Beck, an Assistant Principal at Lane.

There are five individual tanks/growing bed systems. Each one of these individual tanks is designated one of the five Aquaponics classes. "There is also a 'show'

tank/growing bed system which is used to grow new and unique plants and trees. A section of this system is used by our LTAC (gifted 7th and 8th grade) students to grow edible flowers," Beck said.

The STEM lab has space for up to three classes of about 90 students at a maximum, at one time, if the lecture space, lab space, and computer lab area are all utilized. There are 10 lab tables which can accommodate four to six students per group.

All of the lecture spaces are designed to fit 32 students. The computer lab spaces have 19 computers, but teachers often have students partner up to share computers, Beck said.

There currently are five classes of Aquaponics attended by about 150 students, which utilize the Aquaponics space every week. The LTAC has approximately 220 students, which also utilize the space. All classes are also welcome to use the space, by signing up for the lab and having a brief tutorial session.

The STEM lab space is highly utilized by the science department with 44 teachers assigned to grades 7-12. "This space is ideal for laboratory experiments which require more space than the aver-

age classroom," Beck said.

"For example, the Physics classes maximize the space of the STEM lab for experiments regarding velocity and acceleration," Beck said. "During such experiments, students utilize race cars, airplanes, and other sources to simulate a given scenario, which will be utilized to calculate velocity and acceleration."

Technically all 4,300 students should have utilized the STEM lab and/or Aquaponics lab at some point during the year.

Lane Tech College Prep is taking its STEM (science, technology, engineering, and mathematics) program to an entirely new level, Dr. Dignam said.

Previously, the school has promoted STEM through multiple green initiatives, Alpha cross-curricular STEM academic program, a GEMS club (Girls in Engineering, Math, and Science) and a variety of science, math, computer, and engineering electives offered to all Lane Tech students.

This past summer, Dr. Dignam, the Lane Tech administrative team, and many other contributors, including the Lane Tech Century Foundation and the Lane Tech Alumni Association, worked to make the Lane Tech STEM program second to none in Chicago.

Lane Tech's students will be engaged in a long-term exploration of a sustainable agriculture and living program that exceeds any lesson found in a textbook.

Teacher and students will not only be taking advantage of the many agricultural, environmental, and science learning opportunities provided by the farming the tilapia and plants, but will also have opportunities to develop reasoning, problem solving, math, computer science, engineering, and business skills, through the incorporation

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of the latest Aquaponics technology.

The school's Aquaponics program not only provides students with engaging learning opportunities, but also emphasizes the importance of community engagement and involvement. Now that the facility is operational, students will be able to sell plants and fish in Lane Tech's new "Community Piazza" walk.

The Community Piazza will bring together all Lane Tech students (those directly involved with the Aquaponics program, as well students in art, business, music, and special education) and

community members, to embrace the STEM initiative and further develop community relationships.

Lane Tech's Aquaponics cross-curriculum program has the potential to provide a learning experience like no other in the city. In order to ensure the success of this unique STEM program, Lane Tech has received support from both the Lane Tech Century Foundation and the Lane Tech Alumni Association.

In order to continuously provide this exciting opportunity to its students, Lane Tech also needs community support, Dr. Dignam said.

The Lane Tech Century Foundation is continuing its goal to raise \$2-million in charitable gifts to restore the existing 78-year-old building and campus in conjunction with the school's 2008 Centennial Celebration. The foundation's centennial charity efforts already have generated more than \$1.9 million for restoration of the school.