Students at the Marine Science Magnet High School in Groton, Connecticut and their principal, Nicholas J. Spera, have enjoyed quite an amazing first year. The school opened its doors in September, 2011. The first students began learning fish biology in science classes and, using aquaculture techniques, began raising fish in tanks in the school’s labs.

The results were gratifying. With 600 grown fish, students wanted to learn entrepreneurial business practices as well as science. They found a willing partner in Sean Coleman, general manager of Grossman’s Seafood, who expressed interest in buying the fresh tilapia and rainbow trout grown by students. But there was no legal means to license such sales. So a new law that the students call “the fish bill” was proposed.

The bill to facilitate licensing for the seafood sales, supported by State Senator Andrew Maynard from Stonington, was proposed to the General Assembly. The bill clears the way for the students to sell their fish to market for food consumption. Grossman’s Seafood plans to buy a portion of about 600 tilapia and rainbow trout to sell in its market and distribute to restaurants.

“Our students set about changing the law in our very first year!” Principal Spera says proudly. Spera and two teachers accompanied four students to the Capitol, where, after waiting all day, they were able to testify before the State’s Environment Committee. The bill passed the Senate unanimously in May 2012.

The students also clean up the aquaculture wastewater by recirculating it, using nitrogen and phosphorus as nutrient to grow herbs such as basil using hydroponic techniques.

“Our students aren’t learning only science and math in the labs, they are also learning about policy and government, stewardship, and the importance of teamwork to achieve common goals.” Spera said.

Another popular hands-on learning activity at the school is the state-of-the-art navigation simulator. Students learn to navigate a ship using a full scale pilot model station. The model has the capability to change conditions during navigation, for example, by adding rain or snow. As they steer, students are calculating angles, learning geometry and applying their math skills.

The school, which presently has 70 freshmen, received 486 applications for admission. It was featured as a WFSB Channel 3 “Cool School.” Innovation is the philosophy at this school. When it was time to stock the new school’s library, Spera looked at the available space and the scope of the knowledge the students would be expected to master, and then made a decision about stocking the shelves. The library now holds a cabinet with 20 iPads for students to use, providing instant access to a wealth of knowledge.

The school is the third in a series of marine science-focused high schools authorized for development by the Connecticut State Board of Education. The others are the Bridgeport Regional Aquaculture Science and Technology Education Center and the Sound School Regional Vocational Aquaculture Center in New Haven. All strive to combine rigorous academics with practical hands-on experiences for their students.

After this auspicious beginning, it’ll be interesting to see what the Marine Science Magnet High School accomplishes in its second year! To learn more about the school, visit http://www.marinesciencemagnet.org/.