

Envisioning the Dream

In 1990, a team of Advanced Placement Physics students from Konawaena High School designed, built and raced a solar-powered car across the Australian Outback becoming the first high school team to finish the World Solar Challenge, the premier solar energy auto race in the world.

The following year, the 1991 Solar Car Team raced through Europe in the Tour Del Sol. In 1993, the team traversed the U.S. mainland from California to Delaware, becoming the first solar car to cross North America.

The team's teacher, Bill Woerner, a veteran educator and visionary, realized that hands-on learning was missing in the traditional classroom setting. He believed that students needed meaningful, real-world experiences in order to succeed.

In 1993, Woerner assembled a team of educators, and together with input from students, formed a project-based curriculum. On a hardscrabble lava field, the first WHEA students began to construct their school-without-walls.

Partnerships with several key groups in Kona helped to build the school's infrastructure over time. Students, parents, staff, mentors and community volunteers poured cement, built a 3,000 square-foot workshop pavilion, put up 6,000 square-feet of shade cloth project space, constructed a 9,600 gallon reef simulation tank and a 14,000 gallon live shark display, built benches, assembled bleachers, painted, patched and pitched-in to create one of the most distinctive schools in the world.

Learning by Doing

WHEA is Hawaii's first public charter school, originally created as a school-within-a-school at Konawaena High School. It is accredited by the Western Association of Schools and Colleges (WASC) and includes a middle school (grades 6-8) and a high school (grades 9-12). With a current student body of 175, similar to many charter schools, WHEA's waitlist is steadily growing each year.

WHEA's focus is simple-to cultivate critical thinkers who are able to solve real world, complex problems. The school offers a project-based curriculum that emphasizes independent learning, technical writing, and building understanding through practical research.

The school's motto is "No Child Left Indoors," which reflects its focus on getting students outdoors and into the community to participate in meaningful hands-on educational experiences. Most of its projects are marine, malama aina (taking care of the land), or energy related.

Located at the Natural Energy Laboratory of Hawaii Authority at Keahole Point, WHEA is within walking distance of tide pools where organisms are often collected for study and research. Additional features of the school include an octopus tank, shark tank, bat ray tank, electric car exhibit and a green house area.

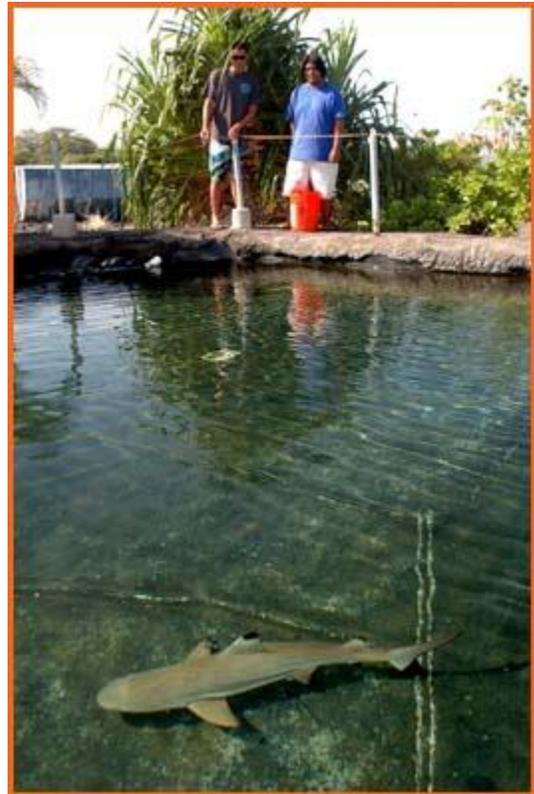
According to Hawaii State assessment scores, charter students appear to perform better on standardized tests, benefiting from small school settings and hands-on practices. At WHEA, smaller learning environments and dedicated faculty and staff help students to feel safe, important and cared for. Students also are empowered to take an active role in their education by providing a voice in the selection of issues and the means by which those issues are addressed.

WHEA's efforts have been recognized positively within the education and business communities. In 2005, it was among 20 outstanding schools recognized by Intel and Scholastic for displaying exemplary educational practices. In addition, Blue Ribbon Schools selected WHEA to receive the high school Schools of Distinction Award for Science Achievement.

Adapting to Change

Since it was first created, WHEA has practiced what it teaches by being independent and self-sufficient when possible. However, facilities and funding issues continue to challenge the school's mission and the ability to respond to students' needs in a constantly changing world.

As a charter school, WHEA is able to operate independently of the Hawaii Department of Education and exercise autonomy in operations, curricular approaches and governance. The school values its good standing in the community and therefore, its board and administration continue to follow its standards and best practices guidelines, including transparency on all governance matters.



Although charter schools are public schools, they do not receive facilities funds. They, including WHEA, must pay lease and utility fees out of its instructional funds, even though they are constitutionally entitled to support from the state.

Unfortunately, sharp budget reductions have resulted in significant decreases in the "per student" allotment, while enrollments at charter schools continue to rise. As a result of the inability to receive state funding for facilities, installation of WHEA's existing infrastructure has taken place little by little, over a long period of time.

In addition, the current campus is often affected by inclement weather and noise. A need for a science or wet lab, as well as more opportunities to provide STEM learning (science, technology, engineering and mathematics) in a classroom setting is desired. The new education center will help to address many of these issues, and provide students with a more dynamic, cutting edge campus.

The School for Tomorrow

When buildings go up first, ideas come most often as afterthoughts-very few good ideas are intended to fit inside four walls. For WHEA, the ideas came first and since 1994, they have been tested and proven by teachers and students.

WHEA is now ready to put up a school around big global ideas. A two-phased plan is underway to build a model environmental education center. With a vision in place as bold as the ideas behind it, WHEA is ready to move forward as the School for Tomorrow.



The new campus will accommodate the needs of students by providing a meaningful and personally relevant education in real-world settings. Indoor and outdoor spaces will allow for a variety of experiences, while also mitigating issues related to noise and bad weather.

Community involvement and partnerships will be strengthened with a new center. Facilities, such as an open amphitheater, will bring individuals, families, and groups together for gatherings, musical performances and special events.

The campus will promote environmental stewardship with a "green" building and module design. Elements of the Hawaiian culture and way of life will be present throughout the campus as well,

including the study of sea life with a new aquaculture area, and green houses and agricultural areas that feature indigenous plants.

New buildings and structures will enable teachers and students to employ educational concepts that are proven to work using academically challenging, hands-on tasks. Several teaching areas for the middle and high schools will provide convenient places to work on and report on projects.

The variety of features of the new educational center will serve as a model for project-based education to a larger audience. Not only will it be an example in the fields of science and technology, it will also apply to arts and humanities as well, with the availability of media and music rooms and an art area.

WHEA's New Campus Features

Buildings:

- Administration Building with staff office space. Includes several conference rooms for meetings and student counseling
- Student Union/Food Service with certified kitchen
- High School and Middle School Computer Labs with library space for each
- Multi-Purpose Lab with sinks
- High School Teaching Areas (12).
- Middle School Teaching Areas (2)
- Student Locker Area
- Bathrooms
- Media/Music Rooms (2)
- Shop Areas (2)
- Art Area
- Project Storage Areas (2)



Additional Structures:

- Shark and Reef Lagoon
- Tide Pool Touch Tank
- Green Houses (2)
- Open Amphitheater
- Aquaculture Area with tanks (2)
- Shade Cloth Agriculture Areas (2)
- Field Space, Track and Multi-Purpose Court (for basketball, volleyball and tennis)
- Outside Showers

- Native Hawaiian Fishpond
- Wet Labs (2)

Reaching Higher

The Kailua-Kona community has always been a vibrant and special place. For many families who live there, WHEA provides their children with a choice—a different way of learning that encourages them to think out of the box. It also empowers them to take an active role in their education and reach higher. It is a real education for the real world.

The ground-breaking school for the future is embarking on a capital campaign to help fulfill its mission and continue to flourish. The Explorations Foundation, a nonprofit organization, was recently established to help build WHEA's model environmental education center by partnering with individuals, businesses and organizations who want to make a difference.

Your support for this campaign will help to ensure that children at WHEA are nurtured and challenged today, as well as successful in what they choose to become tomorrow.