

U.S. DEPARTMENT OF EDUCATION
GreenRibbonSchools
School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades early learning to 12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools

Name of Principal: **Mr. Lee Fertig**

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: **The Nueva School**

(As it should appear on an award)

**Private Schools: If the information requested is not applicable, write N/A in the space*

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.



Date: 19 Jan 2021

(Principal's Signature)

Name of Superintendent: **N/A**

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)

District Name: **N/A**

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Date: **N/A**

(Superintendent's Signature)



Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: **California Department of Education**

Name of Nominating Authority: **State Superintendent of Public Instruction Tony Thurmond**

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.


(Nominating Authority's Signature)

Date: February 18, 2021

SUBMISSION

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: December 31, 2023

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.



The Nueva School

California Private School Nominee to
U.S. Department of Education Green Ribbon Schools



Prepared By:
California Department of Education
School Facilities and Transportation Services Division
[Green Ribbon Schools Award Program](#)
February 2021

PART II – SUMMARY OF ACHIEVEMENTS

The Nueva School, Hillsborough and San Mateo, Calif.

The Tale of Two Campuses

Since its founding in 1967, The Nueva School (“Nueva”), an independent PreK-12 school serving gifted learners, has emphasized environmental education and awareness. The school has a current enrollment of 955 students; the Hillsborough campus serves lower and middle school divisions, and the San Mateo campus serves the upper school division. The Hillsborough campus offers nearly 34 beautiful wooded acres for environmental exploration, gardening, nature immersion, and various studies of ecological systems and processes. In contrast, the San Mateo campus reflects a sustainable urban design and features easy access to public transit.

As the school grew, Nueva added new campus facilities with exemplary environmental performance, including the LEED Gold-certified Hillside Learning Center in 2007, the first LEED Gold K-12 building in the country, and the winner of the 2008 American Institute of Architects Award for School Design and Sustainability. The Hillsborough campus recently completed additions, including a LEED Gold Environmental Center and an expanded café. In 2013, Nueva built the Upper School Campus in San Mateo, which is entirely LEED Gold-certified.

Both school campuses have a comprehensive view of nature from their classrooms. The Hillsborough campus has a substantial urban forest, and the San Mateo campus has an extensive green meadow, xeriscaping, and trees. Both campuses have several outdoor classroom spaces. As part of the school's COVID-19 school reopening plans, outdoor spaces have been mapped and emphasized as learning spaces that afford COVID-19 safety and opportunities to be outdoors surrounded by nature. At the Hillsborough campus, outdoor tented spaces and newly designated forested areas are available. At the San Mateo campus, most classrooms have a retractable wall leading outside. Teachers are encouraged to leave the wall open to allow access to the outdoors and maximize airflow.

The school's operations team continuously works to reduce its environmental footprint by increasing efficiency, avoiding toxic materials, and using low-carbon technologies. Programmatic sustainability practices include eliminating single-use plastics and creating a three-stream waste disposal system. The school has high-efficiency faucets and toilets, drip irrigation and xeriscaping, green roofs, and solar photovoltaic systems that supply an estimated 22% of Nueva's total electricity needs.

A healthy campus environment is further supported by avoiding synthetic pesticides, using non-toxic cleaning supplies, ensuring sufficient ventilation and daylighting, and purchasing non-toxic chemicals for chemistry, biology, and other classes. Healthy, nutritious school lunches and daytime snacks are provided on both campuses, using locally-sourced, organically-grown, and nourishing ingredients.

Students study waste reduction strategies in many contexts, specifically in PreK, Kindergarten, sixth, and eighth grades. Kindergarteners do a full study on plastic trash, collecting a week's worth of plastic trash on campus, sorting and counting items, and developing a presentation and communication strategy for the entire Hillsborough campus. In the past year, Nueva students have phased out paper cups at the San Mateo campus and worked on multiple food sustainability studies in courses and independent study projects running for a full academic year. In 2020, upper-division students made their campus paper-cup free by switching to reusable mugs, carried out a waste audit, and piloted several zero-landfill events.

Nueva performs air quality monitoring using four Air Quality Egg sensors. Students use the air monitoring data as the primary data source for a multi-week project that investigates how to interrogate datasets and find statistically significant relationships in environmental data. Students approach this project with substantial choice—one student might study the variation in a pollutant from one part of campus to another, while another might study a different pollutant, or its variation over time, or how it compares indoors versus outdoors. Air quality monitoring is part of regular campus environmental, occupational health, and safety monitoring shared with all constituents. The data gathered supports measures to improve air quality (e.g., no idling, carpooling, active modes of transportation, campus closure).

Part of Nueva's mission is to share best practices and foster innovation. As such, the school hosts the Innovative Learning Conference (ILC) every other year, most recently in October 2019. The ILC drew more than 1,000 attendees, and 2019 saw the successful addition of an environmental track with presentations and workshops on healthy, sustainable school lunches; environmental curriculum design; and activism on climate change. Every year in January, upper school students can further expand their knowledge and pursue their passions during a four-day Intersession. From 90-minute panel discussions to multi-day workshops, Intersession offers more than 200 “learning and doing” opportunities. These academic-year opportunities are further complemented by a successful summer internship program, which matches approximately 60 students with workplace learning opportunities in a broad range of fields, including local environmental non-profit organizations, the City of San Mateo’s sustainability group, and a venture capital firm focused on the climate crisis.

The school provides students with a wide variety of environmental experiences to develop pro-environmental dispositions in their students, such as responsibility for their actions, care of the environment, and strategies for addressing environmental problems. Nueva's uniquely designed educational travel program—from local trips in San Mateo County to ecological field work in Costa Rica—provides students with extensive opportunities to study environmental systems and their connections to culture, language, history, and local economies. In the classroom, the interdisciplinary PreK-12 curriculum emphasizes the many ways that humanity depends on nature. Students hike and maintain trails in PE class, study the economics of environmental issues, explore environmental justice and equity issues in political science and government, and apply ecological philosophies in ecological humanities. Students act on their learning by representing environmental arguments at the annual Model United Nations gathering in

New York, and supporting environmental actions through voluntary and school-sponsored community engagement activities. For example, students in the Environmental Club researched the topic of fossil fuel divestment, convened stakeholder group meetings, and presented findings to the school board to engage their support.

Approximately 36 students in the middle and upper grades advocate for environmental issues through several clubs, including the Environmental Society and the Environmental Club. The Student Council's Campus Steward, an elected student position charged with advocating for and advancing campus sustainability, works with the Nueva administration and faculty to green the school through project-based efforts such as eliminating paper cups, encouraging fossil fuel divestment, designing living walls, and providing sustainable food options.

In 2019, Nueva launched the new Environmental Citizenship (EC) Program, recruiting a Director and Assistant Director. The new staff developed an EC definition, formulated the programmatic premises and principles for its work, and created a PreK-12 Macro Curriculum Blueprint. The program has developed a 3-year Strategic Plan to advance Environmental Citizenship in Nueva's Curriculum, Campus, Culture, and Community and created a Campus Sustainability document detailing specific opportunities in the areas of energy, water, waste, food, procurement, and campus culture. The program's new home will be the brand-new Environmental Center at the Hillsborough campus, completed in January 2021. The EC staff have also created new courses, including Climate Change Science & Solutions, Environmental Earth Science, and Changing Global Health Dynamics.

In the fall of 2020, a new Environmental Citizenship Ambassador program was piloted in the lower school, involving a newly created part-time role for a teacher who is skilled and passionate about creating and integrating environmental learning across the curriculum. The EC staff partner with faculty and administrators on curricular additions, refinements, and innovations, while also building regional networks of sustainability educators and coordinators to scale efforts. A first week-long Curriculum Design Workshop held in summer 2020 convened 17 teacher participants from all divisions and a variety of disciplines. The EC program also supports curriculum-adjacent activities, particularly the meaningful and consistent integration of ecological learning and performance criteria in Nueva's trip program, student mentoring in clubs, and individual projects. Nueva has both a tradition of, and a serious ongoing commitment to, environmental education while also being a steward of the environment and Earth's resources.

PART III – DOCUMENTATION OF STATE EVALUATION OF SCHOOL NOMINEE

Pillar I: Reduce Environmental Impact and Costs

Element IA: Energy

- To optimally manage its energy use, Nueva uses Building Management Systems (BMS) at both campuses to monitor, adjust, and optimize energy use, including sensor-based lighting and HVAC controls. Nueva is retrofitting buildings at the Hillsborough campus with BMS as part of general maintenance and upgrades. The new Environmental Center and expanded café have a BMS system designed to actively manage the building's energy use using occupancy sensors, real-time monitoring, and scheduling. These buildings are currently on an energy monitoring plan through their electric provider, PG&E, that sends notifications if energy consumption exceeds typical historical ranges.
- The original and older Hillsborough campus has upgraded its buildings and added new energy-efficient buildings. The Hillsborough campus' Hillside Learning Center, which houses their middle school classrooms, library, I-Lab, and the café, is LEED Gold certified. It was built in 2007 and received the 2008 American Architectural Society Award for Sustainable Architecture and Design. Nueva's entire San Mateo campus, built in 2013, is also LEED Gold certified. The school reports a 3% absolute decrease and a 14% per capita decrease in greenhouse gas (GHG) emissions for both campuses in aggregate compared with a 2016-17 baseline.
- Both campuses have Rooftop solar photovoltaic (PV) systems. The systems generate an estimated 80 MWh per year at the Hillsborough campus and 180 MWh per year at the San Mateo campus, for a combined total of 260 MWh, meeting an estimated 22% of total electricity needs for both campuses. The school saves approximately \$54,000 from solar annually.
- Nueva participates in the ECOplus rate tariff by Peninsula Clean Energy (PCE), which provides 50% of electricity consumption from 95% carbon-free renewables.
- The library and café at the Hillsborough campus feature green roofs to reduce heat island effect, and the new Environmental Center building has a cool roof. The San Mateo campus has highly reflective cool roofs. Paving is reduced at Hillsborough using decomposed granite in the parking lot.

Element IB: Water and Grounds

- Nueva's water service is through CalWater and the Town of Hillsborough Water Department. Both agencies perform regular water quality testing and inform their customers of the results, water supply improvements, and other relevant information. The school tests the drinking water fountains twice per year for lead.
- Nueva participates in the WaterSmart program designed to send alerts when there is unusually high usage. The San Mateo campus also uses a similar program, CalWater, and meters indoor and outdoor water use separately.

- The total combined water use for both campuses increased by 23.4% between 2018 and 2020. Construction at the San Mateo campus in 2018-19 and throughout 2019 and 2020 at Hillsborough, and associated student population growth, contribute to an increase in water use. However, these one-time increases in consumption will only temporarily obscure underlying trends in demand. On both campuses where significant construction has occurred and occupancy is growing, these factors will gradually level to a decreased consumption rate on a per capita basis.
- The school utilizes many water-saving tools and processes such as instant leak detection, artificial turf for several grass-covered areas on the Hillsborough campus, and low-flow toilets and urinals on both campuses.
- The landscape at the Hillsborough campus consists mostly of original trees or those that have seeded themselves out. The Hillsborough campus uses irrigation for only 30-40% of the landscaped area; the grounds feature three bioswales (~3% of the site) to replenish groundwater and capture and filter runoff. The San Mateo campus is a small urban campus with 100% xeriscaped landscaping using climate-appropriate grasses, plants, and trees.

Element IC: Waste

- Both campuses have a three-bin collection system for recyclables, compostables, and trash. Nueva reports a diversion rate of 52% from recycling and composting. The school's Facilities & Operations Team tracks waste disposal and recycling to ensure waste streams are clean enough for the school's waste disposal company, Recology.
- The Hillsborough campus has on-site composting using material from landscape maintenance and their old school garden. The old garden had a compost pile, which, together with a small compost bin outside the PreK classroom, was used in outdoor learning activities such as the PreK unit on composting. The new and more extensive school garden (currently under construction) will have more composting space, which should accommodate more compost from food waste from the school's café. Both campuses divert food waste to the municipal green waste collection for industrial-scale composting. The Hillsborough campus also mulches trees and tree branches and uses the mulch on-campus.
- Students study waste reduction strategies in many contexts, specifically in PreK, Kindergarten, sixth, and eighth grades. Kindergarteners do a full study on plastic trash, collecting a week's worth of plastic trash on campus, sorting and counting the items, and developing a presentation and communication strategy for the entire Hillsborough campus. In the past year, Nueva students have phased out paper cups at the San Mateo campus and worked on multiple food sustainability studies in courses and independent study projects running for a full academic year. In 2020, upper-division students made their campus paper-cup free by switching to reusable mugs, carried out a waste audit, and piloted several zero-landfill events. The school generates very little hazardous waste at either campus (<20 pounds) and teachers maintain the chemicals inventory and placards to ensure safety during storage, use, and disposal. Nueva manages its hazardous and chemical waste through San Mateo County and has contracted a bagging and collection service.

- Keeping most events from producing any trash that will end up in the landfill is an ongoing Nueva goal. To accomplish this goal, the school uses reusable clamshells with compostable cutlery for lunch service, has a school-wide collection of recyclables and compostables, and promotes reusable water bottles.
- The Environmental Citizenship program is partnering with the Nueva Parent Association (NPA) to move all paper forms to electronic versions. Additionally, the school uses only printing and copying paper that is FSC and Green Seal certified and at least 30% post-consumer recycled material content.

Element ID: Alternative Transportation

- Both sites are commuter sites; only a small number of students (10-20) can feasibly walk or bike to school. The school contracts with KidzJet, a private bus company, to transport students to and from school, between the campuses, and to other events. 122 students (13%) PK-12 use school-provided buses/vans. Located near public transportation, many upper school students and staff use CalTrain, the local commuter rail. In the 2019-20 school year, the school provided 66 upper school faculty and staff members (46.4%) and 370 students (87.5%) with a CalTrain Go pass.
- The San Mateo campus has implemented a safe route to school from the Hillsdale CalTrain train station. At the start of the school year, the school provides families with transportation information highlighting this safe passage from the train to campus. Seniors welcome students at the train station during the first days of school. The Head of the San Mateo campus also sends reminders to students about safe street crossing using crosswalks, and students discuss safe routes to school during meetings with their advisors.
- Both campuses have EV charging stations—six at Hillsborough and eight at San Mateo. Nueva provides several designated high-occupancy parking spots in preferred locations (near entrances) for which vehicles must show carpool or vanpool tags.
- The school has a no-idling policy if stopped for more than a minute for pick-up and drop-off communicated in the Student & Family Handbook. All school buses and KidzJet vans turn off their engines while waiting for students to board.
- Environmental Citizenship staff are continually working with stakeholders on various projects, including reducing paper waste, calculating Nueva's carbon footprint, researching sustainable mobility solutions for the campus, moving school forms from paper to electronic, measuring air pollution, and assessing school trip programs.

Pillar II: Improve the Health and Wellness of Students and Staff

Element IIA: Environmental Health

- Non-toxic pest management is an essential practice. To minimize toxic materials, Nueva uses natural options such as Planet Orange and noise to control and deter pests whenever possible. If more robust action is needed, the school reduces the

potential contact to people by scheduling applications outside of the academic year or on weekends, and before 6:30 am on weekdays when necessary.

- The school preferentially purchases and advises its contractors to purchase and use non-toxic, environmentally friendly products, including low- or zero-VOC products (e.g., paints, solvents, art supplies, cleaning supplies, furniture, and carpets/floor coverings), non-toxic pesticide management agents, high energy efficiency appliances, recycled content paper, non-plastic alternatives for food serving and storage, and organic, locally-grown products for the cafeteria.
- As part of COVID-19 health and safety measures, cleaning procedures are enhanced using EPA-approved products. They focus on the appropriate use of green products such as Seventh Generation wipes and hand sanitizers.
- The San Mateo campus is in Radon Zone 2; it has a moderate radon potential. The San Mateo campus was built according to LEED principles and practices, achieving Gold certification status. The building complies with Radon Resistant New Construction (RRNC) criteria to minimize radon exposure for occupants.
- Nueva's Operations and Facilities team monitors for leaks, mold, and performance issues with the school's ventilation systems.
- Nueva has upgraded the older facilities at the Hillsborough campus with acoustical tiles to improve acoustics, ensuring they are asbestos- and lead-free. The entire San Mateo campus and all recent buildings on the Hillsborough campus have good acoustics and modern safety precautions.
- Both campuses have a comprehensive view of nature from their classrooms. The Hillsborough campus has a substantial urban forest, and the San Mateo campus has an extensive green meadow, xeriscaping, and trees. Both campuses have several outdoor classroom spaces. As part of the school's COVID-19 school reopening plans, outdoor spaces have been mapped and emphasized as learning spaces that afford COVID-19 safety and opportunities to be outdoors surrounded by nature. At the Hillsborough campus, outdoor tented spaces and newly designated forested areas are available. At the San Mateo campus, most classrooms have a retractable wall leading outside. Teachers are encouraged to leave the wall open to allow access to the outdoors and maximum airflow.
- Chemicals used in science classrooms are clearly labeled and safely stored. Science teachers order supplies, keep chemicals inventoried, and supervise their use inside at the school.
- Nueva performs air quality monitoring using four Air Quality Egg sensors measuring $PM_{1.0}$, $PM_{2.5}$, PM_{10} , NO_2 , O_3 , the U.S. Air Quality Index, and some meteorological parameters (e.g., temperature, relative humidity, air pressure). The Earth Environmental Science class uses the air monitoring data as the primary data source for a multi-week project that teaches students how to interrogate datasets and find statistically significant relationships in environmental data. Students approach this project with substantial choice—one student might study the variation in a pollutant from one part of campus to another, while another might study a different pollutant, or its variation over time, or how it compares indoors vs. outdoors, etc. Air quality monitoring is part of regular campus environmental and occupational

health and safety monitoring shared with all constituents. The data gathered supports measures to improve air quality (e.g., no idling, carpooling, active modes of transportation, campus closure).

Element IIB: Nutrition and Fitness

- Together with foodservice partner Epicurean Group, Nueva focuses on healthy, sustainable, and locally-sourced nutrition. The school website provides the weekly menu, including nutrition and sourcing information. Foodservice provides pre-packaged food in reusable clamshell containers with compostable utensils and recyclable beverage containers due to COVID-19 health and safety measures. All students and staff are encouraged to bring their reusable water/beverage bottles to campus.
- The Hillsborough campus garden is an integral part of outdoor activities and education at Nueva. Students have many diverse opportunities to connect with nature and learn how to grow food. The Kindergarteners hatch chickens each year, and they then move into the chicken coop, producing eggs that lower school students are eager to take home. Members of the Nueva community also volunteer a couple of times every year to do upgrades and repairs to recognize the garden's importance to the school. As part of efforts to expand Environmental Citizenship learning and action, the garden is in the process of being moved and enlarged. The new garden will be roughly twice as large as the current 2,600-square-foot space.
- All students in the lower grades learn in the garden. In middle and upper divisions, garden activities are optional; in the upper division, they are managed through student clubs. Classes who previously learned in the garden are continuing to learn about nature through online learning. During the 2019-20 school year, Nueva launched a new environmental club for grades 1-4 during remote learning with about 15 student participants.
- Students in the Hillsborough campus spend much time doing things outdoors, including recess time games on the sports fields and courtyards, hikes on campus, trail maintenance on campus, and outdoor-based educational activities (e.g., in math, science, art). A PE teacher works with his students to maintain the trails on the Hillsborough campus, while the Environmental Earth Science course at the upper school uses the outdoor spaces for geological mapping exercises. The San Mateo campus is in a more urban setting, with older students, but they still use their outdoor areas to play frisbee and soccer, garden, and find quiet space to work or relax.
- PE teachers at Nueva teach students about whole-body health and wellness, extending beyond physical activity to include nutrition and mental health. They use nature as both a tool and backdrop in their lessons. The first grade has 60 minutes of physical education per week, which increases to 95 minutes per week for fourth grade. Almost all MS students have more than 120 minutes per week.
- Nueva engages a whole-health approach. The school health office and the counselor's offices are grouped in a quiet part of each campus, inviting students to seek advice, treatment, and other support in an inviting and private setting.

Pillar III: Provide Effective Environmental and Sustainability Education

Element IIIA: Interdisciplinary Learning

- Nueva is using a multifaceted approach to advance environmental policies and practices throughout the school. As part of that, Nueva invites all stakeholders, including the senior leadership team, teachers, staff, students, parents, and alumni, to make the school more sustainable. Some implemented environmental policies are:
 - The EC program actively pursues environmental education design and campus ecological initiatives. It has developed a 3-year Strategic Plan to advance Environmental Citizenship in Nueva's Curriculum, Campus, Culture, and Community and created a Campus Sustainability document detailing specific opportunities in the areas of energy, water, waste, food, procurement, and campus culture.
 - The Facilities & Operations team continuously seeks to reduce resource consumption and incorporates environmental design objectives in retrofits and new construction.
 - Several student clubs in all divisions work on self-selected projects throughout the school year, such as divestment, sustainable food options, and hydration stations.
 - Teachers and staff propose and work on topics and ideas they feel passionate about, and in which they have special skills. Examples include trail maintenance and urban forest management, preserving Monarch butterfly habitat, gardening, food systems, and air quality monitoring and modeling.
- Environmental and sustainability concepts form the backbone of science education at Nueva, especially in lower and middle school. For example, Kindergarteners do a full study on plastic trash, collecting a week's worth of plastic trash on campus, sorting and counting the items, and developing a presentation and communication strategy for the entire Hillsborough campus. There is also substantial integration of hands-on nature exploration and lessons in the school garden. Middle school students conduct a months-long interdisciplinary sustainable living project combining work in their science, math, language, and writing. Several core academic and elective courses in the upper grades have an environmental science focus, including Environmental Earth Science, Environmental Economics, Climate Change Science & Solutions, Ecological Humanities, Engaged Citizenship, Biology 101, Introduction to Social Justice, Activism 101, Environmental Change and Justice, Electric Bike Building, and Zoological Engineering and Design.
- The Environmental Citizenship (EC) Ambassador Program launched in the Fall of 2020 at Nueva's lower school. The program is application-based and selects one teacher representative in each division to work as the Environmental Citizenship liaison between the division and the EC program staff to develop and support (i) environmental curriculum design and implementation, (ii) ecological initiatives (campus and beyond), (iii) environmental professional development, and other activities. Nueva is committed to making Environmental Citizenship one of their

educational pillars alongside Social-Emotional Learning and Design Thinking. The new EC program at Nueva systematically develops more specific policies to integrate curriculum across the curriculum and educational activities. The program's Transfer Goals and Essential Understandings design use the California Next Generation Science Standards and Environmental Principles and Concepts to form Nueva's curricular blueprint.

- With help from students with both educational and environmental leadership interests, EC staff facilitated a June 2020 summer curriculum development workshop on Environmental Citizenship for a group of 17 teacher participants from across all three divisions and disciplines (science, humanities, arts, language, math).
- A Green Schoolyards vision is integrated through the planning of outdoor learning spaces and educational program designs at Nueva. All infrastructure upgrades and new construction at Nueva rest on the principle of creating optimal learning spaces while minimizing environmental impacts. The EC program staff also participate in the National COVID-19 Outdoor Learning Initiative with a group of K-12 educators and administrators, spearheaded by Green Schoolyards America and the San Mateo County Office of Education.
- Student environmental clubs on both campuses work on campus sustainability initiatives and community awareness campaigns. There are also other pathways for students to engage in environmental leadership, such as the collaboration between the Student Fossil Fuel Divestment Club and the School Board Finance Committee. Representatives from the student government also collaborate with the Environmental Citizenship team to work with the school administration to identify and specify school sustainability issues.
- Student clubs also conduct fieldwork. For example, the Marine Biology Club partners with LiMPETS (limpets.org) to use Citizen Science tools to collect data. Longer study trips include a trip to Bonaire, for coral reef restoration; Alaska, to learn about subsistence living; Costa Rica, to study ecology and biodiversity; Montana, to observe conservation practices on private lands; and Peru, to study sustainable practices in agriculture and food production.
- All grades engage in Community Service Learning (CSL) Days and field trips (e.g., Earth Day celebrations). Nueva hosts several CSL Days and Community Action Days throughout the school year. For example, middle school students spend a day among several local organizations learning and engaged in service work on food sustainability and food equity. Nueva students participate in CSL Clubs in the upper school and middle school. Since the start of the 2019-20 school year, a Nueva CSL Task Force has systematically researched effective, more meaningful, long-term, and engaging CSL programs and built vital bridges to existing programs, including Environmental Citizenship and Social Justice & Equity.
- Nueva's curriculum offers several environmental field trips each semester across all grades and different subject areas.
 - Upper school trips include Devil's Slide, Hillsborough field sampling, and CSL days related to the environment.

- The middle school field trips are: 5th: Fitzgerald Marine Reserve, Hubbard Park, Crow Canyon; 6th: Sustainable Homes - Tah Mah Lah, 7th: The Great Outdoors overnight, CSL day; 8th: CSL day on food systems and sustainability, Pie Ranch.
- Lower school visits include The Pie Ranch, and Adventure Playground in Berkeley.
- Students at Nueva's Hillsborough campus engage in place-based environmental education and its intersections with identity, culture, history, and community. Some examples include: lower school students study the Ohlone, the original inhabitants of the land; a middle school elective critically engaged with changing notions of "for whom" the wilderness should be preserved; and a group of upper school students recently started a Forestry Club dedicated to immersive experiences in local forests. Many grades begin the year with multi-day outdoor experiences that build community in, and connection to, nature. Lower school students use the campus as a constant source of inspiration for their science course, and upper school courses in biology makes use of a local pond to study water quality, identify plants, and inspire biophilic design, while statistics students use campus-generated building management data to model energy use.

Element IIIB: STEM Content, Knowledge, and Skills

- Science, math, and engineering teachers at Nueva use environmental and sustainability concepts in a project-based learning application, such as designing electric bicycles or using building energy use data for modeling in statistics. The school's makerspace (I-Lab) develops Design Thinking skills in middle school and upper school, often applying them to environmental topics. The EC program has found environmental integration opportunities across many different disciplines. Some curriculum examples include (i) a unit on water quality chemistry in upper school chemistry, (ii) a sustainability-focused data analysis and visualization module in middle school math and science, and (iii) a new garden unit for lower school. These curriculum development efforts were outputs of the EC program's first week-long curriculum development workshop, held virtually in summer 2020.
- Teachers at Nueva individualize career thinking and focus on students' passions and interests. Each student has an assigned mentor during a year-long investigation on a topic of their interest. Many apply to the Youth Climate Ambassador Fellowship run by the San Mateo County Office of Education. One such project became a non-profit to reduce food waste while the Nueva alum was at Stanford.
- The Nueva Internship Program offers a broad range of opportunities for students to experience professional environments and fields. Sixty students participate in workplace learning opportunities with businesses such as Acterra, Sustainable San Mateo, Students for Carbon Dividends, and a venture capital firm focused on the climate crisis.
- The Hillsborough campus is used extensively for outdoor learning by the lower and middle schools. The lower school studies soil, flora and fauna, and watersheds in grades 1-4. For example, third grade studies landforms and erosion; students use

"unofficial hillside paths" on-campus to understand the effects of erosion on plant health and slope stability. They then test the influences of sediment type, water flow, and foot traffic on erosion and the benefits of different erosion prevention techniques.

Element IIIC: Civic Knowledge and Skills

- In upper school and middle school, student clubs with environmental objectives participate in a range of community volunteer events. The Climate Action Club, the Environmental Society, the AI, Climate Change Club, the Limpets Club, the Divestment Club, and the Environmental Club conduct projects, organize beach clean-ups and tide-pooling events, host speakers, and promote campus environmental action.
- Students also organize and participate in civic activities such as Fridays for Future strikes and Right to Water marches. The EC program promotes students' activities through weekly electronic newsletters, emails, and announcements.
- In 2011, middle school students won the Scholastic EcoChallenge award to halt water diversion from the Trinity River to the Central Valley.
- Nueva also has a tradition of community-building and outdoor focused camping trips, including 5-12 grades to Russian River, Big Basin, American River, Portola Redwoods, and other sites. The upper school student council retreats went to the Marin Headlands, Point Reyes and Mt. Herman. Optional trips with various themes, but always including exposure to different environments and cultures, occur during school breaks and the summer and include Bonaire for coral reef restoration in 9th and 12th; Cuba in 10-12th; and Columbia in 10-12th.
- The coursework at Nueva teaches students to learn and then apply the learning of environmental justice to their work. Students do not always have direct government agency interaction, but they look at how they can affect environmental justice through fieldwork. These investigations start in the lower school and expand in-depth for the upper grades. The lower school study of local historical indigenous peoples, for example, looks at how and where they lived, what plants and animals they ate and used for medicinal purposes, how tribes traded with each other, and what environmental constraints they had.
- Nueva has made Environmental Citizenship a central program in its educational mission. The school pursues this mission with the support of a few essential partnerships and networks. Nueva is a member of the California Association of Independent Schools (CAIS) and the Collaborative on Innovation in Education (CIE). Both organizations provide opportunities for exchange, support, and learning in environmental and outdoor education. Locally, the EC program builds a network of educators and administrators working on environmental education and sustainable schools. Nueva has also joined an informal network of sustainability educators maintained by the Head Royce School in Oakland.
- Since 2007, the biennial Innovative Learning Conference is another vehicle through which Nueva engages with communities of educators, scholars, practitioners, and interested parties to advance education and associated practices, including in the

environmental domain. For example, in 2019, "Sustainability: Wellness for Our Shared Future" was one of the main topics. That year, the conference had 1,200 registered participants, drawing teachers from both nearby schools as well as participants from other countries.