earth INHERITORS

As future stewards of our planet, our kids will be entrusted with the protection and preservation of an environment already under siege. Despite the challenges that await them, many young people are eager to jump in and make an impact. Fortunately there are several groups, schools and organizations in the South Bay helping nurture their natural instincts. We met with a handful of educators, lending their knowledge and passion as an investment in the future.

WRITTEN BY MICHELE GARBER | PHOTOGRAPHED BY NANCY PASTOR

"We could never have loved the earth so well if we had had no childhood in it."

—George Eliot, *The Mill on the Floss*

As Southern Californians, we are fortunate to live in a region with unrivaled natural resources and beauty. Within a short walk or drive from our homes, we find a vast array of indigenous flora and fauna and a diverse tableau of microclimates. Yet for all the natural beauty that surrounds us, it is no surprise to learn that today's children are spending increasingly less time outdoors playing and interacting with nature.

A constant din of news reports laments increasing rates of childhood obesity, which has in fact doubled in the past 20 years. We hear mounting concerns over the adverse effects of overused technology. And according to the American Academy of Pediatrics, children spend an astounding average of seven hours per day on entertainment media including TV, computers, phones and other electronic devices.

In fact, from 1981 to 1997 children's free playtime dropped 25%. Generation Z is expected to be the first generation to have a shorter lifespan than preceding generations.

Anyone over 40 will reminisce about the days when kids played outside, unsupervised, until the street lights came on. Those days are certainly gone. But in spite of the cautionary tales of today's children being overscheduled, stressed out and removed from the natural world, Millennials and Gen Z are actually far more environmentally aware and concerned then prior generations, which is hopeful.

So we took a look around our own community and found inspiring stories of kids learning about nature and wildlife while very young, and teens translating that knowledge into action during young adulthood.

Twin brothers Austin Nash and Brandon Nash developed a love of the wilderness and conservation as young boys while traveling to national parks with their parents. Experiencing firsthand the majestic beauty of these national treasures fostered an early and deep appreciation of nature in both brothers.

As Brandon shares, "We realized how special those places are and how important it is to protect them. We wanted to get involved with conservation, and since we can't go to national parks every weekend and we live in a beautiful peninsula, we realized there were opportunities to get involved in our own backyard."

A few years ago the Nash brothers, along with friends in their Los Hermanos volunteer group, participated in an event at White Point Nature Preserve organized by the Palos Verdes Peninsula Land Conservancy (PVPLC). Impressed by the overall event and especially the PVPLC team, the brothers were hooked and knew they had found the right volunteer organization for them.

The experience was so positive, the brothers said the day went by in a blur and didn't feel like work at all. They have continued volunteering with PVPLC at many events, but their favorite PVPLC program is Adopt a Plot.

"We adopted a PVPLC plot at Agua Amarga Canyon in Rancho Palos Verdes," explains Austin. "My brother and I lead a group of our friends from our Los Hermanos volunteer group. We, along with our friends, tend to our plot almost every weekend, though we do so more frequently in the summer months. In the area of our plot there were already some native plants in place. Our job is to take care of native plants, especially watering in dry months. And when it rains, then we're weeding out invasive plants. Recently we planted four new baby willow trees in the plot. On our plot there is a riparian section with a seasonal stream with a square piece of land adjacent to it. We've planted native plants in a grid fashion for intense restoration of the natural habitat. Our plot keeps expanding."

Austin and Brandon are now part of the PVPLC Team Leader Program. "It's more beneficial to the organization for us to help the volunteers instead of being another person pulling up weeds," Austin says. "So when there is a larger-scale volunteer event—for example, recently for MLK day—I'll work with the volunteer coordinator, and I'm assigned to an area and to lead a group of volunteers. I'm there to answer questions and to be working too, but also watching their work to ensure they're not pulling out the wrong plants."

Brandon adds, "We did a Team Leader training to further our familiarity with native plants and how to operate the volunteer program. So we both work as team leaders on the volunteer days, which rotate between the different PVPLC preserves."

Through their volunteer work with PVPLC, Brandon and Austin have developed a variety of skills, seen tangible results of their efforts, honed their leadership capabilities and realized the value and satisfaction that comes with inspiring others to do good. What is perhaps even more significant: The Nash brothers credit their work with PVPLC with helping them discover their individual callings.

Austin has found his true passion in science and plans to pursue a career in biology and environmental science. He has already attended two prestigious research field expeditions in Yosemite and the Galapagos Islands and is currently applying for spots in three expeditions, including one in Boulder and another in Antarctica.

Austin and his friend Jonathan Wang founded a club at PVHS called the Green School Initiative, which educates and encourages its members to be more environmentally conscience citizens. It offers students who are passionate about being green a safe place to express that passion.

The club also initiates ways for PVHS to make green changes on campus and improve its sustainability practices. Some of these changes include water refilling stations, using rain collection barrels and installing solar panels on campus. As a result of the Green School Initiative, PVHS was recently named a Green Ribbon School.

Austin is also an avid nature photographer, and his work has won awards and been featured in photo exhibitions. Ultimately, he aspires to become a researcher or professor.

Brandon has developed a passion for the business of conservation and aspires to pursue a career in an arena that will influence global policies for sustainability. Whether he ultimately works in the public or private sector, his dream is to develop a global standard supported by government and NGO entities that can slow and eventually stop climate change.

In this pursuit, Brandon is taking science and business courses and is involved with PVHS Model U.N. to hone his policy-making skills. He believes if all entities get on board, we can truly effect change on a global scale. As part of Model U.N., Brandon created a website for the group. He is currently treasurer, and next year he will serve as secretary general.

Austin's and Brandon's passion and activism have garnered many well-deserved honors and accolades, for which they are humbled and proud. Among these, the Nash brothers were chosen to be the keynote speakers at this year's Palos Verdes Pastoral—the exclusive annual fundraising event to benefit the Palos Verdes Peninsula Land Conservancy. Held at Terranea, the intimate, sold-out event welcomed 200 PVPLC top donors for a handcrafted, organic, chef-prepared, farm-to-table dinner.

After the Nash brothers delivered their speech, they were approached by many attendees who thanked them for their dedication to protecting and enhancing Palos Verdes. Guests spoke of being inspired by the Nash brothers' work and pleased to see that today's youth are willing to take up the cause. Others expressed their pleasure in knowing their donations are being well utilized.

"Teens get a bad rap," Austin explains, "but the guests at the Pastoral—after hearing our speech and about the work we do—can take comfort that our generation will be the change they want to see." Brandon adds, "We gave them hope."

Research shows a correlation between early exposure to nature and wildlife and an enhanced empathy, appreciation and respect for the natural world and all living beings. It is also thought that the earlier in one's youth this exposure occurs, the more profound and enduring the connection to nature will be.

Sunny Dallafior and her Traveling Nature Class are proof positive that creating a rapport between children and animals can have a meaningful and lasting effect. Miss Sunny, as kids fondly call her, shares her love of all creatures with groups of curious children in a hands-on, symbiotic and controlled environment. The Traveling Nature Class brings a menagerie of live animals into classrooms and other interactive settings, giving children an opportunity to see and touch a wide variety of unusual species while learning about the importance of our ecosystem and the unique role each living being plays in our world.

One of the primary goals of the Traveling Nature Class is to teach children to respect animals and not to fear them. By understanding the unique characteristics and idiosyncrasies of individual species—while also learning how to safely and properly handle each animal—children broaden their appreciation for the animal kingdom and our remarkable planet.

At each Traveling Nature Class, Sunny brings a wide variety of critters that are appropriate for the age group. Animals presented during a class may include hedgehogs, chinchillas, a ferret, longhaired rabbits, a miniature pig, bearded dragons, a tegu, skinks, an eclectus

SIBLING CAVALRY
Austin and Brandon at work with volunteers of the Palos Verdes Peninsula Land Conservancy

Earth Inheritors

WILD THINGS
Kids meet new friends at the Traveling Nature Class.

parrot, and a variety of frogs, snakes and lizards. Sunny can also customize her class to address specific scientific subjects currently being studied by a class such as invertebrates ... humorously nicknamed The Bug Program.

The Traveling Nature Class visits schools throughout Southern California. Based in the South Bay, Sunny conducts annual classes in several local schools. She also visits campuses as far away as Pasadena, Palmdale/Lancaster and throughout Orange County.

Sunny primarily works with preschool and elementary school children, but middle and high schools also bring in her class. She also offers classes at local libraries and many private events.

On the day we visited the Traveling Nature Class, Sunny was working in a Manhattan Beach preschool. With her guidance, the 3- to 4-year-old students were unafraid of these unusual (and often villainized) creatures. Many kids had snakes draped around their arms and shoulders, while lizards, frogs, chinchillas and bunnies rested calmly in other kids' arms and laps. It is inspiring to see the unbridled enthusiasm and curiosity of these young children as they experience interacting with these unique animals up close.

As Sunny explains, "The biggest benefit of our program is that we get kids interested in all living creatures. They learn to care about other beings and understand that we share this planet and that human actions can have an effect on other species. It changes their viewpoint and subsequent behavior and encourages them to appreciate nature and want to conserve our precious earth."

She goes on to say, "When working with children and animals, I'm often reminded of the famous Lorax quote: 'Unless someone like you cares a whole awful lot, nothing is going to get better. It's not.'"

Much like the Traveling Nature Class teaches children about terrestrial and amphibious creatures, The SEA Lab in Redondo Beach—a marine education and science center—teaches kids about marine life and coastal conservation, also through a hands-on interactive experience. Located near the Redondo Harbor, The SEA Lab welcomes approximately 10,000 kids each year to its facility located steps away from the Pacific Ocean.

At The SEA Lab, visitors can tour an exhibition on all things water—from osmosis to droughts to variations between saltwater and freshwater sea life. The facility has open tanks with a wide variety of local marine animals as well as aquariums with underwater ecosystems on display.

Many children visiting The SEA Lab come on field trips from schools throughout the Southland, typically in groups of 60 to 75 students. Their visit is divided into three 45-minute activities, including a guided, hands-on tour of the facility where kids are able to touch sea animals; a beach exploration; and an instructional period specifically tailored to the grade level of the visiting students.

According to The SEA Lab director Maria Madrigal, some groups of students come from inland schools. It's not unusual for their trip to SEA Lab to be their first time seeing the ocean.

In addition to field trips, homeschooled children visit The SEA Lab to meet their science curriculum. The SEA Lab also plays host to private events such as birthday parties. One of The SEA Lab's more popular programs is summer camp, where kids can study and interact with marine science in a more in-depth, specialized educational program.

Since 1997, The SEA Lab has been operated and managed by the Los Angeles Conservation Corps. The SEA Lab team includes four full-time staff members and dozens of local volunteers. As a part of the LA Conservation Corps, a group of 15 to 20 interns play a crucial role in handling the daily operations at The SEA Lab. The Corps interns are comprised mostly of college students pursuing careers in marine biology and other relevant fields of science.

"Many of our interns choose to work at The SEA Lab because of a love of the ocean and sea life, along with a desire to work with children," Maria shares. "They want to inspire future generations and teach them about respecting the ocean and the critical importance of conservation."

Numerous studies have shown that when a love of nature is imbued early in one's youth—much like it was for Austin and Brandon—it often develops into a full-blown passion by young adulthood, inspiring more dedicated pursuit. The 515 students at Environmental Charter High School (ECHS) in Lawndale are emblematic of that passion.

At ECHS and its two sister middle schools in Gardena and Inglewood, students opt out of attending a traditional public school to pursue a more academically challenging curriculum that utilizes the environment as a base to develop and enhance problem-solving and critical thinking skills. ECHS offers students a rigorous college-prep curriculum, requiring each student to complete the A-G coursework required for acceptance into UC and CSU systems. Many students at ECHS aspire to continue their studies at universities offering degrees in environmental studies or to pursue green careers.

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Opened in 2000, Environmental Charter High School is the brainchild of founder and executive director Alison Suffet Diaz, an attorney-turned-teacher whose groundbreaking idea to start a charter school teaching academics through the prism of the environment came to her while working in the classroom.

"When I was teaching," Alison explains, "I discovered that if I could get kids to care about local issues and they in turn could see that they had the power to do something about those issues and be the change that they aspired to be, they were willing to do the work, put in the hours and take the classes needed to achieve their goals."

ECHS is a public high school serving grades 9–12. Like so many outstanding charter schools in LA and throughout California, there are far more students who desire to attend ECHS than there are eligible spots in the school. Thus admission to ECHS is offered through a lottery system. Each year approximately 300 students apply for 130 incoming freshman spots. There are typically between 100 to 150 students wait-listed to attend ECHS each year.

The ECHS campus is often referred to as a "living textbook." It is quite literally an outdoor classroom ... a living, breathing science lab where students are engaged and empowered to implement their ideas for sustainability and see the tangible results of their green projects.

Students feel responsible and invested in their school. ECHS proudly and enthusiastically offers student-guided tours of the cam-

WATER WORKS
Ocean appreciation in action at The SEA Lab

pus. These tours are typically led by top students. The day of our tour we met Carolyn Lam, who fortuitously moved to California from Virginia in ninth grade and won the lottery to attend ECHS.

Carolyn is a Green Ambassador and is currently writing her senior thesis on pollution. She won an Air Quality Management District Award for her work.

At the entrance of ECHS is the amphitheatre, made of urbanite—recycled concrete taken from other locations on the campus. The urbanite was then broken into smaller pieces and placed strategically to create the welcoming student gathering area.

On rainy days, the center of the campus would often flood. ECHS students came up with the idea to create a living stream to handle excess water flow when it's raining and provide a source for conducting water experiments year-round.

The school has a living wall and a solar-powered greenhouse. There are organic fruit trees spread throughout the campus that double as "seasonal snack machines," where students can eat the fruit they want if it's in season.

Bunnies and chickens, cared for by students, roam the school. There is a cistern, rain collection barrels and swales, along with the dry riverbed to prevent excess runoff and recycle water more efficiently. ECHS promotes composting, recycling and minimizing waste. There are also systems in place to reduce electricity and water consumption.

ECHS has an on-campus lab with 3-D printers where students are currently designing and building tiny homes and an on-campus, student-run store selling a variety of sustainable items. The school also has its own bike shop, of which the students are especially proud. At the shop, students are able to rent bikes for a minimal fee, and they are also encouraged to build and repair bikes—adding to their learning experience.

ECHS is exceptionally proud of its Green Ambassador Program. Originally started to mentor and train its own students and staff, the program has now become a model for other green schools around the country and offers training and development to instructors from other schools through the Green Ambassador Program.

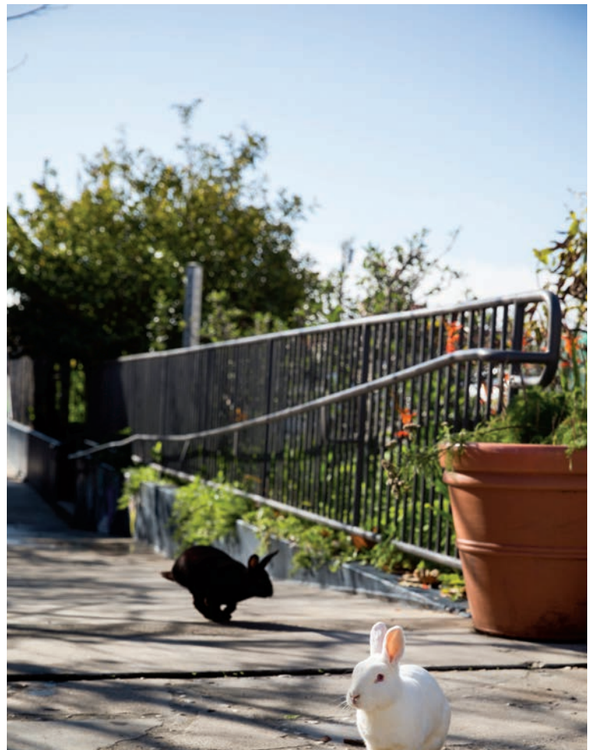
Perhaps what is most outstanding about ECHS is its impressive graduation rates and its outstanding ability to prepare students for future success. Located in South LA, ECHS primarily educates children from underserved communities. More than 75% of the student body qualify for free or reduced-price meals, and the diverse makeup of the student population is approximately 68% Hispanic, 20% African American, 6% Asian and 4% Caucasian.

Many of ECHS' graduates are the first to graduate high school in their families. A notable 98% of ECHS graduating students have completed the required coursework for admission to a four-year university or college (the California statewide average is 35%). Approximately 78% of ECHS graduates go on to attend college.

It is this extraordinary success in inspiring and educating children that has garnered ECHS numerous awards and accolades, including being named in the top 3% of U.S. public high schools by U.S. News & World Report, receiving a California Gold Ribbon School award and a National Green Ribbon School award and Green Leadership award, to name but a few.

Alison, who also serves on the board of Green Schools National Network, is certainly proud of the numerous accolades the Environmental Charter Schools have received. Yet she sites that the most essential element to making the schools so effective is that they create a positive and collaborative learning environment.

"Community is critical for the success of any school," she says. "We are creating a family and a community in our schools. If you build a community and the kids feel a part of that, and the teachers feel supported and that they are making a difference—which they are ... well then, that's the magic." ●



SUSTAINABLE STUDY
Mother Nature rules at Environmental Charter High School.