

For our team's SchoolsNEXT 2025 design competition, we decided to create a high school with a focus on marine biology and aquaponics. While the initial idea did take a while to come up with, we faced many challenges along the way, the main one being communication. While it may seem contradictory, saying for a team challenge, communication was a problem, for my team, putting together all our ideas was a struggle.

In August, we started brainstorming ideas for the competition. The only agreement we could come to was that we would make a high school. With all of us being high school students, we assumed we would understand the spaces needed for a high school better, with the hope students could thrive in the learning environment we created. We wanted the school's overall design to be heavily influenced by the curriculum offered, which was agriculture. While the idea was appealing at first, there were many variables we hadn't accounted for that limited the design's potential. One of them being the appeal of agriculture to high school students. While everything was hypothetical, we didn't think that high school students in any location, rural or not, would devote the majority of their curriculum to farming, and so we pivoted.

After about a month of silence and realizing our first idea wasn't what we anticipated it to be, we regrouped and started from ground zero. We believed science needed its own building for the extensive research taking place through student-led initiatives. We started again with brainstorming, and this time with a bit of research, we came up with the next best option of aquaponics and marine biology. Aquaponics, unlike agriculture, could be studied anywhere and didn't require any land, which was a binding factor. Marine biology did require some sort of body of water to add to the hands-on learning of students, but was not as difficult in terms of site location. Aquaponics is the practice of growing plants in water rather than soil and uses fish waste as fertilizer. Since the science building is equipped with numerous fish tanks, the waste produced from them would be recycled into fertilizer for the aquaponics room.

The school was also intended to serve students who were either inhibited from quality education or simply not offered a quality one. With this information in mind, we researched statistics for schools nationwide to find the right location. We concluded that Hawaii was a perfect choice since it not only had ties to marine biology, but also because it had a dropout rate of 11.8% in the 2019 school year. For some context, the national average that year was 5.8%. The dropout rates, while high, aren't simply a reflection of students. But on what's going on both in school and at home. Socioeconomic factors have been known to hinder many, with about 51% of Hawaiian high school graduates going to college in 2021.

At one point in a group discussion, a member of the team mentioned the idea of a coral facade in homage to the marine biology aspect of our school, and thus bloomed Anthozoa High School. Anthozoa is the scientific name for coral, which also plays a large role in Hawaiian folklore and religion. In Hawaiian religion, the Kumulipo is the creation chant, and in it, it states "Hānau ka 'Uku ko'ako'a, hānau kana, he 'Ako'ako'a, puka," which means "Born was the coral polyp, born was the coral, came forth." The Kumulipo claims that life began with the coral polyp, and it is believed that coral is an Akua, or deity, that may be responsible for both life and

death for natives to the islands. In Hawaiian legends and folklore, coral reefs symbolize life, abundance, and the connection between land and sea.

Now that there was agreement among the group about our purpose and reasoning, we were ready to begin the design part of the project. In order to utilize and appreciate the warm weather and nice site our school is located on, we have created a college-like campus layout for our school with a main building, science building, dormitories, student center, gymnasium, and chapel, all to create a better school. Most importantly, the main building is the central area where students take their classes, including some Hawaiian-specific electives such as: Theology, Hawaiian folklore, traditional Hawaiian dance, and Native Hawaiian dialect such as ‘Ōlelo Hawai‘i. The science building is in partnership with NOAA and is used for both high school and college-level research on marine biology with a focus on coral restoration. The dorms are for students who either face housing difficulties or wish to stay on campus.

Our campus design reflects both the uniqueness of Hawaii and the educational needs of our students. By creating a space where academics, tradition, and community come together we hope to foster a learning environment that supports and fosters curiosity, engaging students into becoming lifelong learners and leaders. The design isn't just a plan for a better school, but for a lasting investment into the future of Hawaii's youth and education system.