



Farming the Ocean

Perry Raso, Matunuck Oyster Farm
Rhode Island

☀ Call to Action

Clean up a beach in your area and support organic farm-to-table businesses in your community. To learn about aquaculture, follow Matunuck Oyster on Twitter @MatunuckOyster & Instagram @matunuckoysterbar

☀ Values

- Entrepreneur
- Sustainability
- Initiative
- Education
- Environmentalist

☀ Lessons Learned

Hard work, passion, and creativity lead to innovation. And innovation can make it possible to be both professionally successful and environmentally responsible.

Hard work and a dream are not enough to achieve success. You have to educate yourself, and not be afraid to innovate in your field.

You can build a successful business by working to preserve the environment and using the natural resources available in your community responsibly, instead of depleting them.

Perry Raso started digging for clams when he was just 12 years old.

I knew that the harder I worked, the more money I'd make," he says. "I liked being able to determine how much I made by how hard I worked." When it was time for him to go to college, he knew he wanted to learn how to provide seafood for people. So he studied aquaculture and fisheries technologies at the University of Rhode Island; after that, he was ready to start his own business. He started small, with a one-acre sustainable farm where he grew oysters and sold them at the local farmers' market. His business grew by leaps and bounds: today, in addition to running an oyster bar, Perry devotes a lot of his energy to teaching young people about sustainable aquaculture. "Many people see it as a niche industry," he says. "But I want to change that. It should be viewed in the same way as sustainable agriculture. Then we can really make an impact."

☀ Language Arts

What type of business would you like to be in? Think of ways you might want to open a business, and do it in a sustainable and environmentally friendly way. Write a cover letter introducing yourself to potential investors. Include information about the type of business you plan to start; the skills and experience you have that will be necessary for the business to succeed; and what will make your company better than any other company in the same field. It's important to cover all these points, but the people who will be reading it are probably very busy. So it must also be brief.

After reading this [article](#)¹ write your own business proposal. It should include the cover letter you wrote for the previous activity. Then, for this exercise, focus on creating the following: Table of Contents, Executive Summary, and body of the Proposal,

as explained in the article.

Create a presentation on aquaculture: what it is, the preferred methods used in aquaculture, and why it is considered a sustainable practice.

STEM Activities

For this activity, students will learn the importance of aquaculture in the sustainable fishing industry by playing [Eco Ocean](#)²: an overfishing simulation game. They will need to answer the following questions:

- What was your goal during this simulation? How did you attempt to accomplish your goal? How could you change your fishing technique to increase the number of fish you caught?
- There was a surprise factor that you didn't know about before you started fishing. What was this factor? How did this factor impact your fishing success?
- Now that you know about this additional factor, complete the fishing simulation again. How will you change your fishing practices this time?
- How many fish did you catch in your second simulation? How did you place in comparison to the other boats?
- Why do you think it is important to consider both the number of fish that you caught and your sustainability rating when scoring this game?

This resource, from the [AQUA Project](#)³, will give students a hands-on introduction to aquaculture. In this activity, students will design, create, and maintain an aquaculture farm. The activity starts on Section 3, page 11. (Note: This is a long-term project.)

Coastal erosion is the process by which wave action wears away beaches and shorelines; it results in loss of property for landowners, and millions of dollars' worth of damages each year. In this activity, students will develop a cost-effective and environmentally safe engineering solution to show how aquaculture operations can be strategically developed to reduce shoreline damage. [Link](#)⁴.

Sustainability Innovations

Perry had the perfect storm of drive and determination, along with an ideal geographical location to give him the opportunity to succeed with the Matunuck Oyster Farm. Some individuals are not as lucky; but they can still take advantage of created aquaculture systems to cultivate shrimp, fish, and oysters. There are many challenges with this process, including water organism diseases. [Viaqua Therapeutics](#)⁵ is one of the leaders in the delivery of oral vaccinations to prevent disease in fish.

Due to lack of area and space for aquaculture and the threat of waste, [Better Fish Farming](#)⁶ was created as a project of the Recirculating Farms Coalition to emphasize the usage and efficiency of closed-looped fish farming. [Atlantic Sapphire](#)⁷ is one of the leaders of this project, which has created "blue houses" to farm and cultivate Atlantic salmon.

Perry has a beautiful aquaculture farm because of his ability to use a natural setting, but others have developed the use of technologies to assist them in less conducive conditions. [Innovasea](#)⁸ is a company that has found success within open ocean aquaculture, land-based aquaculture, and aquaculture intelligence.

Sustainability Career Pathways

Diver. Before he created his shellfish farm, Perry harvested shellfish by scuba diving. Divers are in demand for many other projects as well--from [building offshore wind turbines](#)⁹, to reseeded coral reefs, to helping to conduct scientific research and archeology. If you love diving, there's potential to make a career out of it! [Read about some diving jobs here](#)¹⁰.

Sustainable Aquaculturalist. One of the great ways to heal the ocean is by [growing kelp and shellfish to filter and clean the ocean](#)¹¹. Farming the seas, or [aquaculture](#)¹², is a growth industry, as is working for companies that help seed aquaculture operations. An aquaculturist oversees the breeding and growing of fish, manages staff, and/or operates aquacultural systems. [Learn more here](#)¹³.

Robotist. If you love the ocean (and robots), perhaps you should be a robotist. Robotists are designing autonomous underwater vehicles that will be the future of ocean exploration, aquaculture, and coral restoration. This is an exciting new sector of the Blue Economy that is growing, and that currently lacks a sufficient number of qualified employees. Even if you don't like oceans, there are dozens of fields in which robotists are needed. Interested? [Learn more about entering the field of robotics here](#)¹⁴.

Sustainable Restaurateur. It's possible that it's never been harder to be a restaurateur than now, due to the COVID pandemic. But for those who love the idea of managing a restaurant, especially one that draws on sustainable ingredients and helps people understand that healthy and sustainable food is delicious, there are many leaders to draw inspiration from. For example, Alice Waters opened her trailbreaking restaurant Chez Panisse in Berkeley, California, in 1971. And in 2021, Ona, a restaurant in a small village in southwestern France, became the first vegan restaurant to receive a Michelin star. Perry's restaurant, [Matunuck Oyster Bar](#)¹⁵, has shown how obtaining ingredients from local sources and integrating those sources into the business plan can be successful. Perry now has a Farm-(and Sea)-to-Table enterprise, drawing from his vegetable and oyster farms. Want to learn more about being a restaurateur? [Read here](#)¹⁶.

1 <https://www.pandadoc.com/blog/how-to-write-a-proposal/>

2 <http://www.ecoocean.de/play-online/>

3 http://www.ctsa.org/files/publications/Aqua_Curriculum.pdf

4 <https://extension.umaine.edu/4h/stem-toolkits/innovations-in-aquaculture/activity-5/>

5 <https://www.viaqua-t.com/>

6 <https://www.betterfishfarming.org/>

7 <https://atlanticsapphire.com/>

8 <https://www.innovasea.com/>

9 <https://www.maritime-executive.com/article/more-2000-commercial-divers-needed-meet-demands-offshore-wind-sector>

10 <https://www.tdisdi.com/sdi-diver-news/top-jobs-in-scuba-diving/>

11 <https://www.fisheries.noaa.gov/feature-story/aquaculture-grower-profiles>

12 <https://www.fisheries.noaa.gov/topic/aquaculture>

13 <https://www.discoveryeducation.com/>

14 <https://www.northeastern.edu/graduate/blog/what-does-a-robotist-do/>

15 <https://www.rhodyoysters.com/about/>

16 <https://www.foodandwine.com/how/how-open-restaurant-restaurateur>

