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Diamond Hill Aquaponics Project

ABBEVILLE — Mrs. Busby's class at Diamond Hill Elementary School is getting a hands-on experience with an aquaponics project. The aquaponics equipment was delivered to Mrs. Busby's class in February 2018. The lesson, grow plants in water, with nutrients coming from the fish living in the water, from which clean water is returned to the fish because the plants filtered it. Sound like a cycle, well it is. A wonderful cycle that these children are very excited about.

On April 23 2018, as Jenny Mountford, Abbeville County 4-H Agent, and myself entered Mrs. Busby's class, the first thing I noticed was the teaching style Mrs. Busby has...traditional and hands-on. In the back corner of the room, sits the aquaponics unit, a system that is doing so much more than just sustaining fish and growing lettuce. This aquaponics system is teaching these children about plant and animal life, life cycles, sustainability, environmental changes affecting plants and animals, biology, and so much more. As I listened in during her lesson, I was amazed at the amount of information these students have not only learned, but retained. They answered every question that Mrs. Busby and Jenny Mountford asked. They talked about xylem, transpiration, carnivorous plants, evaporation, nitrogen levels; and the conversation continued about how the fish were helping the plants, and the plants were helping the fish. Did you know fish can drown? Mrs. Busby's class does. They even know how to keep it from happening by making sure there is enough oxygen in the water and how to provide it. Currently, the class is growing lettuce; however, they are not limited to this plant only. The class is getting ready to change out the lettuce to a different plant. In an aquaponics farm, you get to harvest both the plants and the fish for consumption. These children may or may not realize it right now, but they are not only learning science, they are learning agriculture also. The students were able to taste the "fruits of their labor" or should I say vegetables. They said the lettuce tasted good. One student comically piped up that he prefers ranch on his lettuce; I believe I would tend to agree with that student. However, in all seriousness, an entire salad could be grown from aquaponics and the fish harvested for the main course.

A joint effort between Clemson University, Freshwater Coast Community Foundation, and the Abbeville County 4-H has brought this opportunity to Mrs. Busby's class. The aquaponics equipment was provided by the Freshwater Coast Community Foundation. Clemson University has provided the support for the project. The Abbeville County 4-H program reached out to Diamond Hill Elementary to connect with Emily Busby as a teacher. This partnership has allowed for the traditional classroom education to meet with the 4-H hands-on education to give new opportunities to our Abbeville County youth. Dr. Lance Beecher, Aquaponics, Aquaculture and Fisheries Specialist, Clemson Cooperative Extension Service, has been instrumental in helping to get the unit set up and providing help as needed

for Mrs. Busby's class. While there are many high schools around the state that have aquaponics systems, very few middle schools or elementary schools, if any, have that system. This is a very unique opportunity for this 6th grade class. Dr. Beecher is more than happy to assist any school out there to get a program together and offer advice on system design. Another aquaponics unit is being utilized by an organization in Abbeville County, the Due West Robotics First Lego League Team, Narwhal of Ideas. This unit is housed at Erskine College and is maintained by the robotics team. The team is still excited over the lettuce they grew. These are projects that Mrs. Busby's class and the Narwhal of Ideas robotics team will never forget. These hands-on learning experiences are totally educational, totally interesting, and totally fun; and that is what makes for a great education and learning experience.



CUTLINE: Mrs. Busby's 6th grade class adding plants to the aquaponics system, May 4, 2018.