



McNear School

California Department of Education Green Ribbon Schools Green Achiever



Prepared By:
California Department of Education
School Facilities and Transportation Services Division
[Green Ribbon Schools Award Program](#)
January 2025

PART II – SUMMARY OF ACHIEVEMENTS

McNear School, Petaluma, California

School Leads with Garden-to-Table Education, Energy Efficiency, and Global Environmental Stewardship

McNear School (McNear) integrates environmental stewardship, health and wellness, and ecological literacy into a holistic educational approach rooted in its natural and cultural heritage. Located near the Petaluma River, the school leverages its natural surroundings, including Thompson Creek and diverse habitats, as living classrooms to enhance learning and foster environmental responsibility. Sustainability efforts include recycling and composting programs, drought-resistant landscaping, energy conservation practices, and alternative transportation initiatives. Health and wellness programs feature Positive Behavioral Intervention Supports, on-site mental health services, daily physical education, nutritious meals, and mindfulness activities like nature journaling by the creek. Environmental literacy classes incorporate land acknowledgments, Indigenous stewardship, and interdisciplinary projects such as trout-raising, habitat restoration, and native garden design, blending STEM learning with civic responsibility. Facilities like the McNear Arts and Science Center, Maker Lab, and an expanded library provide students with design spaces to develop environmental solutions through multidisciplinary activities. Partnerships with organizations, their local waste hauler, Safe Routes to School, and local environmental organizations further enhance sustainability and student engagement. These efforts position McNear as a leader in cultivating lifelong resilience, wellness, and sustainability values within the Petaluma City Schools District.

PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE

Pillar I: Reduce Environmental Impact and Costs

Element IA: Energy

- McNear Elementary School (McNear) reduces its energy use through a comprehensive energy action plan. The school collaborates with its school district, the Petaluma City Schools District (PCSD), to implement cost-saving and sustainability projects with TerraVerde Energy.
- The school reports a 63% reduction in greenhouse gas emissions from the 2022–2023 school year to the 2023–2024 school year. Additionally, during this period, McNear reduced total non-transportation energy use by 64.7%.
- McNear enlists high school interns in the Climate Action Pathways for Schools (CAPS) program to track conservation data, audit the campus, and recommend efficiency improvements. The interns monitor energy use for heating, ventilation, air conditioning (HVAC), and solar systems through billing statements.
- Fourth-grade students partner with CAPS interns to analyze real-world greenhouse emissions data, conduct site-specific energy audits using district energy data, and present their findings and recommendations to the McNear School community, fostering ownership and responsibility in energy conservation and climate action.
- In 2016, McNear installed solar panels using Proposition 39 (California Clean Energy Jobs Act) funding. Between the 2022 and 2024 school years, the school produced 36%

more solar energy than it consumed. To maximize the benefits of this initiative, the school partners with TerraVerde Energy, a leading solar energy company, to ensure it harnesses clean, renewable energy and optimizes energy usage for the long term.

- McNear features cool roofs, a grass playing field, trees throughout the campus, and shade structures created by breezeways and solar panels that reduce the heat island effect. The school partners with the local non-profit ReLeaf to strategically plant and maintain shade trees on campus.
- All classrooms on campus are equipped with motion-sensor-linked overhead lights that ensure the lights are on only when needed. Additionally, teachers often opt to teach without the overhead lights, making use of natural daylight whenever possible.
- Since 2019, the school has upgraded all heating and air conditioning units to energy-efficient models, significantly reducing its energy consumption. HVAC systems are carefully monitored to maintain temperatures between 68 and 72 degrees, and units are turned off during non-operational hours to conserve energy. Fresh air and ventilation are also prioritized by opening windows, reducing energy consumption, enhancing cooling, and promoting healthy indoor air quality.

Element IB: Water and Grounds

- McNear records a combined 26.85% decrease in outdoor and indoor water use from 2022 through 2024.
- McNear mulches its vegetable and habitat gardens to retain moisture, reduce irrigation needs, conserve water, and promote healthy soil and plant growth.
- The school incorporates drought-resistant and native plants that help conserve water and foster sustainable wildlife habitats. McNear boasts a landscape comprising almost 90% native plants, including oaks, buckeyes, redwoods, crape myrtles, coyote bush, golden currents, and yarrow. It also exclusively utilizes native plants for all new plantings.
- McNear students collaborate with the district's maintenance department to monitor irrigation systems. For instance, fifth-grade students study freshwater systems and use this knowledge to inform their work for a project that aims to enhance irrigation in the school's Bird Habitat. Students are also partnering with an instructor from the School Garden Network to install the new irrigation lines in the habitat. This upgraded system features designs intended to keep two bird baths consistently filled with fresh water, providing essential resources for birds and other wildlife that visit or inhabit the area. This project improves the habitat while deepening students' understanding of water conservation and ecosystem support
- Fifth-grade students partner with Daily Acts to provide classroom presentations on stormwater management and pollution prevention. Students engage in rain garden projects, creating soil ribbons to study soil types, digging trenches to explore water flow from spouts to storm drains, and designing plans for placing native plants around storm drains to filter and clean stormwater.
- The school maximizes water efficiency by using reclaimed water for all outdoor irrigation, setting sprinklers on timers, and regularly monitoring leaks and stormwater runoff to ensure storm drains remain clear and functional.
- The school prioritizes efficiency and conservation. When replacements are required, it installs the most advanced drinking fountains, faucets, and irrigation systems, ensuring sustainability across all school sites.

- Fifty percent of McNear's grounds serve ecological purposes, fostering a connection between students and nature. A notable feature is a 100-foot stretch of creek frontage where students actively monitor water quality and replace invasive plants with native species, enhancing their stewardship and understanding of water within an ecosystem.

Element IC: Waste

- McNear reports a waste diversion rate of 43% from recycling and composting. The school fosters a robust composting system where students actively sort and collect compostable materials daily, including pouring out leftover milk from their lunches, to minimize waste and promote responsibility.
- The school anticipates less waste in the current school year and into the future as the lunch program has undergone numerous revisions. For example, the program now uses more compostable containers and serves food in bulk instead of individually wrapped items. As a result, the food quality has improved, and custodial staff report less food waste.
- School staff and students collaborate with local waste hauler Recology to monitor waste diversion by auditing practices and ensuring proper sorting. Students line up at lunch to sort food waste, recyclables, and landfill waste into designated bins under staff guidance, promoting environmental responsibility.
- McNear diverts substantial organic waste from landfills by composting schoolyard green waste and lunchtime waste, partnering with Recology to transform the materials into nutrient-rich compost that supports environmental sustainability.
- The school manages materials under strict safety protocols, ensuring secure storage accessible only to trained custodial staff. The school's district also regularly assesses inventory to identify safer alternatives and implements best practices for waste reduction.
- CAPS interns are collaborating with the school to develop food packaging guidelines. They will communicate these guidelines to producers and the waste management company to ensure that each alternative can be disposed of properly. Through their collaboration, the school has established policies that prioritize compostable, bio-based food service alternatives for the District.
- The school, in collaboration with Recology, offers an upcycling clothing program. The program tracks the amount of materials diverted from landfills to monitor waste reduction, promoting less waste and better resource management.
- About 90% of students use reusable lunch bags, and sixth graders give school-wide presentations on reducing single-use plastics. Recology also holds biannual presentations on waste reduction and environmental impact.

Element ID: Alternative Transportation

- A 2024 – 2025 Walk and Roll to School Survey revealed that 20% of the school's respondents walk, 8% use rolling methods such as bicycles, scooters, or skateboards, 2% carpool with two or more students, and 1% utilize the school bus for transportation. All remaining students use single-family vehicles to get to and from school.
- This school promotes active transportation through the Safe Routes to School (SRTS) Program. It engages students and families in community-led bike trains and gathers regular feedback to improve participation and involvement.

- Fourth and fifth-grade students enhance their bike safety skills through an annual Bike Rodeo. Approximately 100 students receive helmets and gain confidence in riding to school safely.
- McNear promotes active commuting by hosting weekly "Walk, Roll, or Bike to School Day" events, honoring special days like International Walk and Roll to School Day, and offering secure storage for scooters, skateboards, and bikes to facilitate these initiatives.
- The school has established a no-idling policy for all vehicles, including school buses. This policy is communicated through signs located in the pick-up and drop-off areas. The signs inform the community of the school's commitment to complying with the California Airborne Toxic Control Measure, which aims to reduce vehicle idling.
- The school uses five all-electric buses for field trips, greatly reducing air pollution, fuel costs by up to 80%, and maintenance costs by 50%.
- McNear supports eco-friendly practices by encouraging walking to local destinations for field trips, minimizing transportation impacts, and promoting physical activity.

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

Element IIA: Environmental Health

- McNear School practices Integrated Pest Management (IPM) by reducing pesticide use and ensuring a safe environment for students and staff. The school adheres to a "no chemical" policy and collaborates with Nature Science Pest Control, utilizing eco-friendly products and IPM strategies.
- The school's IPM program includes routine pest inspections, pest identification, and detailed recordkeeping. School janitorial staff prevent infestation by cleaning classrooms daily and regularly reminding students, staff, and faculty to avoid leaving food or other vermin-attracting items in classrooms through verbal announcements and informal reminders.
- McNear prioritizes the health and safety of students and staff by maintaining a smoke-free environment. The school also refrains from using fuel-burning combustion appliances and has protective measures to avoid exposure to carbon monoxide.
- All frequently occupied rooms at or below ground level have undergone radon gas testing. Rooms exceeding four picocuries per liter were promptly mitigated and retested. The school has incorporated radon-resistant features into new construction to ensure radon levels remain below the allowable threshold.
- McNear prioritizes the safety of students and staff through a chemical management program that includes purchasing products with low or no Volatile Organic Compounds (VOCs), secure storage, labeling, and regular inventory assessments. All staff receive training on safe chemical management, including hazard communication and clean-up procedures. Art classes use non-toxic materials, while custodial staff utilize third-party-certified green cleaning products, ensuring effective cleaning with minimal environmental impact. Examples include biodegradable detergents and non-toxic disinfectants.
- The custodial staff is trained in proper cleaning techniques to ensure the safe application of all cleaning products. This includes using appropriate dilution ratios, wearing personal protective equipment, and adhering to detailed cleaning protocols to prevent cross-contamination. Ongoing training sessions ensure custodians remain informed on best practices and the importance of using green products.

- Staff incorporate advanced cleaning equipment, such as high-efficiency particulate air (HEPA) vacuum cleaners, to improve indoor air quality by capturing dust and allergens. The cleaning schedule focuses on high-traffic areas and frequently touched surfaces to ensure thorough and effective cleaning.
- The McNear custodial staff focus on preventing asthma triggers by exclusively utilizing asthma-safe cleaning products across the campus. These specially designed chemicals reduce irritants that may worsen asthma symptoms, promoting a healthier environment for all students.
- The school consistently assesses indoor air quality and implements measures to enhance ventilation across all classrooms. By improving the flow of fresh air and ensuring that HVAC systems run continuously to keep the air clean, the school decreases the levels of allergens and pollutants that can trigger asthma flare-ups, fostering a safer atmosphere for students with respiratory conditions asthma.
- McNear improves ventilation by providing classrooms with air purification systems, along with regular inspections and maintenance to keep unit ventilators free of dust and allergens, fostering a healthy indoor environment.
- At McNear, classrooms feature audio amplification systems that maintain acoustics under 45 dBA, promoting clear sound delivery and enhancing communication and learning for all students.
- Classrooms maintain relative humidity levels between 30% and 60%, adhering to American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) standards to promote a comfortable indoor environment.
- The McNear campus offers students views of natural scenery. It is enveloped by trees and various native plants, providing inspiring glimpses of nature. This picturesque environment features a bird habitat, a reading garden, a riparian creek area, and a rose garden, enhancing the educational experience while promoting a tranquil environment.
- McNear manages building moisture by using humidifiers when necessary and addressing moisture-related issues, such as mold, through district-led identification and abatement procedures. Maintenance concerns are promptly addressed through the District's ticketing system, ensuring swift repairs and maintaining a safe, healthy environment.
- The school follows strict procedures to ensure lead safety in buildings and site soils, including past soil testing and remediation of contaminated areas. Prior to construction or renovation, lead-based materials are inspected and, if found, abated to prevent exposure, ensuring a safe environment for students and staff.
- At McNear, access to clean drinking water is prioritized by connecting the campus to the municipal water system and implementing regular testing for lead and contaminants to ensure water safety.
- The school features three water bottle filling stations equipped with purified water installed across the campus, encouraging students and staff to use reusable bottles and reduce plastic waste.

Element IIB: Nutrition and Fitness

- McNear participates in the District's food service department's Farm to School initiatives, which focus on providing nutritious, locally sourced meals to students. Since 2019, the school has increased its use of the USDA DoD Fresh Fruit and Vegetable Program by 60%.

- McNear School enhanced food services in the 2024-2025 school year by transitioning from heat-and-serve meals in plastic containers to freshly prepared lunches in a central kitchen, reducing plastic waste and improving meal quality.
- McNear's district utilizes Local Food for Schools funds to acquire 60% of its produce. In partnership with FEED Cooperative, it sources seasonal fruits from more than 50 North Bay farms dedicated to ecological sustainability.
- The school replaced high-sugar cereals and chocolate milk with healthier options on its menus. Additionally, interactive, multilingual menus offer detailed nutritional information to accommodate diverse dietary needs and promote informed food choices.
- McNear utilizes an "Offer vs Serve" model, empowering students with meal choices while ensuring a vegetarian or plant-based option accompanies each meat-based entrée. Culinary training for staff and increased nutrition education resources further support these sustainability-focused initiatives.
- McNear's school garden program enriches nutrition education for students in Transitional kindergarten (TK) through second grade, providing weekly hands-on lessons. Students enjoy tasting produce from the garden and local farms and trying new fruits and vegetables while learning fun nutrition facts highlighting health benefits.
- McNear's garden is maintained collaboratively by staff, parents, and students, with a dedicated garden committee comprising the site principal, parents, the garden teacher, and the school's Environmental Literacy Coordinator overseeing its upkeep and future enhancements.
- The McNear Parent Teacher Association (PTA) allocates a budget to support a garden teacher's salary and provides essential supplies, ensuring the garden thrives. The garden includes eight raised beds, a fenced area, a meeting area with tables, cupboards stocked with gardening tools, and a sink with running water for hands-on activities.
- During 30-minute sessions, TK through second-grade students engage in sustainable gardening practices, focusing on waste reduction, water conservation, and minimizing environmental impact. They gain hands-on experience identifying, harvesting, and preparing produce grown in the garden.
- McNear Elementary emphasizes physical education (P.E.) with 120 minutes of weekly instruction. In the primary grades, an innovative approach involves a four-choice program, enabling classes to rotate through different P.E. activities. This strategy keeps the content engaging while fostering teamwork and collaboration among students.
- The school hosts physical education activities beyond required PE classes, including the annual Petaluma Westside Relays, where students prepare and showcase their athletic skills. Additionally, students participate in monthly Taekwondo sessions, which promote respect, discipline, and exercise. Whole-school events, such as dance lessons and the annual Move-A-Thon, further encourage physical activity and foster a lifelong love for health and fitness.
- McNear provides outdoor education and recreation by offering students opportunities to engage with nature through environmental literacy and stewardship projects. Each class participates in 45 minutes of environmental activities weekly, observing surroundings, collecting data, and contributing to garden-based learning that promotes ecological responsibility.
- Beyond the standard curriculum, McNear offers a variety of outdoor enrichment programs, such as Fencing, Golf Club, Skateboarding Club, Archaeology Club, Adventure and Rec Club, and Art in the Garden Club. These programs foster creativity,

teamwork, and physical development, supporting students' holistic growth and connection to nature.

- The School Nutrition Advisory Committee (SNAC) and the Petaluma City Schools District (PCSD) Safety and School Climate Committee meet quarterly. This group, made up of students, teachers, parents, and community members, addresses topics such as nutrition education, school food, and emotional and behavioral well-being. Together, they develop guidelines, language, and measurable goals for the Local School Wellness Policy (LSWP), ensuring that they incorporate diverse perspectives on nutrition, safety, and environmental education.
- Over 50% of McNear students have engaged in the SunWise program or similar sun safety initiatives. The school's Environmental Literacy Coordinator integrates these initiatives into the curriculum to promote UV protection awareness and foster real-world connections through data analysis in nature journals.
- McNear supports staff wellness through various initiatives, including access to the Employee Assistance Program for mental health resources. Staff wellness programs feature weekly Staff Morale Meetings designed to foster community and tackle challenges, as well as the District's Walking Club, and Wellness Wednesdays. Staff enjoy amenities such as bottle-filling stations, therapy dogs, and discounts on Columbia sportswear. Nutrition support includes workshops focused on healthy eating, nutritious snacks provided at meetings, and partnerships with the school garden program.
- McNear's Coordinated School Health approach integrates various health initiatives to create a comprehensive and supportive environment that promotes students' well-being. Students participate in the California Healthy Kids Survey annually, which provides insights into their physical and emotional well-being and informs programming that addresses evolving student needs.
- McNear School provides a school nurse who is present one day a week and offers health assessments, chronic condition management, and first aid to ensure timely student health support. Additionally, the school counselor is available three days a week, provides emotional support, and helps students build coping skills through individual and group sessions, fostering resilience and emotional well-being.
- McNear focuses on initiatives and strategic partnerships with organizations prioritizing environmental health for human well-being. This work supports the school's mission to enhance student mental health and well-being, addressing student academic and emotional challenges through the following initiatives and partnerships:
 - **Safe Spaces and Support:** A designated break space in the school's office allows students to regroup and ensures they can return to class with a calmer mindset.
 - **Restorative Practices:** Restorative techniques and classroom circles assist students in resolving conflicts, developing empathy, and enhancing relationships, thereby fostering a positive and inclusive school climate.
 - **Positive Behavior Interventions and Supports (PBIS):** PBIS teaches students shared expectations and positive behaviors, fostering a respectful and harmonious learning environment.
 - **Anti-Bullying Initiative:** The STOPIT app enables students to report bullying anonymously, fostering accountability and contributing to a safe, inclusive environment atmosphere.

- **Cross-Grade Buddies and Falcon Friday:** The buddy program connects older and younger students, fostering mentorship and school pride, while Falcon Fridays promote unity and school spirit.
- **Empowerment Through Leadership:** The Student Council provides leadership opportunities that encourage students to share their ideas and positively impact their community environment.
- **Social Emotional Learning (SEL):** Integrating SEL through read-aloud supports students in processing their emotions and cultivating empathy through open discussions.
- **Outdoor Learning & Mindfulness:** Students cultivate focus and mindfulness through nature journaling, observing, and sketching in the serene environment of the creek and native tree shade.

Pillar III: Provide Effective Environmental and Sustainability Education

Element IIIA: Interdisciplinary Learning

- Bella McNear aligns with their district's 2021 Climate Action Resolution by integrating California's Next Generation Science Standards (CA-NGSS) and history-social science curricula with California's Environmental Principles and Concepts (EP&Cs). These initiatives prioritize environmental awareness and sustainability while fostering critical thinking and responsible decision-making.
- The school adopts the California Blueprint for Environmental Literacy's definition of an environmentally literate person as "someone who can act independently and collaboratively to support communities that are ecologically sound, economically prosperous, and equitable for current and future generations." McNear commits to helping every student graduate with this understanding, using lived experiences and varied learning approaches to empower students to recognize environmental issues and make informed choices.
- McNear students focus on environmental literacy, benefiting from hands-on opportunities to explore nature and engage in stewardship projects. Dedicated garden and environmental literacy instructors deliver biweekly lessons emphasizing scientific inquiry, critical thinking, and impactful actions tailored to students' developmental stages. The program divides instruction to suit various ages. The school's Garden Teacher works with grades TK through second grade, while the Environmental Literacy Coordinator teaches grades three through six. This collaborative approach ensures that all students receive balanced, age-appropriate instruction.
- The school's campus features native plants, wildlife habitats, gardens, and a riparian creek, forming a living classroom that supports outdoor education. A Grounds Committee of parents, teachers, and administrators maintains these areas, develops outdoor learning spaces, and designs sustainable features, such as water catchment systems, to ensure garden sustainability during drought conditions.
- McNear employs a carefully chosen state-adopted curriculum to implement the McNear Environmental Literacy Framework and ensure the complete integration of EP&Cs into instruction. This strategy allows teachers to present environmental and sustainability concepts across multiple subjects.
- Many of the school's teachers enhance their lessons with the Education and the Environment Initiative curriculum, which emphasizes California place-based

environmental studies. This approach helps students connect local and regional environmental concepts to real-world applications in various subjects.

- A fourth-grade integrated unit on the California Newt exemplifies McNear's interdisciplinary approach. Students analyzed iNaturalist data, created public service announcements, designed wildlife crossing signs, and raised funds for conservation efforts, reinforcing their understanding of ecological challenges and fostering actionable solutions.
- McNear's Garden Program, a vital resource for over twenty years, engages TK through second-grade students in activities such as harvesting sunflower seeds, learning about nutrition, composting, planting carrot seeds, and tasting locally grown tomatoes. These lessons connect environmental literacy to practical life skills and seasonal learning.
- The evaluation of environmental and sustainability education includes assessments from state-adopted curricula, observations of student engagement, self-assessments in environmental literacy lessons, student-led stewardship projects, and pre-and post-tests that the Environmental Literacy program administers.
- McNear staff actively pursue professional development in environmental literacy at the Sonoma County Office of Education. Teachers also participate in the Watershed Classroom to enhance their ability to deliver place-based and environmentally focused lessons.
- Teacher representatives on the District Climate Action Committee support district-wide environmental literacy initiatives by sharing insights and professional development opportunities with colleagues. Recent meetings have focused on climate action policies, Safe Routes to School partnerships, student anxiety related to climate change, nutrition improvements, and curriculum resources from the District Environmental Literacy Coordinator.
- The McNear Environmental Literacy Coordinator, who also serves as the district Environmental Literacy Coordinator, plays a key role in advancing district-wide environmental literacy initiatives. With experience in science and environmental education since 2014, she leads efforts to integrate environmental literacy into the curriculum, ensuring students and teachers are equipped with the knowledge and resources for responsible environmental stewardship.
- The McNear Watershed Classroom has provided local watershed education to students for over five years. Each class receives two instructional visits and a field trip to the River Heritage House, where students engage in the following activities:
 - TK/K students participate in a campus cleanup.
 - First-grade students complete a plant-focused Bioblitz.
 - Second-grade students participate in a watershed cleanup.
 - Third-grade students complete a bat habitat-focused Bioblitz.
 - Fourth-grade students participate in an animal life-focused Bioblitz and a "Council of All Beings" activity.
 - Fifth and sixth-grade students test the water quality of the Petaluma River.
- The school has collaborated with Students and Teachers Restoring a Watershed (STRAW) for over a decade as an essential partner in environmental education. STRAW initially focused on campus creek restoration, but it now engages K-6 students in off-campus, hands-on restoration projects, enhancing watershed health and building a sense of community involvement.

- The Student Council/Green Team facilitated a school-wide Plastic Free Lunch event sponsored by Cafeteria Culture. This initiative, introduced during environmental literacy classes in the 2023 – 2024 school year, encourages all students to reduce single-use plastics during lunch.
- McNear's Environmental Literacy program is anchored in the place-based learning approach, promoting inquiry and fostering connections to local ecosystems. The school's Environmental Literacy Coordinator develops the program's framework, which includes a Google site housing standards, lessons, and resources.
- McNear offers a variety of co-curricular programs to enrich sustainability education and nurture students' connection to their environment, including:
 - The Student Council/Green Team leads projects that promote recycling, reduce single-use plastics, and ensure the environmental sustainability of school events.
 - Each year, approximately 60 sixth-grade students participate in an immersive overnight outdoor education program, where they study ecology, explore natural habitats, and engage in hands-on creek and garden activities.
 - Fifth-grade students receive specialized instruction on water conservation and its critical role in maintaining healthy local ecosystems in collaboration with the Sonoma County Water Agency.
 - Second-grade students participate in "Trout in the Classroom," an animal research project that observes the life cycle of trout from eggs to fry. The project culminates in the release of young trout into the Russian River, bridging classroom learning with real-world ecological practices.
 - TK students participate in projects such as raising monarch butterflies, studying the life cycles of pumpkins and bees, and conducting regular litter patrols to keep the campus clean.

Element IIIB: STEM Content, Knowledge, and Skills

- McNear School fosters a culture of environmental literacy, stewardship, and sustainability by integrating sustainability, Science, Technology, Engineering, and Mathematics (STEM), green technology, and civics into the curriculum through innovative, solution-based projects including the following:
 - **Bird Habitat Design and Implementation:** Students applied mathematical skills by measuring designated areas and creating scaled designs for planters and pathways. They conducted research on native plant species to determine the most suitable selections for supporting local wildlife. The final garden combined various student designs, resulting in a habitat that enhances the ecosystem for birds and insects.
 - **Creek Restoration with STRAW:** Students constructed models of healthy watershed systems using natural materials, deepening their understanding of ecological balance. During the restoration, they removed invasive plant species and planted native flora, directly contributing to the health of the creek's ecosystem.
 - **Bat Habitat Construction through the Watershed Classroom Program:** After an ecologist identified approximately seven to eight species of bats residing near the school campus, students collaborated to design and build bat boxes. This project required precise measurement, spatial reasoning, and the use of various tools. Students also exercised their creativity by decorating and labeling the

boxes. Concurrently, they researched different bat species and developed educational slide presentations, which they shared with their peers to raise awareness about local biodiversity.

- The McNear Environmental Literacy Program fosters creativity and problem-solving through its Maker Space, where students participate in crafting projects with both recycled and new materials. This approach leads them to inquiry-based projects, such as building bug hotels, designing critter crossings, and creating bug collection sheets, all of which enhance their understanding of ecosystems and their environmental roles in stewardship.
- McNear exposes students to green technologies and career opportunities by collaborating with environmental experts on practical applications. For example, students work with scientists like Matt Lau, who researches bat populations on campus and organizes “Bat Nights” to discuss biodiversity. In addition, National Geographic Explorer Anna Antoniou conducted an “Ecoblitz” to inform students about human impacts through waste audits and to foster community stewardship by promoting litter reduction. Additionally, students are inspired by interactions with renowned conservationists like Jane Goodall, who shared her insights on watershed projects and the importance of advocacy.
- Parents and community members with environmental knowledge enhance McNear’s programs. For example, a parent from Pt. Blue Conservation Science aids bioblitzes, assisting students in identifying bird species and promoting understanding of local wildlife and conservation practices.

Element IIIC: Civic Knowledge and Skills

- McNear is aligned with the Petaluma City Council’s leadership, emphasizing decision-making through the lens of climate change and sustainability, with efforts to align district policies with the City Council’s Climate Action Blueprint.
- At McNear, environmental and sustainability projects empower students across all grade levels to engage in civic and environmental stewardship, integrating hands-on learning with real-world impact, including the following:
 - TK and Kindergarten students patrol the campus for litter, learning the importance of keeping their environment clean. This foundational activity fosters early responsibility and demonstrates how small actions can positively impact the community.
 - First and second-grade students build bug and pollinator hotels for the school’s gardens, gaining insight into pollinators’ vital role in ecosystems. This project deepens their respect for living creatures and allows them to contribute directly to local environmental health.
 - Third-grade students plant native species that attract butterflies, enriching the school garden. By engaging with biodiversity, they learn about the importance of native plants in supporting wildlife and fostering an appreciation for local ecosystems.
 - Fourth-grade students monitor school energy usage, learning about energy conservation and sustainable practices. By tracking consumption, they understand the impact of small actions on reducing their carbon footprint.
 - Fifth-grade students design and install rain gardens and catchment systems, equipping them with water conservation knowledge. Through this hands-on

project, they explore sustainable landscaping and how captured rainwater benefits local wildlife and water quality.

- Sixth-grade students work on reducing the school's carbon footprint and complete ten hours of Youth Empowered Service (YES), where they explore community service projects and develop personal reflections. They participate in local river and beach cleanups and support garden workdays, building a sense of belonging and responsibility in their community.
- The school fosters students' appreciation for the natural world through Nature Journaling, inspired by John Muir Laws, which encourages mindfulness and observation. During monthly visits to the neighboring creek, students learn about environmental awareness and stewardship, enriching their connection to the local ecosystem.
- McNear integrates outdoor learning across grade levels to develop community and civic responsibility. Activities include:
 - Kindergarten and first-grade students enjoy read-aloud sessions under trees, connecting stories to nature and cultivating a love for reading.
 - Second-grade students participate in gardening projects and work on classroom assignments at outdoor picnic tables, deepening their understanding of plant life cycles and nutrition.
 - Third-grade students engage in outdoor games that promote teamwork and physical fitness while also using outdoor spaces for art and classroom activities.
 - Fourth through sixth-grade students mentor younger students through cross-age buddy programs and utilize outdoor areas for technology-integrated projects, including video recording.
- In 2017, McNear secured an Ocean Guardians Grant from the National Oceanic and Atmospheric Administration (NOAA) to establish the Bird Habitat, which supports wildlife in the local watershed as required by the grant. Funding was used to install large metal planters, plant native vegetation to attract birds and insects, and create a space for observing and studying local wildlife. The habitat includes cover boards and logs that students can turn over to explore organisms, as well as logs that serve as seating for class meetings and discussions.
- McNear's collaboration with local organizations is focused on environmental education, social equity, and economic viability. Partnerships that support the school's mission of hands-on learning, community engagement, and promoting sustainable practices, including the following:
 - **Sonoma Environmental Education Collaborative** partner programs provide classroom instruction on topics such as water and energy conservation, the local watershed, and hands-on experiences like creek restoration.
 - **Ten Strands California Environmental Literacy Initiative** keeps the school informed about statewide developments in environmental literacy, including educational policies, curriculum updates, and examples of best practices. This ensures that the program remains current and impactful.
 - **Safe Routes to School** promotes safe walking and biking to school, helping students develop healthy habits while also reducing traffic congestion and pollution around campus.
 - **Sonoma County Water Agency** partners with the school to provide students with valuable insights into water conservation, management, and the importance of protecting local waterways.

- **Friends of the Petaluma River and Watershed Classroom** organizations offer hands-on experiences that connect students with their local ecosystem, nurturing a sense of stewardship for the Petaluma River and its surrounding habitats.
- **Students and Teachers Restoring a Watershed** engages students in watershed restoration projects, allowing them to actively participate in improving their environment and understanding ecological concepts in a practical context.
- **Bay Area Air Quality Management District** teaches students about air quality issues and engages them in projects to improve the air they breathe.
- **Recology Education Programs** teach students about waste management, recycling, and composting, instilling important habits that contribute to a sustainable future.
- **Community Bat Habitat Restoration** helps students understand the role of bats in the ecosystem and promotes biodiversity through habitat restoration projects.
- **Fawn Rescue Education Outreach** provides students with the opportunity to learn about local wildlife and the importance of wildlife conservation efforts.
- **TIDE (Team for Inclusivity, Diversity, and Equity)** promotes inclusivity and equity within the school and the greater community, ensuring that all voices are heard and valued.