

ABCs:

Aquaponics Biotechnology in Classrooms

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What is aquaponics?

Aquaponics is the combination of aquaculture, or fish farming, with hydroponics, or growing plants without soil.

Who was involved?

Aquaponics systems were established in two 4th grade and one 5th grade classrooms at North Elementary. BIOL 101 undergraduate teaching assistants guided the setup remotely and designed at-home mini systems for distance learning.

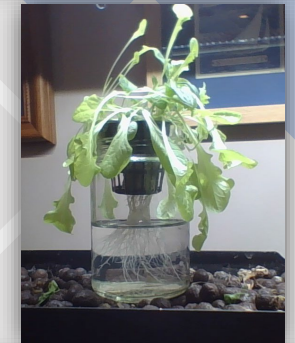
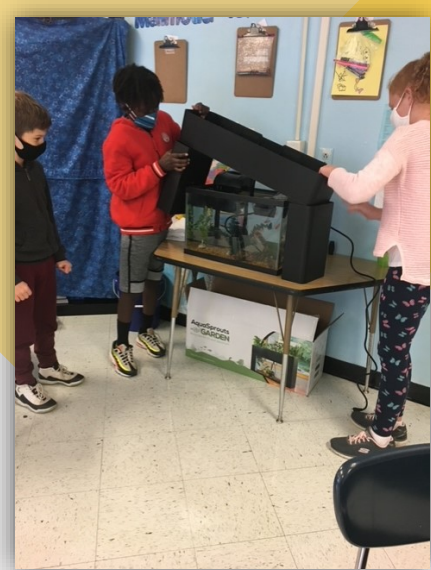
Why did we do this?

Over a third of the BIOL 101 curriculum focuses on biotechnology and environmental biology and as such, being able to explore this curriculum hands-on is invaluable, especially in this large-lecture GEF course that faces challenges with engagement and high D/F/W rates. Moreover, community service and educational outreach are effective teaching strategies.

Where are we going?

Homework assignments, including video assignments from a creating a news brief on this technology to an instructional video on setup, maintenance and/or troubleshooting the system, and reflections will be incorporated into the BIOL 101 curriculum. Materials will be shared with the BIOL 103, 104, and BIOL 105 laboratories. BIOL 101 students will regularly visit the classroom to present student-designed curriculum.

This project provides hands-on experience on curriculum topics in an educational outreach and community service context, highlights an important, emerging technology for food production and organic farming, and allows BIOL 101 students to explore technologies as the field advances.



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See reactions

The fish are doing their job!! What plant do we have growing? What will we be creating in the next hour??

