



Aquaponic Gardener Profile – Lane Tech High School Class of '14

Q: Where are you from? Tell us a bit about yourself.

A: We are from Lane Tech High School, a Chicago public school with over 4,200 students. In 2012, Lane opened their own aquaponics lab as part of our STEM Program to promote the application of multiple subjects – including environmental sustainability, nutrition, math, aquaculture, and botany – in one class. Aquaponics is currently a science elective open to all students who have taken biology. There is even an “Aquaponics Independent Study” class for a few seniors who apply for the chance to manage and improve the lab every day! I am one of the six seniors chosen for this course and am completing the interview on behalf of my fellow aquaponics classmates and teachers.



Q: How did you get interested in aquaponics?

A: As a school, Lane Tech became interested in aquaponics when we wanted to have more innovative electives that would attract students. Being one of the two Chicago Public Schools with a lab like this, and the only CPS school to offer an aquaponics course, Lane knew it would encourage student interest. As a student at Lane, I wasn't sure what aquaponics was when I first signed up for it. I knew it had something to do with plants and was in the new lab that was being built my sophomore year, but now I am very glad I took it! This is my second year in the class and I love it!



Q: How are you currently working with aquaponics? Home setup, community greenhouse, etc.

A: Currently we have 6 independent systems in one classroom lab. We also have a hydroponics rack that we use as a nursery to propagate plants before putting them in the beds. In addition to that, we maintain a “living wall” in the middle of the lab where various plants and flowers are grown



Q: Tell us about your system. Geek out a bit and tell us all the specs.

A: In our lab, there are 6 flood and drain systems in total. The largest, our “show system”, is a 32 sq ft grow bed connected to three 150 gallon tanks of tilapia. The other 5 identical systems have 18.5 sq ft grow beds connected to 175 gallon fish tanks. Each aquaponics class period focuses on maintaining and growing in their assigned class bed.

Q: What plants and fish have you had the best luck with? And the worst?

A: “For fish, Lane raises solely tilapia. While some of the baby fish we bought this year haven't

grown as quickly as anticipated, the adult fish provide enough nutrients to keep our plants healthy.

Plants that thrive in our system include basil, sage, gourds, swiss chard and other lettuces. We also grow flowering plants like wandering jew, coleus, and elephant ears. One of our students is also experimenting with growing herbs in raft systems floating in our reservoirs. He's had luck with lettuces and herbs like cilantro."

Q: What do you like most about aquaponics? Least?

A: "The best part of aquaponics is seeing everything that you work for come together. This may be watching a little seed grow into a huge tomato plant, or finding and patching a leak in a hose. There's never a calm moment, giving plenty of opportunities to improve the lab for the future.

The downside is probably having problems that we can't help or solve. For example, recently some of our fish have been getting red gills that we can't make go away. While these problems are frustrating, researching and trying to fix them gives us more knowledge for similar things in the future."

Q: What do you think the biggest misconception about aquaponics is?

A: When people hear that we have an aquaponics lab, usually the first question they ask is, "Isn't that when you grow plants with fish poop?" While this is true, there are many steps in between that transform the ammonia in the waste to nutrients for plants. The fact that waste is used might turn people away, but it shouldn't because the plants never come in contact with it! And it's a lot healthier than eating produce grown with inorganic fertilizers or pesticides.

Q: What are your future aquaponics goals?

A: Our goals are to maintain a healthy and stable environment for our newest baby fish so we can raise them to maturity. We would also like to try using other fish instead of tilapia in one of our systems. As of now, we are waiting for permission from our school district to allow us to eat, sell, and donate our produce and fish. So our long-term goal is to attain these licenses. Once we have those, we want to design a class that uses aquaponics to teach students how to run a small business.

Q: What do your friends say when you show them your system for the first time?

A: Initially, everyone that visits our lab is amazed at, one, how warm it is (especially during the winter in Chicago), and two, all of the plants that are growing without soil! Then we show them the fish and explain how aquaponics works, and they begin to grasp the idea. Usually it takes people a few times to really soak in everything that we have!

Q: What's next for your system?

A: “Our next small purchases will be spring seeds, timers for our beds, and other maintenance things. We also have to get light bulbs for our pet turtle, Ricky (he’s not in the aquaponics systems)!”

The next big purchase will be supplies to build an outdoor compost bin for our waste. As of now, we have a few small indoor ones, but a big one would benefit anyone in the school who needed compost!”

