

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: **Mrs. Michelle Scheiber**

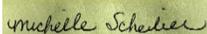
(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: **Fryberger Elementary 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: 1/19/2021

(Principal's Signature)

Name of Superintendent: **Dr. Cyndi Paik**

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

District Name: **Westminster School District**

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



Date: 01/21/2021

(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.



Fryberger Elementary School

California Disadvantaged 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

Fryberger Elementary School, Westminster, Calif.

Efficiency Upgrades and Student Projects Lead the Way for Environmental Change

Fryberger Elementary School (Fryberger) leads students and the surrounding community in environmental education and sustainability practices. In 2018, a committee of the school's stakeholders set forth to bring education on sustainability, mental health, and wellness initiatives to the school and community. These practices are at the forefront in the school's facility and grounds operations, nutrition and health services, and student education.

Sustainability efforts began in 2016 when Fryberger completed a comprehensive energy efficiency and renewable generation program. This plan led to the installation of new energy-efficient HVAC systems, a campus-wide upgrade to LED lighting, and the addition of a 45.4 kWDC solar array that produces 90% of the school's energy needs. Fryberger highlights these improvements by educating through a customized Science, Technology, Engineering, and Math (STEM) program. The program allows students to expand their STEM skills and learn about how the campus changes help combat climate change.

Water efficiency upgrades at the school constitute another method of conservation. Fryberger uses water at a rate of 390 gallons per occupant per year. To achieve this reduction, Fryberger installed low-flow plumbing fixtures and upgraded irrigation controls. The irrigation system's design helps save water and electricity by using local weather information and moisture sensors to only run at the most optimal watering times.

A strategic no-idling policy during student drop-off and pick-up periods helps improve outdoor air quality. During morning drop-off, parents use the drive-through drop-off or park their car and walk their children to the entrance gate. In the afternoon, parents must park their car and walk to the student pick-up gate upon dismissal. These measures not only ensure the safety of students but also eliminate excessive emissions. The school district purchased two propane-powered school buses in 2018, and an additional two in 2020. These buses provide a sustainable alternative mode of transportation for 70 students. Students and families who walk to and from school do so safely with the help of a city-employed crossing guard.

Fryberger engages in multiple strategies for waste reduction. The school has an 80% diversion rate from recycling and composting. Students clean and sort biodegradable food trays and environmentally friendly milk and juice cartons for recycling during meals. Students also maintain a school compost bin with red worms to break down food waste from meal service. The school started a food share program in 2018 as another way to eliminate food waste. Students add excess packaged whole fruits and vegetables to the food share table for students in need.

The school promotes healthy and nutritious living for staff and students, providing breakfast and lunch daily; students in the afterschool program also receive dinner. School meals feature organic fruits and vegetables from local farms; at least 25% of food purchased is certified as environmentally preferable. Students participate in a Play First, Eat Second program inspired by a 2018 study completed at Fryberger that determined student behavioral incidents decreased when students had meal time following playtime. Partnerships with the American Heart Association Kids Heart Challenge and Kaiser Permanente Healthy Eating Active Living theater program bring awareness and education to students and their families on eating healthily and the importance of leading an active lifestyle. Yearly, students and their families participate in Heart Month with daily exercise challenges, family dinner recipes to make at home, and positive affirmations.

Teachers and staff take advantage of the school's green space, and students find quiet places outdoors to read a book, work collaboratively with student peers, and explore in the garden. The classrooms at Fryberger have views of trees and nature. Students look out of classroom windows and see large grass areas, trees, and student-maintained gardens.

Social-emotional learning is a top priority at Fryberger. Many teachers have mindfulness training, enabling them to regularly bring mindfulness activities and practices into their classrooms. The school has also adopted Mind Up, a social-emotional learning curriculum that is taught to students weekly. Students learn about the components of their brain, how to express their emotions, and how to set goals and never give up. For the past two years, students also learn a Growth Mindset trait of the month. Monthly Growth Mindset awards recognize students from each class who have demonstrated a specific Growth Mindset trait. Fryberger's Positive Behavioral Interventions and Supports (PBIS) have a 3-tiered system for academics and behavior. Restorative practices are taught in the classroom and on an individual basis. Students learn to reflect on their behavior so that they may take control of their actions. Restorative circles run by trained staff, the school counselor, and school psychologist all support students' academic, behavioral, and other unique needs.

Environmental literacy is the focal area used to bring resources and standards together into multi-disciplinary learning activities. Students have opportunities to lead their learning through projects and experiences. Thematic project-based units center around the California Next Generation Science Standards and Environmental Principles and Concepts (EP&Cs). Unique to California, EP&Cs highlight the profound relationship between humans and the natural world. Teachers do not follow a specific textbook or program, but rather work together to organize grade-level plans that introduce ecological topics through project-based learning units. Implementing learning through project-based learning allows the intertwining of environmental issues across the curriculum. Students focus on literacy, math, science, and social studies standards through an environmental lens using the EP&Cs.

Students engage in several real-world ecological activities. For example, TK and Kindergarten students participate in organic farming to apply engineering design

concepts, mathematical thinking, and scientific principles necessary to grow plants. Students then begin learning about parts of a plant and move into the importance of using organic farming materials. First-grade students study natural resources conservation, while second-grade students learn how humans can reduce pollution in the ocean. Third-grade students study how to combat microplastics in the ocean. A partnership with the Surfrider Foundation teaches students about the "5 gyres." Fourth and fifth graders learn about energy conservation. These learning activities give a context for students as they develop their skills in all other subject areas.

All field trips focus on the environment and provide fieldwork opportunities that complement what students are learning in the classroom. Students have taken trips to the beach for a clean-up day, explored the wetlands, investigated local farms, participated in walks observing local phenomena, and had networking sessions with scientists. Assemblies and experiences from the EcoHeroes, Inside the Outdoors, and the Water Department are just a few examples of partnerships that support Fryberger's vision of inspiring and developing successful, productive citizens who are environmentally responsible in a changing world.

A planned Earth Day and Open House celebration ends Fryberger's school year, which provides a forum for student culminating activities. All students share their projects and campaigns for protecting the environment and urge the community to take action.

PART III – DOCUMENTATION OF STATE EVALUATION OF SCHOOL NOMINEE

Pillar I: Reduce Environmental Impact and Costs

Element IA: Energy

- Fryberger Elementary School has a multipronged approach to energy efficiency and renewable energy generation. In 2017, the school leveraged funding from California's Proposition 39, designed to support green and renewable energy projects for schools and districts, to invest in a 45.4 kWDC solar array, campus-wide interior and exterior LED lighting upgrades, new energy-efficient HVAC units, interior low-flow plumbing fixtures, and upgraded irrigation controls. With the energy efficiency upgrades implemented and renewable solar shade structure installed, the comprehensive program implemented at Fryberger saves over 160,323 kWh of electricity annually.
- 90% of Fryberger's energy comes from renewable energy generated on-site. Southern California Edison provides the remainder of the school's energy needs, supporting energy-saving efforts by offering Fryberger net metering at a reduced rate due to on-site solar generation.
- The school partnered with Engie Services to design their custom sustainability program integrating energy efficiency, renewable energy, and a reduced carbon footprint. To track savings attributed to the comprehensive energy program implemented in 2016, Fryberger uses Engie Services' Performance Monitoring

Reporting System, Utilityvision. The data collection documented a 91% reduction in non-transportation energy use since 2016 with a total energy reduction of 554,674 kBTU/year. The greenhouse gas emissions offset is the equivalent of 113 metric tons of carbon dioxide, or the amount of carbon sequestered by 1,874 tree seedlings grown for ten years.

- Improvements to the school's roofs and pavement help reduce the heat island effect. Recently-installed cool roofs are a two-ply torch down roofing with cap sheet; these properties are resistant to UV rays and reflective, to keep the building cool and energy-efficient.

Element IB: Water and Grounds

- In 2012, Fryberger upgraded to more efficient interior plumbing fixtures designed to save water. The school further reduced their use by 2% from 2016 to 2020, to a rate of 390 gallons per occupant per year.
- Fryberger irrigates 8.2% of its 10-acre lot. The Rain Master Irrigation Control System monitors flow and responds to upper, lower, unscheduled, and no-flow conditions. A probe is placed into the ground and senses the level of moisture to eliminate any unnecessary watering. An internet-based control system allows for a moisture percentage adjustment. In addition, the system has automatic detection of the mainline water breaks.
- 0.5% of the Fryberger campus is vegetated swale. Multiple types of plants, trees, and vegetation are incorporated to capture runoff for the site. Separate outdoor learning and student-designed garden areas are located throughout campus. Students planted sunflowers, native plants, fruits, and vegetables. Strategically-placed gardens benefit from existing irrigation systems.

Element IC: Waste

- Fryberger documents a diversion rate of 80% from recycling and composting. A local waste hauler collects and sends all the school's trash to its recycling plant for sorting.
- Kindergarten students manage a compost system using lunchtime waste generated on-site. Students place red worms in the compost to support the breakdown of food waste material. Students learn about the importance of worms in the composting process from this activity.
- Students use biodegradable food trays and paper milk and juice cartons to support a sustainable environment. Students learn to clean and empty their trays and cartons to prepare them for recycling.
- Fryberger follows the green cleaning model, where cleaning methods protect individuals' health without harming the environment. The school has appropriate training and reviews procedures for the custodial crew twice yearly. There are no hazardous materials at the school that pose a health threat to the school community; hazardous materials are stored off-site.

- When purchasing supplies, Fryberger and the district purchase items according to a 2015 board-approved comprehensive study. The purchasing department and site staff are trained in what items are allowed and how to make those purchases. 90% of the school's total office/classroom paper content is post-consumer.

Element ID: Alternative Transportation

- Using district transportation department records and observation, Fryberger reports 50% of the student body carpools to school, 8% take the bus, 5% walk, and 1% roll as alternate transportation modes.
- Fryberger's safe routes program provides safety while reducing gas emissions from vehicles. The school publishes procedures for students' safety upon arrival and dismissal at school through principal messages, newsletters, and the school website. Morning drop-off features a parent drive-through lane to prevent idling. Hand-to-hand pick-up is practiced during school dismissal to ensure the safety of all students. Adults picking up students are required to park vehicles and walk to the student dismissal area. School buses have a designated drop-off and pick-up area and adhere to a no-idling policy.
- A crossing guard employed by the city assists students and their families daily when traveling to school. Crosswalks are visible and allow for safe student passage for families and students walking and riding bikes to school. Morning and afternoon staff supervision of crosswalks ensures adherence to safety procedures. An enclosed, secured bike rack is available for staff and students.
- Fryberger uses two brand new 40-foot conventional type propane-powered buses that emit clean energy. The school district purchased these buses through a South Coast Air Quality Management District grant.
- The school participates in International Walk to School Day in the first week of October. Students and families are encouraged to walk to school to promote a reduction in car emissions. The yearly event promotes the school's focus on the environment.

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

Element IIA: Environmental Health

- Fryberger has a written Integrated Pest Management (IPM) Plan consistent with California's Healthy Schools Act. The district's IPM coordinator completes a monthly report and submits data to the county agricultural department. Chemical pesticides are applied on an as-needed basis by a licensed professional. The school district sends an annual written notification regarding pesticide applications along with a 72-hour notice. District maintenance employees use humane trapping devices and animal control protocols for rodents and other small animals. Maintenance and grounds department workers attend IPM training annually.
- Fryberger does not store any chemicals on campus. All potentially hazardous materials have been removed, such as lighting, lead-based paint, thermostats, and

asbestos. Only green cleaning products are at the school for use. The school district stores pesticides and fertilizers at a central location at the district office and has a chemical management program for chemicals. The program includes a chemical purchasing policy, storage and labeling, training and handling, chemical inventory, hazard communication, and selecting green cleaning products.

- The school prohibits smoking on campus and school buses. Signs are visibly posted to remind visitors that smoking is prohibited (including e-cigarettes).
- Construction workers identify and report all materials (roofing, plaster, paint, mastic, flooring, drywall, stucco) that contain asbestos during current construction. Fryberger also tests soil before bringing it onto campus to make sure it meets state standards.
- All classrooms at Fryberger have good acoustics and lighting. Each classroom has ceiling tiles that improve acoustics by diffusing noise and absorbing sound. All incandescent and fluorescent lighting has been retrofitted with LED lighting to be 90% more efficient.
- New and upgraded HVAC systems provide outside air in sufficient volume to dilute indoor air contaminants utilizing thermal dispersion technology and are ASHRAE 62.1 compliant. The HVAC system includes a monitoring system, which merits LEED credit by monitoring the performance of the ventilation system ensuring that the system meets six to twenty air exchanges per hour. Classrooms in the school have reasonable relative humidity control. An economizer is a part of the outdoor system and evaluates the outside air temperature to even classroom humidity levels. When the exterior air levels are appropriate, it uses the outside air to cool the building. All classrooms and office spaces have an air purification unit. Air is filtered every 30 minutes. The air purifiers remove indoor air pollution and work in conjunction with existing ventilation systems. The school has also installed local exhaust systems for airborne contaminant sources.
- Staff uses the Air Quality Index to monitor outdoor air quality to avoid exposure to asthma triggers. The index notifies staff when the outside air is not safe for sensitive groups, including students and staff sensitive to pollutants that trigger asthma. If the air quality is deemed unsafe, students and staff remain indoors.
- The classrooms have views of trees and nature. Students look out of classroom windows and see large grass areas, trees, and student-maintained gardens. Students often relax in the grass, read books, collaborate with peers, and participate in physical activity. The school's garden program plants 1-2 new trees yearly across campus to reduce the carbon footprint. Gardens are replanted and harvested each school year.
- Fryberger's drinking water comes from a municipal water source that controls contaminants in the drinking water. The school also provides filtered drinking water through one centrally located refillable water station. Since the installation in 2017, the refillable water station has saved 21,856 disposable water bottles.

Element IIB: Nutrition and Fitness

- Nutrition is of utmost importance for Fryberger's students and staff. 73% of the school's students are eligible for free and reduced-price meals. The school provides

fresh fruits and vegetables and choices for students and participates in a Farm to School program. The district nutrition department attends a local farmers market expo annually to purchase local organic produce. 25% of food purchased is certified as environmentally preferable from local farms. Weekly and monthly promotion of the week or month's fruit or vegetable encourages students to try new foods.

- Students participate in a Play First, Eat Second program inspired by a 2018 study completed at Fryberger that determined student behavioral incidents decreased when students had meal time following playtime. Staff and students are provided a choice of fruits and vegetables at the cafeteria's salad bar for breakfast and lunch daily. Students can access a food share table where they can add or take whole fruits and excess approved sealed, packaged foods. Under restrictions for COVID mitigation, students have a Grab-and-Go breakfast and lunch each day while on campus for instruction. Fryberger families learning from home can use a drive-through Grab-and-Go service, including healthy fruits and vegetables, so they may still have a healthy breakfast and lunch while at home.
- Fryberger strategically partners with community organizations that emphasize the importance of health and wellness. A partnership with Kaiser Permanente's Healthy Eating Active Living Program enables students to learn the importance of living a healthy and active life through an educational theater program. Each year, students also participate in the American Heart Association's Kids Heart Challenge to bring awareness to the importance of being active with a fitness tracker. The challenge extends to staff, students, and their families as they participate in 30 days of activity and education on leading a healthy life. The Dairy Council of California's Mobile Dairy Classroom presents a hands-on experience of dairy farming and how milk moves from farm to table. A partnership with The Kids Protection Program provides safety kits that include records of a child's height, weight, blood type, eye color, and fingerprints. Fryberger partners with AltaMed Mobile Dental Service to provide dental cleanings and referrals for more extensive care and educate students about proper dental hygiene.
- There are three areas across campus where students and staff maintain gardens. TK and Kindergarten students learn about the positive impact on the environment attributed to organic farming using organic soil and seeds to grow fruits and vegetables. Students in special education classes maintain a garden to tend to the growth of fruits and vegetables. Students try new foods, and food grown is made available to parents and staff to enjoy with their families. The after school program grows their garden with a student-led garden club. Students maintain their garden, chronicle their efforts, and share them at a family night. The local high school's Future Farmers of America program club members collaborate with students to teach them best farming practices.
- All students engage in a minimum of 120 minutes of PE taught by their classroom teacher, the district PE teacher, and lunchtime supervisors. Lunch supervisors provide supervised activities such as volleyball, soccer, and basketball games.
- Fifth-grade students participate in the Anaheim Ducks Captain Challenge. Before attending the event, students set goals and train. Students visit the Anaheim Ducks stadium and demonstrate their fitness level with 5th-grade students across the

county. Various physical fitness activities are coordinated for students to showcase their fitness levels. Students record their results of fitness activities to meet state physical fitness standards.

- In 2018, Fryberger formed a committee of parents, school staff, and administrators to explore how to advance sustainability, mental health, and wellness throughout the school. The committee shared findings with stakeholders and, after a collective agreement, led the school in implementing a social-emotional learning initiative to teach students and staff how to keep a Growth Mindset. In 2019, the school added Mind Up, a social-emotional learning curriculum that teaches students to be mindful and provides social-emotional learning strategies to their families through parent training.
- A partnership with the Westminster Resource Center (WRC) provides an additional resource for students and their families to support nutrition and mental health. WRC intake meetings help families navigate available resources to fit their needs. Center staff members provide families with information on food banks, affordable housing, parent education classes, and family counseling services.
- The school promotes healthy food and activity choices through weekly announcements, including a healthy tip of the day reminding students to drink plenty of water, try new healthy foods, choose water to drink instead of sugary drinks, and get plenty of movement during the day. Students often spend class time working collaboratively or independently outside their classroom in the grass under a tree or lounging on yoga mats. The school shares health and wellness opportunities with families during parent and community meetings and the school's monthly newsletter.
- Many staff members participate in daily and weekly health challenges, tracking and sharing their fitness goals. Teachers often walk around the school neighborhood during lunch breaks. Annual wellness screenings are provided and incentivized for all employees each year. Fryberger's Employee Assistance Program provides health and wellness services for staff members, including no-cost access to counselors, referrals, and employee work- and home-related services. The school's partnership with the American Heart Association engages staff in 30 days of challenges to stay healthy alongside students and their families.
- A health aide is on campus daily; a registered school nurse is on-site once a week and available on-call as needed. Fryberger's health aide has extended daily hours to support morning COVID-19 health checks for staff and students. Student counseling services are provided weekly by a school counselor or psychologist for at-risk students and special education students. The school counselor and school psychologist support students and support staff with social/emotional regulation, self-care, and coping skills.
- The majority of the school's teachers attended and have training in mindful techniques through the Resilient Mindful Learner project sponsored by the Orange County Health Care Agency. Teachers lead students in practicing mindful breathing, mindful listening, and being aware of their emotional needs. Mind Up social and emotional lessons are taught to students weekly. Students learn about the parts of their brain, mindfulness, and problem-solving strategies. Students receive monthly awards for demonstrating their growth mindset. As part of the social-emotional

curriculum, the school offers parents training on mindfulness strategies and how they can use them at home with their children. Teachers also receive training on practicing mindfulness in their own lives to maintain a work-home balance. The Orange County Department of Education has recognized Fryberger Elementary as a Mindfulness School.

- Restorative practices are part of Fryberger’s Positive Behavioral Interventions and Supports system. Students are required to reflect on their behavior and discuss how their behavior affects themselves and others. Restorative circles for students who need reteaching opportunities for behavior occur weekly. Other restorative circles to support small groups of students and whole classes occur as needed.
- Fryberger uses a Coordinated School Health approach to address overall school health issues. The school refers to the school district's Wellness Policy to support student wellness, nutrition, and physical activity. The school wellness committee meets multiple times each year with other schools in the district to discuss student wellness, policies, and accountability.

Pillar III: Provide Effective Environmental and Sustainability Education

Element IIIA: Interdisciplinary Learning

- With the school community’s planning and encouragement, Fryberger staff decided to engage project-based learning as a method to craft thematic units centered around environmental issues. In 2019, teachers began their training on developing project-based learning units using California’s Next Generation Science Standards Environmental Principles and Concepts (EP&Cs) to drive their multi-disciplinary lessons. A partnership with Defined STEM provides Fryberger teachers with additional training, and dedicated site-budgeting provides planning time to create multi-disciplinary project-based learning units centered on environmental literacy concepts.
- All grade levels at Fryberger focus on environmentally-centered project-based learning. The following driving questions and learning activities engage cross-curricular exploration and learning around critical environmental issues.
 - Transitional Kindergarten and Kindergarten students’ driving question is, “How can we, as environmentalists, create an organic environment for plants to grow?”
 - First-grade students study the EP&C, "People Influence Natural Systems" and create a useful product using natural resources and recycled materials.
 - Second-grade students' driving question is, "How can we reduce pollution in our oceans?"
 - Third-grade students explore how they can combat microplastics in the ocean.
 - Fourth-grade students focus on solar energy and how it can replace fossil fuels.
 - Fifth-grade students focus on how the school can become more energy efficient.

- Community partnerships, resources provided for Title I schools, and available grants allow students to expand their learning outside the classroom. Community partnerships include Tanaka Farms, Centennial Farm, Bolsa Chica Conservancy, OC Fairgrounds, Surfrider Foundation, Marine Mammal Institute, and Inside the Outdoors (Orange County Department of Education). Students across grade levels participate in field trips and assemblies that emphasize the school-wide focus of Environmental Science.
- Prior to March 2020, students had regular in-person environmental education experiences. All student field trips focused on environmental literacy. Currently, field trips and assemblies are continuing but remain virtual.
 - Transitional Kindergarten and Kindergarten classes visited Centennial farm, met a farmer, and had a chance to see the animals and explore the gardens.
 - First-grade students visited Tanaka farms, learned about farming techniques, tried various fruits and vegetables, and learned about sustainable farming practices.
 - Second-grade students walked the local neighborhood for a neighborhood clean-up. They also visited a local beach, met with an environmentalist, and participated in a beach clean-up.
 - Third-grade students also walked the local neighborhood for a trash clean-up. They were also able to visit the local Wetlands, meet with a park ranger, and discuss the effects of plastics on the environment.
 - Fourth and fifth-grade students use Nepris, a digital platform, to have live discussions with scientist experts in energy and reusable resources.
- For the past two years, Albertsons Supermarket has sponsored fifth-grade students in attending outdoor science camp. Students could explore local habitats and further their knowledge and understanding of the environment and the importance of sustainability.
- In addition to field trips, assemblies around the school educate students about sustainability. Primary grade students attend an annual water assembly sponsored by the local water company, emphasizing the importance of natural resources. A partnership with Inside the Outdoors provides hands-on assemblies focusing on environmental education for second, fourth, and fifth grades. In 2020, Fryberger celebrated Earth Day with the EcoHeroes, who explain the importance of taking care of the Earth and recycling.
- Utilizing their campus as an educational tool, teachers use the data generated by on-site solar panels to support fourth and fifth-grade students' research on solar energy and renewable resources.

Element IIIB: STEM Content, Knowledge, and Skills

- Each grade level uses project-based learning to demonstrate ecological and sustainability practices and utilize STEM skills. For example, Fryberger's TK and Kindergarten students focus on the importance of organic farming. Students use engineering and design, mathematical thinking, and content knowledge to learn the

necessary components to grow plants. Students integrate writing, reading, math, science, and social studies skills in the pre-planning process through to the harvesting stage. First-grade students focus on the science of natural resources. A culminating activity requires students to use their understanding of reusable materials to repurpose and create a new product or material.

- Second-grade students focus on the harm of pollution in the ocean and the effect on marine animals. The final culminating project is a student-designed Public Service Announcement using Google slides on how pollution in the ocean causes harm to marine animals. Third-grade students learn about microplastics and their damage to the ocean. Students use their knowledge to educate their peers and community members on the harmful effects of microplastics. Fourth-grade students focus on solar energy science and how people can use it to replace fossil fuels. Students use their engineering and technology skills by building a solar car. Fifth-grade students focus on how the school can become more energy efficient. Students create websites to present their application and design ideas on how Fryberger can increase sustainability practices and become more energy efficient.
- Green technologies are visible across campus. Mathematical data from on-site solar panels allows students in fourth and fifth grades to learn about the importance of solar energy and the positive impact on the environment. The refillable water bottle station allows students to track how many single-use plastic bottles they have saved by refilling their water bottles. Students can apply whole school practices to environmental topics they focus on in their grade level.
- Since 2018, administrator involvement with OC Ecosystems and the Tiger Woods Institute support efforts to bring STEM education to Fryberger students while building teacher capacity. The school principal and district administrators attend collaboration sessions to hear from other schools and experts on implementing STEM in school settings. The school provides planning time to support the school site and the district.
- Before March 2020, Fryberger held five Saturday Academies each school year. Students attended these Saturday Academies to participate in enrichment activities. A partnership with ENGIE provides STEM activities focused on energy efficiency. Students learn the importance of energy efficiency, the science behind weather, and the impact of global warming; complete activities focused on research and design; and work on robotics projects.

Element IIIIC: Civic Knowledge and Skills

- During in-person instruction, Fryberger's student council (students in third, fourth, and fifth grades) organizes weekly recycling. Staff, students, and their families bring in bottles and cans to support the student council and promote recycling practices.
- Special education students, Transitional Kindergarten, Kindergarten, and students in the after-school program have the opportunity each school year to plan and implement a garden on campus. Students learn the importance of growing their own fruits and vegetables and are given a chance to share their knowledge with staff, their families, and the surrounding community. Once the gardens are thriving,

student families are encouraged to take advantage of the fruits and vegetables grown and take them home to eat.

- Second and third-grade students participate in neighborhood and beach clean-up activities. Students learn the importance of caring for their environment and are encouraged to take action. Each year, students analyze the trash collected and often find the majority of litter comes from plastic materials. Student campaigns around the community surround the topic of how litter found in the neighborhoods and the beach ends up in oceans and, as a result, damages the environment.
- Fourth and fifth-grade students present their findings to staff, their families, and the community on their investigations into replacing fossil fuels with solar energy and implementing energy-saving changes at school.
- At the end of the school year, a combination of an Earth Day and Open House celebration gives students an opportunity to showcase their knowledge and campaign for a better environment. On this day, school partnerships that include the Bolsa Chica Conservancy, Surfrider's Foundation, the local middle school, and high school showcase sustainability practices and proper gardening techniques.