ing fragging, glass cleaning, and killing aiptasia.

a title which conveyed their expertise in all areas of aquarium care him to read college-level texts and share his insights with others. and required sacrifice of free time to learn more complex tasks. These included adjusting and maintaining the equipment, interpret- and even learned bravery. When the class hermit crab, infamous for ing the water test data, and proper placement & care of the corals. its large claws and fast speed, needed to be transported from quaran-It was also their duty to effectively communicate and share their tine, none of the students were brave enough to pick it up. After an knowledge with the other students and to delegate & supervise awkward silence, the once shy Julio suddenly found his courage. other students with daily tank chores. These students were also He rolled up his sleeves, pushed his way through the crowd, and tasked as 'reef ambassadors', teaching other classrooms how to picked up the crab without hesitation. This meaningful moment take care of their new tanks when they received them.

gallon long sump and a mud refugium.

tions. He decided to fund the project himself and invested 25% of stock were donated or purchased locally from Craigslist.com. his annual salary. This was critical in getting the project started and after witnessing the level of student engagement.

The students wrote request letters and even created an online Students originally not interested in learning have become fascipresence for the project on the forum 'Reef Central'. Inspired nated with science, and shy students have taken on leadership roles adults would see them in action and contact Brandon to contribute. all around the school. Third grader Scott is one stellar example of This classroom learning program required students to perform the huge impact this program can make on a student's life. Scott various 'hands-on' activities on a regular basis. These included: was not one of Brandon's students, but he would come to see the water testing and water quality maintenance, daily measurements tank every morning before class started. Despite Brandon's identifiof pH and salinity, water changes & mixing saltwater, feeding the cation of a 'spider crab', Scott insisted it was actually an 'arrowlivestock, cleaning & adjusting skimmer/calcium reactors, basic aq-head crab'. He was so passionate about the subject, Scott walked to uascaping and placement of coral, basic coral propagation includ- the library in order to prove his assertion. Since then, he has become a most informed source for information on marine inverte-Several student leaders nominated themselves the 'reef bosses', brates at the school. His new thirst for knowledge has encouraged

> Similarly, students were also pushed out of their comfort zones made Julio a class hero and gave him a new confidence.

Brandon first launched his Aquatic program in Garden Hills EleBrandon built up his reefs and spent his money wisely by focusmentary, a Title One school with over 80% of the students receiving on corals and invertebrates instead of fish. Tank inhabitants ing free and reduced lunch (indicator of poverty). His third-grade were predominately soft or LPS corals, mushrooms, and polyps. gifted class had 23 students. Following Brandon's success, two ad- They also had orange tree sponges, several different gorgonians, ditional tanks were setup at Garden Hills Elementary. The first and a large tentacle anemone. Fish included ocellaris clownfish, classroom display tank was 120 gallons with a homemade 40 chromes, blenny, and damselfish. Invertebrates included brittle & serpent starfish, reef cleaner shrimp, coral banded shrimp, spine ur-Initially, Brandon was unsuccessful in receiving grants and dona- chins, lobsters, and various crabs & snails. Almost all of the live-

To help reduce problems caused by overfeeding, Brandon stratebuilding belief & support for receiving donations. Initially skeptigically chose to invest in large skimmers. The tanks were designed cal teachers that complained about the mess became supportive for learning purposes, rather than for display. Making sure all equipment was readily accessible for the students was essential.

FOR MORE INFORMATION: www.MrRutherfordIsAwesome.weebly.com



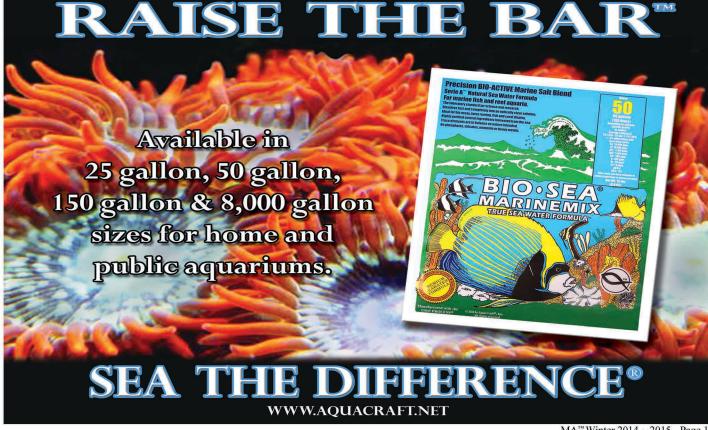


"We had to be very careful not making mistakes like accidently knocking the coral over or smashing something. You have to be really gentle if you're cutting the coral when you frag them." - Elisha Ebes

"I like that we can actually have science projects, it doesn't feel like we're learning because it's so much fun, but we actually learn a lot. I really liked being a reef boss, it's sort of like being a teacher, you have to explain everything step-by-step. My friends were good students, because they would make listening faces when I would tell them things. I felt like I was being a leader because I had to teach everyone else and make sure they did the right thing. I want to be a vet when I grow up, so this helped me learn more about different animals. -Kaylee White

Brandon has ambitious goals for the future. He has recently transitioned to Stratton Elementary, a school that shares his vision. Stratton's aquariums are centrally placed in common areas so teachers can have access without disturbing other classrooms. The last classroom period at Stratton is set aside for schoolwide instruction, where students leave their homerooms to learn specialized lessons from other teachers. Interested students from all different grade levels can participate in the Aquatic Learning curriculum.

Locally, he is launching a K-5th grade marine biology program and creating a fully integrated aquarium curriculum so others can reproduce his success. He is also writing an instructional manual teaching the beginner aquarist how to care for reef tanks. •



MA™ Winter 2014 ~ 2015 - Page 11 MA[™] Winter 2014 ~ 2015 - Page 10