

U.S. DEPARTMENT OF EDUCATION



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

☐ Public ☐ Charter ☐ Title I ☐ Magnet ☒ Private ☐ Independent ☐ Rural

Name of Principal: **Mr. Tim Molak**

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

Official School Name: **Woodside Priory School**

(As it should appear on an award)

Official School Name Mailing Address: **302 Portola Rd. Portola Valley, CA 94028**

(If address is P.O. Box, also include street address.)

County: **San Mateo** State School Code Number *: **41 69062 6940217**

Telephone: **(650) 851-8221** Fax: **(650) 851-2839**

Web site/URL: <https://www.prioryca.org/> E-mail: tmolak@prioryca.org

**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.



(Principal's Signature)

Date: 1/31/2020



Name of Superintendent: N/A

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

District Name:

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

N/A

Date:

(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.

A handwritten signature in blue ink that reads "Tony Thurmond".

Date: February 10, 2020

(Nominating Authority's Signature)

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: March 31, 2021

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.



Woodside Priory 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 2020

PART II – SUMMARY OF ACHIEVEMENTS

Woodside Priory School, Portola Valley, Calif.

Where technology meets back-to-roots education

The Woodside Priory School (Priory) is a private and independent college preparatory school serving 6th through 12th grade day and boarding students in Portola Valley, California. Priory's motto, "Ora et Labora" [Prayer & Work], connects it with its history of the monasteries of the Benedictine Catholic tradition. The school's mission is centered on the ideals of lifelong learning and stewardship. The concepts of *Service* and *Balance* are central to the student experience as demonstrated by a focus on student service-learning. Priory encourages the alignment of education, stewardship, and collaboration; this focus is evident in the school's community life, program, pedagogy, and campus operations.

The efforts to create a sustainable school began in 2009 with a student-formed Sustainability Club. The student-led club worked with a faculty moderator, leading to the establishment of the Faculty Sustainability Committee in 2010. In 2012, the school appointed the club moderator/committee facilitator to the role of Sustainability Coordinator to collaborate with the school community as well as with representatives from the local utilities. In 2017, the title changed to Sustainability Director to acknowledge the multi-dimensional aspects of school sustainability, from community life and culture to educational programs and campus operations.

Priory began on-site solar generation in 2007. Today the school generates 30 to 40 percent of its electricity need. Solar panels are arrayed on the roofs of five different buildings along with one ground-mounted array. The most recent implementation of solar Photovoltaic (PV) generation on campus (2015 and 2017) scaled the size and output of the arrays to building demands to make the spaces energy-neutral or energy-positive.

Collaborative focus and efforts in sustainability have led to many initiatives and achievements. To encourage water conservation, Priory hosted a drought-planning conference for other community stakeholders, completed plumbing fixture retrofits, and installed satellite-controlled drip irrigation in the drought-tolerant campus landscaping. To reduce waste, the school consistently re-evaluates recycling and waste diversion programs. Priory has a waste diversion rate of 75 percent, and each month diverts an estimated 450 pounds of food waste from landfills. The school has instituted a large-scale composting program and hosts periodic e-waste drives to further model sustainability.

Recent high-performance construction projects include the Benedictine Classrooms (2015; 17,000 square feet), which exceed state green building requirements by 41.6%. This project earned a Sustainable San Mateo Green Building Award for the building's energy efficiency. The school's new STREAM building (2017; 9,400 square feet) exceeds state standards by 48.8% and was awarded an American Institute of Architects of California (AIA) Design Award and a Savings By Design Award from Pacific Gas & Electric.

The school's focus on sustainability goes beyond the establishment of green buildings. Priory's energy and conservation program involves third-party energy audits, Savings-By-Design initiatives with the power utility, the development of an energy benchmarking portfolio, subsidized retrofits to building equipment, and participation in the *Community Choice Energy Purchase* program that allows the school to purchase 100% renewable, greenhouse gas-free energy.

Priory's 9,000 square foot Franklin Garden is a demonstration garden that supplies the school kitchen with a daily harvest of fruits and vegetables. Founded in 2013, it has served as a place for community gatherings and educational opportunities. In 2017, the Franklin Garden Pavilion was completed and has raised the profile and appeal of the school's garden and sustainability programs.

Recent events attract members from all segments of the school community and have included workshops on canning foods, processing honey, and baking, as well as classes in various food traditions. In 2007, a performing arts theater was constructed on a former parking lot. The theater's living roof reduces the heat island effect. Tall trees scattered across the 50-acre campus, reducing the heat gain on campus roofs and roads. Nearly 30 acres of the school campus is undeveloped native grassland and mixed oak woodland habitat, and student efforts to improve habitat quality have led to a remarkable resurgence in the diversity of the school's ecological community.

Produce from the garden is a daily offering at the salad bar, and the school works with GreenLeaf to purchase local and organic fruits and vegetables for the dining program, which serves lunch daily to all students, and other meals to boarding students. Menus are created to support health, consider the ecological impact, and with an awareness of humane animal treatment. Meatless meals are increasingly served to ensure healthy options and reduce the school's environmental footprint. Students are educated about how to make healthy nutritional choices by considering the posted nutritional information.

Balance is the focus of the school's efforts to optimizing student health and wellness. In a senior exit survey, students identified anxiety, sleep deprivation, right answer addiction and cheating as barriers to their success. Specific measures in the form of Structural Reforms, Holistic/Spiritual Reforms, and Pedagogical and Programmatic Reforms for *Balance* have been initiated as part of a school initiative funded by the Edward E. Ford Foundation. Additionally, the school is a member of Challenge Success at Stanford University, which has helped the school to establish benchmarks, guidelines, and practices for improving student wellness.

In 2015-16, Priory initiated a codified approach to integrating sustainability themes across disciplines and curricula. The Faculty Sustainability Committee developed Essential Questions and Enduring Understandings for sustainability and stewardship. Priory offers sustainability classes in *Ecological Design & Sustainability*, *AP Environmental Science*, *Food Production*, *Discourse of Dining*, *Plant to Plate (Middle School)*, *Stewards in Action (Middle School)*, and *Health and Wellness*. Priory also sponsors various outdoor education experiences and summer field study trips abroad, and maintains an enduring whole-school sustainability leadership collaboration with the all-girls Daraja Academy in Kenya. School-wide assemblies further students' understanding of the social and environmental impacts of biodiversity loss, climate change, and global wealth inequality.

Priory Sustainability Club meets regularly to lead and organize outdoor activities, perform habitat restoration, and help manage the sustainable efforts of school events. Student-built contributions to the school's campus have included a 900-gallon recirculating aquaponics system, a 280-square-foot living wall, and an enclosure for the 50 chickens that eat the school kitchen's prep waste.

Class retreats allow students to focus on environmental problems and sustainability issues at various levels and in various contexts. The sophomore service-learning retreat at Priory is centered on campus service projects. Sixth graders learn about sustainable agriculture and food sourcing in the school's garden. The senior retreat takes students to an off-site organic farm. Resident students in all grade

levels also complete habitat restoration. Three all-school assemblies in the last two years have focused on opportunities for students to take action regarding biodiversity loss and climate change.

Over the last few years, Priory has emerged as a sustainability leader in the Portola Valley. Priory campus is a common destination for students from other schools to see Priory's garden, student-created aquaponics system, and living wall planter with air-purifying plants. Additionally, Priory hosted a conference for science teachers from the area, and there was a strong interest in visiting both the garden and aquaponics sites.

The school first used the U.S. Department of Education Green Ribbon Schools framework to benchmark its progress across the Three Pillars in 2014. Priory received California Green Ribbon Schools recognition from the California Association of Private School Organizations, in partnership with the California Department of Education, each year from 2014-18, ranking among the highest-achieving schools to earn Gold Level four times.

PART III – DOCUMENTATION OF STATE EVALUATION OF SCHOOL NOMINEE

Pillar I: Reduce Environmental Impact and Costs

Element IA: Energy

- In the 2018-19 cycle, Priory developed the most comprehensive analytics yet for understanding the school's energy use and opportunities for conservation. This has optimized results from voluntary energy audits (Pacific Gas and Electric (PG&E); San Mateo Energy Watch) and prioritized efficiency strategies for future construction ("Savings by Design" subsidy program). Additional initiatives include: Optimize rate pricing, Optimize PV productivity, and Purchase 100% greenhouse gas (GHG)-free energy offsets through Community Choice Aggregation (CCA). Conservation guidelines and best practices are communicated to students and faculty in student handbooks and periodically throughout the year in community announcements.
- According to historical analysis of changes in energy usage for campus electricity conservation practices, there was a 30% reduction from 2014 to 2017. Efficient equipment and offset demand due to onsite solar PV production accounted for an aggregate reduction of 600,000 kWh in electricity purchased from the utility. According to the Environmental Protection Agency (EPA) GHG calculator, this 30% decrease to the school's total energy over that time represented a savings of 440 metric tons of CO₂. As school natural gas use remained relatively constant, this portion of the school's GHG does not appear to have changed.
- Priory's energy usage is logged and analyzed via PG&E's My Energy dashboard. This allows the monitoring of changes in energy use at various intervals and helps to reveal waste patterns and opportunities for conservation and efficiency. Monthly reviews of usage patterns are conducted by the Sustainability Director.
- Energy usage information is compiled from the usage histories of 19 meters and 6 solar arrays. Over the last 10 years, the campus square footage has expanded by almost 10%, with proportional increases in the student body. Detailed calculations of changes in per-capita and per-area energy use, reflective of the changing size of the school, have not yet been quantified, but 2019 energy totals (11/18-11/19 cycle) are 3.5% lower than 2018 totals.
- The current estimate is the school generates 7-10% of total campus energy consumed, or 30-40% of electricity, through the production of solar photovoltaic energy. Solar panels are arrayed on the

roofs of five different buildings, and there is one ground-mounted array. The most recent implementation of solar PV on campus (2015 & 2017 construction) scaled the size and output of the arrays to building demands to make the spaces energy-neutral or energy-positive.

- Priory was a critical founding partner in the Town of Portola Valley's Community Choice Energy Purchase Program, which offers the offset program in conjunction with PG&E. The school purchases a portfolio equivalent of 100% renewable/100% GHG-free energy through this program.
- Priory has solicited energy campus-wide audits and equipment maintenance or upgrade suggestions from San Mateo County Energy Watch on two separate occasions, in the spring of 2012 and fall of 2017. The 2012 audit resulted in improvements to campus lighting, air-handling equipment, pool equipment, and plumbing. The 2017 audit identified additional efficiency opportunities based on changes to campus external lighting.
 - The 2012 energy audit was predicted to achieve performance 30% better than the older *Title 24* standards. Since then, architects and engineers overseeing two separate campus construction projects have utilized PG&E's Savings By Design program to implement efficiency technology to exceed code minimums for both projects.
 - Performance of the Benedictine Classrooms (2015; 17,000 square feet) exceeds *Title 24*, Part 6 code minimums by 41.6%. This project earned a Sustainable San Mateo Green Building Award for the building's energy efficiency. The school's new STREAM building (2017; 9,400 square feet) exceeds *Title 24* by 48.8% and was awarded an American Institute of Architects of California (AIA) Design Award and a Savings By Design Award from PG&E. The school's dining hall is currently being remodeled. Building standards and design considerations are consistent with previous recent construction.
- In 2007, a 9,000-square-foot performing arts theater was constructed in the place of a former parking lot. The theater's living roof is a visible demonstration of the school's efforts to reduce heat islands. Moreover, most of the campus' 50 acres are undeveloped grassland or forest. Tall trees scattered throughout the campus' built spaces and landscaping help to minimize heat gain on roofs and roads. Since 2016, accounting for new construction, about 15% of all other rooftop space is utilized for PV solar collection.
- Other efforts to reduce energy use include replacing 300 fixtures in a campus-wide lighting retrofit (2010-13), replacing gas mowers with propane, and installing a Variable Frequency Drive (VFD) on the pool pump. Priory renovated classrooms to include occupancy sensors and SmartTools for monitoring and regulating lighting, climate, and other indoor environmental factors (2012-14). The school completed a Chapel lighting retrofit (2014), opened net-zero classroom space (2015-16), and changed air conditioning units for the school's student center and cafeteria to 'peak shifting' ice block units, which use most of their energy during off-peak hours.
- The TechDisplay Committee formed in 2018 with a goal of documenting and displaying school energy use for student education and community information. This group made an extensive effort to obtain the most precise and comprehensive view of school energy use to-date. The results of these efforts were compiled as usage and cost data that can be provided to the school for targeted conservation strategies.

Element IB: Water and Grounds

- Priory strives to conserve water by implementing water-saving technology as well as encouraging water-smart behaviors. New construction, newly added landscaping areas, and enlargement of the school's athletic areas have led to increases in the aggregate use of water, while usage on an

area basis has remained stable. Water conservation strategies have included the installation of campus-wide drip irrigation, weekly monitoring of fixtures, and periodic review of watering intervals. Subsequent to the reductions realized during the drought years, the school started the installation of satellite-linked irrigation systems.

- The school has been aggressive in its efforts to conserve water in the face of California's recent drought years. Starting in 2007, the school began installing water-efficient indoor plumbing fixtures such as low-flow toilets and waterless urinals. Since 2013, a combination of drought-tolerant landscaping with drip irrigation, extensive mulching, and carefully monitored timer schedules have been used throughout the landscaping. Since 2014, the facilities and maintenance team have worked diligently to find and repair leaks in campus plumbing. Adjustments to the watering schedules of the school's playing fields had a significant impact on overall water use, while the addition of new playing fields and associated establishment period caused brief spikes in water use. In 2014, the school hosted a drought-planning conference for area stakeholders.
- In 2017 the school worked with the landscaping contractor to test, purchase, and implement a satellite-linked irrigation system that adjusts watering based on regional weather factors for use in the school garden. Based on the results of this test project, more widespread implementation will begin throughout the school's athletic fields and landscaping in the months and years to come.
- 95-98% of plants outside of the turf areas are considered regionally appropriate, native, and/or wild. Water-efficient plantings include Salvia, manzanita, ceanothus, live and valley oak, fescue, Juncus, toyon fir and pine. Regionally appropriate plants include redwood, Cercis, and oak. Nearly 30 acres of the school's 51-acre campus is undeveloped, native grassland and mixed oak woodland habitat. Student efforts to improve habitat quality have led to a remarkable resurgence in the diversity of our ecological community.
- Since 2010, the school has been aggressive in efforts to map, manage, and eradicate non-native plant species. Beginning in 2018, a seasonally-appropriate 13-acre grazing project has been integrated with the non-native species program. Rented goats and sheep eat through non-natives at the same time as they help to restore campus soils by sequestering carbon, improving soil moisture capacity, and reducing fuel in the landscape. The grazing project serves as a study site for students in the environmental science class.

Element IC: Waste

- Priory has calculated a waste diversion rate of 75%. The school diverts an estimated 450 pounds of food waste from the landfill during the course of each month.
- No institutional composting is offered; therefore, compostable materials are processed on campus, as appropriate. Garden crop waste and kitchen prep waste are collected and diverted from the landfill and used to feed a flock of fifty chickens. Chicken manure, bedding, straw, and other organic waste materials are similarly collected and added to a compost pile within the garden's 800-square-foot student-built composting enclosure. Compost temperatures are monitored and recorded until piles are allowed to rest. A master-composter advises garden staff on composting considerations and best practices. Finished compost is used in the school's garden.
- Student plate waste has been reduced because historical student and faculty committee initiatives, developed in conjunction with a food waste reduction professional, helped shape the culture around food waste.
- Diversion from the landfill is the school's goal for materials ending up in waste bins. Visual audits and periodic club or class inspections of trash and recycling receptacles help to maintain an

efficient system. In 2017, students in the *Stewards-in-Action* class helped to map and organize the system, making suggestions for future improvements throughout the campus-based on their observations. A 2019 review of the waste system counted several hundred receptacles on campus and identified opportunities to drastically reduce this number and further streamline the system as a way of reducing associated labor costs and bags needed for trash collection.

- The school generates very little hazardous waste. Total quantities of hazardous materials used in maintenance, cleaning, art, and science activities total less than 110 pounds per year, about .25 pounds per person per year. Maintenance staff report that annual averages for hazardous materials are consistent: 1 gallon of thinner; 200 gallons gasoline and 720 pounds of propane for use in the school tractors and mowers. Stored for short periods, this fuel was used and not wasted. The chemistry teacher manages the collection and disposal of materials according to permitted procedures.
- 30% of office and copy paper, certified sustainable PCF (post-consumer recycled fibers). Bathroom tissue is 20-60% PCF; Bathroom towels are 40-60% PCF; Kitchen Napkins are 30-60%.
- The school works with an outside contractor, Total Quality Maintenance, Inc. (TQM), which adheres to green cleaning practices, procedures and purchasing following guidelines set by the USGBC (LEED v3/2009 O+M and LEED v4 O+M Green Building Rating Systems), the EPA, third-party ecolabels and the state of California standards.

Element ID: Alternative Transportation

- Student transportation is monitored at a broad level by an annual family survey to identify total car traffic to school, as per conditional use permit with the town. Carpool numbers and arrangements are collected annually by the school's front office and managed through a carpooling website. Sixty of the school's 385 students are boarders, living on-site. Local kids regularly walk. The school offers a 'Train Van' (small-scale school bus operated by KidzJet) to assist students in getting from the local train station to the school. Survey results indicate 20% of students walk, 5% roll, 25% carpool, and 5% take the school bus.
- The school's semi-rural geography means that there are no sidewalks per se in the town; however, Portola Valley maintains broad walking trails that are separated from traffic by a wide shoulder or embankment. The safety of the trail design, as well as low local crime rates, means that children are encouraged to walk to school starting at ages much younger than those attending Priory. As specific measures meant to shield Priory students from traffic, a crossing guard is stationed at the school's front entrance, where cars turn onto the property. Additional school staff patrol crucial drop-off and turn-around points to ensure student safety.
- Since 2007, the vehicles used by school maintenance staff are electric "Club Cars." School mowers are fueled by propane (since 2010); landscaping tractors use diesel and are well-maintained and high-efficiency/low-emissions as per manufacturer documents. For athletic events and other field trips, the school maintains a fleet of leased vehicles, which have replaced the use of an aged diesel school bus previously owned by the school.
- An early manifestation of the school's sustainability effort was dubbed, "Ban the Bottle." Students signed a petition asking the school to stop purchasing water bottles. This tradition has been largely followed. Since 2015, sensors and meters on water dispensers at the drinking fountains show a running tally of the number of bottles saved by the refilling of reusable bottles. To date, close to a million plastic bottles have been saved based on the results of the tallies—at these filling stations alone.

- The remodeling of the school's dining hall (2019-20) has predicated the creation of a make-shift dining tent with limited food preparation and cleaning facilities. As a result, for the 8-month duration of the construction period, the school is not offering reusable dishware, and issues single-use serving-ware instead. Inspired students and faculty have created a 'Bring Your Own Plate' initiative that features a makeshift 4-bin dishwashing station and drying rack. Student efforts have reduced single-use materials by 10%.

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

Element IIA: Environmental Health

- The school has identified principle pest types to be addressed through Integrated Pest Management (IPM) practices. Plants, insects, and rodents are targeted for prevention, control, and/or eradication. Chemical pest controls are only ever used as a last resort. Invasive plant species in the school landscape are removed by hand and controlled by sheet mulching. Problem insects in building spaces are treated by professionals with citrus oil as appropriate. A pre-emergent is used one to two times annually on school fields. Herbicides are used sparingly, and only when students are off-campus for extended periods (e.g., school vacations). Rodents are controlled through prevention practices and by encouraging ecological remediation in the built-wild interface (e.g., brush piles and owl houses encourage predatory birds); trapping is used as a further measure. The use of poisoned baits is discouraged by the town.
- To minimize exposure to hazardous contaminants, Priory has no smoking on campus. Additionally, the school has replaced aged thermometers (2013-14) and thermostats (2012-14). Ventilation hoods, fans, and Carbon Monoxide (CO) monitors are part of equipment and classroom environmental sensors installed in new spaces and recent classroom retrofits. Following the California wildfires of 2018, the school purchased and installed 'PurpleAir' sensors that monitor air quality at two on-campus locations—one indoor, and one outdoor. Online reference to these sensors has helped the administration to make decisions about the health implications of keeping school in session—or closing the school—when smoke from wildfires becomes intense and problematic.
- Priory had reconfigured classroom spaces to optimize the student experience. Carpets and ceiling tiles reduce reverberation. All classrooms have excellent natural light. The school's last lighting retrofit (2012) included a lighting consultant and updated all fixtures. New construction features indoor lighting that adjusts with changes in outdoor light. A voluntary 2017 energy audit confirmed the adequacy of lighting and air handling units for managing humidity.
- Since 2012, all retrofitted classrooms feature updated HVAC systems. Maintenance staff together with outside contractors perform monthly, quarterly, and annual preventative maintenance on the HVAC units and exhaust systems. Air filters are changed three times a year; air conditioning vents are cleaned with green products and without the use of solvents.
- To prevent asthma triggers, air handlers balance the airflow in all buildings to make rooms pressure-positive to the outside. This means that air flows out of the rooms when the doors are opened, to avoid pulling in dust and other particulates. Filters in air handlers are changed three times a year with approved filters. These filters also scrub recycled air within the building. Much cleaning of classroom surfaces uses micro-fiber cloths, to reduce the use of chemicals.
- Rooms and ducts are monitored for water leaks by performing inspections of the rooms and their ceilings and roofs. Annual roof inspections and repairs, and preventative maintenance help to avoid moisture buildup and leaks. Additionally, air temperature and humidity levels in interior

spaces are monitored with programmable thermostats. Some employees on the maintenance staff have been trained and certified in mold remediation. When mold issues are found on campus, mold-affected materials are removed completely, and new material is installed.

- Since 2017, most pre-existing classroom spaces have been remodeled or replaced with newer construction. This has almost entirely eliminated the extent of student-occupied spaces with a potential presence of lead paint. Moreover, unlike many independent schools, the school's budget funds depreciation and repair. Accordingly, maintenance staff are aggressive in repainting interior and exterior surfaces often. Demolition that preceded recent construction included a lead-abatement program with pre-screenings for potentially hazardous areas, and after-construction inspections to make sure that lead residues were at or below permitted levels.
- Drinking water is obtained from the Hetch Hetchy reservoir. Water is monitored and inspected for quality by the water utility. Drinking water dispensers feature additional cartridge filters. Incidentally, chloramine treatments are used in local drinking water for sanitation purposes. The school's experience with aquaponics—and problems with chloramine levels in water—has led some community members to see the impact of chloramine on bacteria and other components of living systems. This raises the question of the appropriateness and safety of its use in human water supplies as it obviously affects gut biome. The school will use this experience as a teaching opportunity.
- In general, few hazardous chemicals are used on campus. MSDS sheets are kept on-file for relevant chemicals and substances. Staff training helps custodians to know what chemicals and procedures may be hazardous. Some members of the maintenance staff are OSHA-certified. The infrequent application of pesticides is done when students are away. The use of chemicals and solvents is largely avoided by virtue of the use of microfiber cleaning cloths by the custodial staff. During any maintenance projects that involve paint removal, students are barred from areas to avoid exposure to paint dust. Specialized air-handling systems in the art studio protect students from exposure to hazardous contaminants in the air; ventilation hoods are used to remove paint fumes and solder exhaust, and ceramics dust is removed from the air by a filter. No sweeping is allowed in this area; rather, a special vacuum is used to remove debris from the floor. Chemicals used in science labs are stored in secured areas and disposed of properly, with EPA license.
- The school contracts with Total Quality Maintenance to manage the custodial program. TQM's purchasing policy adheres to the requirements set forth by Green Seal, UL-ECOLOGO, California Waste management requirements, and EPA Safer Choice Standard. TQM provides initial and ongoing training for all employees. Training consists of a combination of classroom and hands-on instruction. Topics include: General Custodial Customs and Practices, Chemicals & Chemical Management, Ergonomics and Equipment, Microfiber Mopping and Microfiber Cleaning Systems.
- Indoor environmental quality is managed in the school's newly renovated classrooms with a SmartTool dashboarding system that monitors various aspects of energy use and indoor environmental quality, including carbon monoxide and carbon dioxide levels. The Sustainability Committee has worked with the system's installers and technicians to understand the capabilities of the monitoring system, and to optimize the indoor environment and reduce student exposures to allergens and contaminants. The Sustainability Director and Maintenance Director conduct monthly inspections of school facilities. In one instance, a gas leak in a main supply line was detected outside of a classroom and office area just prior to school vacation. Gas was shut off, residential students were moved to local residences for the remaining days before break, and the mainline was excavated and repaired while students were away.

- Outdoor environmental quality is protected with clearly stated sustainable operations and behaviors written in the school handbook for parents and students. These include a no-idling recommendation, as well as common-sense recommendations for resource-use and stewardship.
- The recent renovation of buildings and campus outdoor spaces included the planting of several dozen new trees and bushes, some in areas that had previously been highly-erodible slope, as well as the addition of bio-swales for drainage. Birdhouses and owl boxes have helped recruit more local and native wildlife to the campus.
- The appearance and recognition of several fast-spreading species of non-native plants on campus has been a scourge, but improvements have been observed and documented. Non-native species removal is an on-going stewardship project with multiple opportunities throughout the year for student education and stewardship. Priory Grazing Project, detailed above, aims to restore soils, sequester carbon, fight desertification, and encourage verdant pasture throughout a longer period of the year.

Element IIB: Nutrition and Fitness

- The school works with GreenLeaf to source local and organic fruits and vegetables for the dining program, which serves lunch daily to all students, and other meals to boarding students. Additionally, produce from the garden is served as a daily offering at the salad bar. Sustainable food considerations include health, ecological impact, and humane animal treatment. Meatless meals are increasingly served to ensure healthy options and reduce the school's environmental footprint as connected to diet. Nutritional information is posted at food service areas and stays current with offerings.
- Priory's Franklin Garden, est. 2013, is a cornerstone of the school's sustainability program. Garden elective classes ('Plant to Plate', 'Discourse of Dining', and others), as well as class retreats, provide opportunities for students to work in the garden for extended periods of time. Maintenance is performed by students in the Sustainability Club, and by dedicated parent volunteers, who come to the garden weekly to work. Garden harvests are given to the kitchen for use in the preparation of salads. The garden also serves as an educational site for other schools that have come to visit, as well as a community gathering place.
- A new garden pavilion, completed in the fall of 2017, serves as the entrance to the school garden and has vastly improved the garden's community appeal, education, and outreach. Recent events attract members from all segments of the school community and have included workshops on canning foods, processing of honey, baking, and classes in various food traditions.
- The school maintains a PE requirement of 200 min weekly, most outside. Middle school PE Students complete SPARK and Presidential fitness challenges. 'Outdoor education' is offered as a middle and high school elective course.
- *Balance* has been a primary focus of the school's efforts to optimizing student health and wellness. Specific measures for balance have been identified and quantified as part of a school initiative funded by the EE Ford Foundation. Additionally, the school is a member of Challenge Success, which has helped the school to establish benchmarks, guidelines, and practices for improving student wellness.
- Priory's Counseling Department has initiated a wide-reaching wellness program, including informational assemblies and health class additions to graduation requirements. Late-Start Wednesdays promote sleep, reduced stress, and improve overall work-life balance. The athletic trainer mandates benchmark cognitive testing for all athletes and provides post-impact testing

and frequent reports/updates about students who have sustained concussions. The school requires teacher training in first aid and CPR. An on-site school nurse and visiting dormitory nurse monitor outbreaks of illness within the school community.

- Due to the large and sprawling campus, students spend a fair amount of time outdoors daily. The campus is on a hill with stairways between classroom areas. The headmaster estimates in his annual graduation address that an average student climbs the stair-equivalent of Mt. Everest 12 times during their years at Priory! A 20-40-minute morning break, with more time after lunch, allows kids to gather outdoors. Most students prefer to stay outdoors rather than enter the library or lounge spaces, and many engage in games or activities. Classes incorporate campus walk-and-talks or silent walking meditation. Additionally, the school offers ample athletic options. Middle school (MS) students participate in annual outdoor education and ecology-oriented camping trips. Additional electives with a substantial outdoor component include MS and high school (HS) garden electives; High school Yoga class (2013-14); and MS and HS Outdoor and Experiential Education electives. A HS service-learning requirement allows students to log service hours in the school garden. Campus improvements in 2014-15 resulted in the creation of a large MS ball court with baskets, nets, goals, etc. The school also installed a gaga ball court and tetherball poles, providing opportunities for student-directed play.
- Teachers at Priory are encouraged to optimize their own health and wellness. Various measures and opportunities illustrate this. For example, beds within the school's vegetable garden are identified as available for community harvest. The cafeteria salad bar features high-quality and nutritious menu offerings. Faculty are encouraged to visit with athletic trainers for fitness consultation and rehabilitation after sports-related injuries. Some teachers team-up during free periods to swim laps in the school pool.
- Garden produce is sometimes sold from a student farm stand along the carpool line in the school driveway. The school also offers a summer program that allows economically disadvantaged students from the public to study on-campus. While in the program, some students work in the garden and take produce home.
- The school's counseling department recognizes that optimizing student health is a holistic effort. This effort includes many subset approaches, including those identified in the Coordinated School Health Model. Students receive health education, physical education, mental health counseling as needed—together with community discussions about when it might be needed, nutritional education, mindfulness and wellness instruction, a healthy school environment, and interactions with healthy and happy teachers and staff. These practices are deeply aligned with the school's commitment to the values of *Community* and *Balance* and are necessary for students to learn most effectively.
- For some time, Priory has featured guest speakers and authors from Stanford University, San Francisco General Hospital, and the non-profit agency Challenge Success, which have provided education and assembly presentations on stress, sleep, recreational drug-use, healthy relationships, and teen suicide. Since 2017, these efforts have culminated in the school's earning an Edward E. Ford Foundation Innovation Grant supporting *Balance* in student life. The grant supports ways to bring balance into student life and school culture. Accordingly, teacher professional development and student time in advisory groups address how all community members can achieve work-life balance and optimize mental and physical health.
- An on-site school nurse manages student injuries and health concerns. Periodic announcements advise the community of outbreaks of illness and possible exposures within the student body. The school's athletic trainer mandates benchmark cognitive testing for all athletes and provides post-impact testing and frequent reports/updates about students who have sustained concussions.

Teachers are trained in first aid and CPR; certifications are updated before school begins each year.

- Student mental health is a major priority for the school. There has been active work by the counseling department—and overall community, by virtue of the school's mission—to maintain a safe school environment of tolerance and respect. Additionally, the Counseling Department works to identify and support students who are experiencing social or emotional difficulties. Faculty members are notified of individual cases of concern as appropriate. School-wide assemblies, chapel talks, and advisory sessions address a wide cross-section of issues relating to student health and wellness, including the presentation of a documentary movie about victims of bullying in schools. The MS program includes an annual Kindness Fair and Anti-Bullying campaign and pledge; a gathering space features a Shout-Out Wall, where students post specific compliments about their peers.

Pillar III: Provide Effective Environmental and Sustainability Education

Element IIIA: Interdisciplinary Learning

- Centered around the phrase, *Learners and Stewards*, the school's mission grounds students' academic thinking and problem-solving around the theme of *Stewardship*. Accordingly, the Student Handbook defines the central aspects of sustainable thinking and action in a 4-part framework that roughly mirrors the Whole-School Sustainability Approach; the pillars are Natural & Ecological Awareness; Resource Conservation; Healthy Habitats - Human and Natural; and Action, Connection, and Outreach.
- As a habit of mind, and at deep levels throughout the scope and sequence of Priory curriculum, students are encouraged to develop proficiency in the school's Learning Competencies (Communication, Creativity, Collaboration, Critical Thinking, and Resiliency), and to apply this proficiency to myriad global problems and issues, including and especially those relating to sustainability, equity, and stewardship. This kind of pedagogical thinking has led to a transformation in the nature of student academic assessment. The shift toward authentic assessments has led to more student opportunities to consider and collaboratively develop solutions to all kinds of real-world problems, and then to consider “what-if” scenarios relating to humanity, culture, and the planet as a whole.
- In 2015-16 Priory made a deliberate effort to develop a codified approach to integrating Sustainability themes across disciplines and curricula: the Faculty Sustainability Committee developed Essential Questions and Enduring Understandings for sustainability and stewardship. These are in-line with the school's core values as well as its focus on teacher professional development.
- 2016: The Eco Design Class' Living Wall project was featured on the front cover of the school's annual report, with an explanation of how the school's graduate outcomes align with sustainability objectives. 2018: A video produced as a cornerstone of the school's admissions materials explains to prospective families interested in the school the extent to which sustainability and stewardship are essential to Priory experience, education, and culture.
- The school offers the AP Environmental Science class as a science elective. A student-established environmental sustainability club helped to found the school's sustainability program and establish sustainability as an aspect of student consciousness and service. As a result of this change in consciousness, the school mission was re-written in 2004 to include the phrase, “lifelong learners and stewards who will productively serve a world in need of their gifts.” One advisory

session per year features a survey on student understanding of sustainability and awareness of school-wide sustainability practices (e.g., recycling policies, energy sourcing questions, etc.).

- Community sustainability education has been a theme aligned with the school mission for the better part of the last decade. Since 2012, several faculty meetings per year have included presentations on sustainability. These help to frame the issue of sustainability and remind faculty of the school's mission-based commitment to it, provide updates on the school's operations and student projects relating to sustainability, describe opportunities for improved cultural practices, and suggest the possible implementation of sustainability into class themes and projects.
- Priory has offered the HS elective class "Ecological Design and Sustainability (aka 'Eco Design')" since 2014. This class began with an introduction to the principles of sustainability and then moved on to become a collaborative project-based class in which the students have designed and built an 800-gallon aquaponics system (a closed-loop fish farm and soil-less kale growing system). In 2015, the Eco Design Class designed and built a 280-square-foot living wall, visible to all students and staff as they enter the school's dining hall. In 2015-16, Priory introduced a new HS elective, "Discourse of Dining." In this class, approximately one-third of class time is spent in the school garden. In 2015, the school established Tinker Labs in the MS and HS areas. These promoted hands-on problem-solving and conservation-minded resource (re-)use. Since 2017, this educational endeavor is now shifting to the recently completed STREAM building.
- There is an active student-run sustainability club, as well as student sustainability representation in student government. The Sustainability Commissioner role was, in fact, student-conceived/originated: The Commissioner oversees the sustainable operations of after-school events - dances, performances, and athletic games. The Sustainability Club was also re-born because of student interest and effort. The club now requires habitat restoration hours as part of the membership and so that members remain committed. The students in the club have identified non-native species on campus and have worked to eradicate them. Many students can connect on-campus efforts to remove non-natives to participate in local habitat restoration as part of a grade-level service-learning retreat.
- 2010-present: Science Department has partnered with trip outfitters to offer science field trips and summer programs focused on global ecology and sustainability. Destinations include: Australia, Vietnam, Argentina, Costa Rica, Myanmar, Kenya, and others.
- 2015-present: The Dean of Students, Campus Minister, and Sustainability Director organize retreats based on campus stewardship and the concept of sustainable communities.
- 2014-present: Ecological Design class completes projects visible to the entire student body as visible reminders of the importance of sustainability in design and technology. These projects include the aquaponics system, a living wall, a 'bio-ball' in-vessel composter, pollinator garden, chicken flock, and interactive garden map/calendar, solar-rooftop water heater.
- 2019: Priory students and alums worked as the instructors and counselor staff during the pilot sessions of the Sustainable Future Outdoor Academy, a project co-founded by Priory Sustainability Director.

Element IIIB: STEM Content, Knowledge, and Skills

- The fall of 2017 saw the completion of Priory's newest construction, the STREAM building. The integration of science and art in a single campus facility reflects the school's focus on balance and has led to the development of entirely new course offerings as well, including an Engineering class and the Ecological Design & Sustainability class (described above). The Engineering class, for

example, helped assess the structural concerns of the Living Wall, and also designed and constructed inexpensive or free shelters for homeless using natural and waste materials they assumed would be available in different cultural and geographic settings. For middle schoolers, the 'Stewards in Action' elective (started in 2017) affords students opportunities to connect scientific concepts, service, and basic hands-on building skills in a problem-solving context. Students in the class explored soil hydrology and dug an extensive trench for burying a curtain drain. The project focused on teamwork, the behavior of groundwater in different media, and problem-solving approaches to surveying and measuring slopes of real-world gradients.

- Students in the same class helped to reorganize the school's maintenance yard. In the course of this project, STEM content included volumetric assessments of materials, construction of adequate storage, and learning about the properties and applications of various building materials.
- The science department at Priory features quarterly "Science Friday" guest lecturers. Some of these speakers have given presentations on green technologies and business/ tech innovation opportunities. One of these lectures featured an investor in plankton-carbon sequestration technologies. November 2014 featured a presentation by the City of San Francisco's Consulting Ecologist on the topic of enhancing biodiversity and ecosystem function in urban and park settings. In spring of 2016, the Marine Biology class featured a fisherman from the National Marine Sanctuary's 'Fisherman in the Classroom' program. Additional opportunities for students to connect with green innovators present themselves by chance but with some frequency, due to our school's proximity to an area of rapid growth in the green tech industry. In this way, for example, in September 2013, student reporters from the school newspaper were able to meet personally with former Secretary of State George Schultz, and interview him on the topics of sustainability and solar technology.

Element IIIC: Civic Knowledge and Skills

- Class retreats address environmental problems and sustainability issues at various levels and in various contexts. The sophomore service-learning retreat at Priory, for example, is centered on campus service projects. Seniors do campus habitat restoration. Sixth graders learn about sustainable agriculture and food sourcing in the school's garden. The senior retreat takes students to an off-site organic farm. Dormers in all grade levels also complete habitat restoration. Three all-school assemblies in the last two years have focused on opportunities for student action with regard to the environmental problems of biodiversity loss and climate change.
- Students in the HS Democracy/Civics elective write letters to elected officials. Some choose to address environmental concerns. APES (10th-12th grade) class focuses on sustainability themes and solutions. Annual science department summer travel opportunities focus on international ecological concerns.
- MS students attend a three-day outdoor education retreat that focuses on the ecology of a certain site. MS and HS science classes frequently take advantage of the school's natural setting to learn outside the classroom. MS and HS students in spirituality classes frequently conduct silent nature walks and outdoor meditations. The landscaping behind the chapel building includes a beautiful and contemplative labyrinth with stone and plants arranged in an otherwise native setting. The Earth Day chapel ceremony for 2013 was conducted outside to inaugurate and bless the new garden, focused on the theme of Stewardship. The entire school community attended. In 2014, years ago, the entire MS took a day away from school to climb a nearby ridge, passing through a local open space preserve. The event was intended to help develop the students' sense of place

with regard to the school's special setting. The event continues as an annual retreat for the seventh grade.

- Priory teachers are innovative and appreciate opportunities for the teachable moment, especially if it can be outdoors. The biology class has tagged several dozen plant species to learn about the use of a dichotomous key for identification. To engage the broader community, plants were tagged with smartphone-scannable QR codes that link to online information about the plant species. All freshman physics students build and launch compressed air bottle rockets from recyclables, modify them based on wind patterns. Math students solve equations in chalk, graphing huge parabolas in chalk on campus pathways. APES students observe how changes to soil texture and chemistry correlate with changes in the grassland plant community.
- The school works closely with the sustainability coordinator for the Town of Portola Valley, improving the productivity of the relationship with energy, water, and waste utilities, and with citizens of the town. Additionally, the school has communicated efforts and successes to the local community by way of sustainability reports in the town newsletter. The school's sustainability coordinator met with administrators, teachers, and interested parents at three different area schools to help initiate sustainability programs and encourage them to apply for this award. The school has established an enduring and committed partnership supporting the Daraja Academy in Kenya, an all-girls boarding school outside of Nairobi. Student summer trips and senior projects have helped to support the operations and growth of this off-the-grid, and almost entirely self-sustaining school. Priory campus serves as a summer site for the Peninsula Bridge Program, which brings students from needier schools to our campus, where daily nutritious lunches are served (these meals are better, the students often report, than they would be eating at home or at their own schools). One class in the summer program allows students to learn about sustainable gardening and foods, and take harvests home to their families. Several garden clubs have visited the school garden, as well as founders and representatives from a non-profit, Gardens for Health International, visiting from Rwanda. These visits focus on a "Sustainability Matters" tour that demonstrates how features of the garden's design and operations are sustainable. A booth featuring school produce at the local farmers market further shows the school's green leanings.
- Over the last few years, Priory school has emerged as a leader in the community around school sustainability. Several schools have visited Priory campus to see the school's garden, student-created aquaponics system, and living wall project. Additionally, Priory has hosted a conference for science teachers from the area, during which there was a strong interest in visiting both the garden and aquaponics sites. A book on innovative education, "Charting a New Course: Reinventing High Schools for the New Millennium", 2016, features an entire chapter on Priory's Ecological Design and Sustainability class. The school's sustainability director was asked to consult with interested parties at several local schools about the greening of their schools.
- The publication of the annual report featuring the Living Wall on the cover has helped to spread the word to the broader community of alumni and families about the school's focus on applying to 21st-century learning skills and integrated solutions to engineering and environmental challenges. This demonstration of the sustainability program at Priory has shown a group of people no longer connected with the day-to-day operations of the school what sustainability education can look like. This has led to increased interest in the program and offers from alumni to connect the school with foundations and grant writers who could fund further sustainable improvements.