



## 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 2015-2018

Public  Charter  Title I  Magnet  Private  Independent  Rural

Name of Principal: **Ms. Lisa Jordan McCarthy**

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

Official School Name: **Maple Village Waldorf School**

(As it should appear on an award)

Official School Name Mailing Address: **4017 E. 6th Street, Long Beach, CA 90814**

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

County: **Los Angeles** State School Code Number \*: **19 64725 6142020**

Telephone: **562-434-8200** Fax: N/A

Web site/URL: [www.maplevillageschool.org](http://www.maplevillageschool.org)

E-mail: General: [info@maplevillageschool.org](mailto:info@maplevillageschool.org) OR Dean: [lisa.mccarthy@maplevillageschool.org](mailto:lisa.mccarthy@maplevillageschool.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: March 3, 2018

Name of Superintendent: N/A

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

District Name: N/A

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

\_\_\_\_\_  
 (Superintendent's Signature)

Date: N/A

### 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 Tom Torlakson**

(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: March 30, 2018

### 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, 2018

### 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](mailto: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.



# *Maple Village Waldorf 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](#)  
March 2018

## PART II – SUMMARY OF ACHIEVEMENTS

### Maple Village Waldorf School, Long Beach, Calif.

*Teaching children to live in harmony with the Earth*

Maple Village Waldorf School (MVWS) opened in 2007 with a philosophy and mission deeply aligned with the Three Pillars: having little to zero waste; low energy/water usage; whole foods; farm to table education; heaps of outdoor time; physical activity rain or shine; students and teachers with a balance of heart, mind, body, and spirit; and a reverence for others and the environment. MVWS opened on its rented site using only two rooms and a courtyard; today the school uses 16 rooms and has undergone three play yard expansions, removing turf to build a natural playground of mulch, wood poles/stumps, tires, climbing ropes, sand, and multiple gardens. Enrollment has exploded from an initial 8 students to 161 from toddler through 8<sup>th</sup> grade.

MVWS is proud of their energy use per square foot and per occupant as well as their environmental policies and performance. Although it is hard to show improvement over time with such a low base, they believe their accomplishment lies in being able to sustain this rate while square footage increases each year. MVWS benefits from education and partnerships with Long Beach Environmental Services; Long Beach Office of Sustainability; California Department of Public Health, Healthy Cleaning for Asthma-Safer Schools; Rain Barrels Intl; Algalita Marine; Tree People; Grades of Green; local farms; and nutrition, yoga, meditation, movement, and counseling professionals.

MVWS hired a Gardening Teacher who runs a local farm and built a dedicated outdoor garden classroom this year. Each family is instructed in packing zero waste lunches, and there is 100% compliance. Cooked meals in all early childhood classes are served in reusable ware and washed by the children and set out to dry. All serving ware on campus is reusable and is compostable at larger events. Leftover vegetables/fruits are placed in a vermiposting bin. Paper/cardboard is repurposed into crafts or recycled. As a result, MVWS is nearly a zero waste school, diverting 95% of waste. The amount of trash produced per person per month is less than 1.5 milk jugs!

MVWS is a technology-free school, resulting in very little electrical use in classrooms. Hand sweepers are used more than vacuums and hand cranks are used for grinding grains. Toys are battery-free and made of natural materials, and art supplies are plant- and beeswax-based. Cleaning supplies are green certified or homemade from natural ingredients, and MVWS has switched to micro-fiber cloths for dry cleaning. Chalk, cinnamon, and essential oil is used instead of pesticides. Parents come from all over the city, yet nearly 70% of transportation to/from school is alternative (not including electric/hybrid cars). The City of Long Beach just completed improvements to the streets, creating a “Bike Boulevard” including roundabouts, traffic circles, landscape planting, and access ramps, making it even easier for families to walk and bike to school.

MVWS entered the Cool California Energy Challenge for two years and won first place for the City of Long Beach both times. There is lots of natural lighting, so overhead lights are rarely turned on. Watering is done by hand, rain is caught in barrels, and gray water is used. Notices are electronic rather than paper. Families are educated in packing healthy lunches, early childhood cooks daily with organic grains and produce, and children participate in all preparation. Parents provide healthy food at faculty meetings and all school and community

events. Teachers read, sing, move, meditate, and craft together, as do the children! MVWS has Faculty Yoga every Friday after school.

There are four parks in walking distance. In addition to daily walks for Kindergarten, all grades walk to the park every Thursday to spend half of their day outdoors and average 9.5 hours a week of physical education. During these experiences, teachers engage students in the observation of nature, model environmentally-conscious practices, and share their view of the world as an interconnected place. The children come to understand their interconnectedness and the need for sustainable practice—like reusing, recycling, and classroom chores—that follows from that understanding. In the grades, this aperture of experience is widened as students study local surroundings, then their state and its history, and then our nation's geography and weather patterns, and later, world history and climate patterns. As this understanding widens, so does their sense of responsibility to care for the environment, and they take on more cleaning and care responsibilities in school shared spaces and the neighborhood, then eventually beyond school grounds.

Teachers employ a place-based curriculum integrated across all subjects rather than taught in isolation, infusing students' lives and learning in science, geography, history, math, and language arts. This addresses the whole child, attends to the students' cognitive, emotional, and aesthetic needs, consistently connects them with the natural world, and allows them to experience hands-on environmental projects. Whole process curriculum (e.g., grinding wheat berries to make flour to bake bread) allows students to gain understanding of food origins and an appreciation for whole foods. MVWS participates in a Farm to School program to use local, fresh food. Field trips to local Farm Lot 59 highlight biodynamic and other innovative farming techniques; and Lazy Acres donates local organic produce. The schools maintains a "picking garden," from which children can eat produce and herbs at will. All purchased food is in bulk and organic.

The MVWS STEM by Nature initiative trains and supports teachers in the use of the natural world, school grounds, and field trip experiences to teach STEM content and skills. Teachers use environmental phenomena to engage the students in inquiry-based lessons. Through activities such as composting, rainwater capture, and gardening, students use the school grounds and surrounding community to deepen their understanding of the natural world. Some examples of this approach include root system identification through flower observation, the study of different cultures throughout time, and the environmental resource availability that made these settlements possible. Students are in regular contact with experts in green technology and careers. Guest speakers invite students into their worlds and share their work and projects with them.

MVWS students knit for the homeless, adopt families during the holidays, sing at hospitals, make thank you cards for volunteers, collect cans and toys for food banks and help to unload and stock the shelves monthly. Students learn to be stewards for the environment by planting, watering, harvesting, composting, vermiposting, and only picking from the picking garden. 85% of plants grown at school are edible and 15% are California Native, including a National Wildlife Federation Wildlife Habitat. MVWS received California Green Ribbon Schools Gold Level recognition in 2016 and 2017 and was selected by California State University, Long Beach to be the subject of project in the MBA program with a focus on sustainability. This year, MVWS became a "Recognized Green Business" with the City of Long Beach.

## PART III – DOCUMENTATION OF STATE EVALUATION OF SCHOOL NOMINEE

Maple Village Waldorf School serves 120 Pre-K to 8<sup>th</sup> grade students, in addition to daily parent and toddler classes. The school rents their classroom buildings from a church and is located in Belmont Heights, a quaint residential neighborhood near the ocean and arts district in Long Beach, in the County of Los Angeles.

The private, non-profit school was founded in 2008 by a group of passionate parents and teachers who wanted to bring Waldorf Education to Long Beach. The school serves families from Orange and Los Angeles counties who desire a Waldorf Education for their children. Dedicated to serving and representing the surrounding community, over 30% of families receive tuition assistance, over 50% of students are of color, and 15% have special needs.

### Pillar I: Reduce Environmental Impact and Costs

#### Element IA: Energy

- The MVWS Board of Trustees has adopted a resolution on Energy Management Conservation. The implementation of this policy is the joint responsibility of the board, administrators, teachers, students, and support personnel. This policy covers thermostat parameters, lighting, desired behavior, and rules for all use of energy. Overall performance is part of the Dean's annual evaluation. The after-care teacher is responsible for following daily, holiday, and summer shut-down checklists.
- MVWS's calculations to demonstrate a reduction in greenhouse gas emissions are from ECAP 19B for the last 12 months compared to the previous 12 months. Last year, MVWS had a reduction of 15%. This year they have increased utilization by one extra (new) classroom, and have still managed to reduce an additional 1.7%. The emission rate per person is extremely low; occupant numbers includes students, faculty, staff, church use, and tenants who sublease.
- MVWS's Energy Cap Pro. 100 score is estimated since they are not able to go through the application process for Energy Star rating due to financial constraints. The estimate is based on energy usage (water, gas, and electricity by square foot). This process was completed on behalf of MVWS by the Energy Manager for Santa Ana Unified School District. Usage is as good as or better than other sites with a 100 score. The Energy Manager of Santa Ana Unified School District provided two examples of schools with an Energy Star score of 100, both of which have substantially more usage (25% and 90% higher) by square footage than MVWS.
- As renters, MVWS is not able to have any on-site renewable energy generation; however, they have save an estimated 3,000 gallons of water annually due to rain barrels that are placed under gutter spouts. 30% of the water bill cost is electricity used to pump water, so this might be considered a source of renewable energy. MVWS also practices vermipost, saving on fertilizer (which uses petroleum), and allowing them to use less water due to better water retention.
- 23% of the Southern California Edison production in the Long Beach area is from renewable sources. Last year, MVWS began paying the full utility bill for the site (instead of landlord) and have decided to enroll in Edison's "Green Rate" at the 100% level.
- MVWS participates in the Energy Upgrade California's Cool California Challenge for the City of Long Beach. MVWS has earned First Place in the city in 2014 and in 2015/16 by educating parents about energy saving techniques and having them log energy

consumption and demonstrate significant improvement over time. Last year MVWS not only won First Place in Long Beach, but ranked the highest in the entire state of California, helping Long Beach earn second place in the state.

- MVWS just built a new classroom and installed all LED lighting. Two years ago, MVWS built two new classroom walls on campus, and fully insulated the walls (R19) for energy conservation. MVWS also used zero VO2 paint. Since space is rented from a church, construction projects are limited, but 100% of any improvements are green in accordance with MVWS' mission and policies. In the past three years, MVWS has painted all classroom walls and exterior school building walls with only zero VO2 paint. MVWS has removed all turf in front of the school to expand the play yard to create a dirt and mulch play area and edible gardens. A section of non-edible plants was also removed to create a climbing area with reclaimed stumps and sand, which is a permeable space. Tiered raised beds have been built and lined with felted recycled sweaters. Ropes from Habitat For Humanity have been repurposed for the playground.
- MVWS has an established teaching garden and two trees to the south of the building, and added drought tolerant plants to the gate perimeter. When a student passed away last year, the school arranged with the City to plant an additional approved tree on the easement. This year, all cement and grass on the west side of the building was removed and replaced with decomposed granite and California native plants. MVWS removed concrete to have a dirt surface for play, and put up four shade sails over the play yard. There is also an awning just outside the gate, where parents and siblings can wait for students to be dismissed. Pavement is light colored (no blacktop) with deep overhang eaves along the walkway.
- MVWS has energy efficient lighting, and uses lights in only 20% of the building from November through February, as philosophy values the use of natural light. MVWS has installed LED lights in the newest classroom. Because MVWS is a technology-free program, there is lower electricity usage (no computers, microwaves, etc.). Programmed thermostats (heat only; no AC) are used with a manual start to avoid energy usage until rooms are occupied. Consequently, energy is never used when spaces are not in use. The system is turned off on weekends and vacations. Heat is only used on cold days until 10:00 a.m. and only a few months of the year when needed (generally December through February). There is one swamp cooler that can be moved around as needed. Shade sails have been added in the play yard, and trees and a new garden were planted on the south side, including a large Pepper tree, to reduce the heat island effect. Hand sweepers are used instead of vacuum cleaners 80% of the time. Class laundry is hand washed and hung to dry on clotheslines; due to the use of natural soaps, this gray water is often reused.

#### Element IB: Water and Grounds

- MVWS used Energy Cap software to measure water consumption both indoors and outdoors. From an initial baseline of 1,387 gallons in 2014, MVWS has shown a 50.2% reduction over time. With this water consumption covering 12,517 square foot building, 305 occupants and 18,700 sq feet of land, it is reported by the Long Beach School District Energy Manager that compared to 86 other schools in the area, MVWS ranks the highest.
- MVWS has implemented several water reducing practices, including removing all turf to create a dirt play yard, which is mulched to avoid need for watering; partnering with the City of Long Beach Sustainability Office to receive free city mulch three times a year;

pouring and spreading mulch in all gardens to conserve water and creating moats around each plant to hold water efficiently; and removing all grass from the property and replacing with decomposed granite and California Natives.

- Through partnership with Rain Barrels Intl, MVWS received and installed two 55-gallon rain barrels to catch run-off that previously ran onto concrete. The school planted raised garden boxes (over concrete) to catch rainwater/runoff; no automatic irrigation, avoids potential problems with overwatering or watering at unnecessary times; “Water Fairies” water by hand during breaks and off-school hours. Part of the shut-down checklist is to check for leaking faucets daily, and water efficient filters have been installed. To reduce wasted water at drinking fountains, all children bring reusable water bottles from home and refill their bottles at water filling stations.
- In addition to using roof runoff, MVWS uses gray water/recycled water from preschool and kindergarten dishwashing tubs (using biodegradable, phosphate free, and pH balanced soap) and all hand-washing tubs. Bins are also used to wash wool for crafting, and all dirty water is poured into planting beds. Previously, students collected rain gutter runoff in a watering container; now they use rain barrels. MVWS practices soil health for maximum water retention and only hand-waters when needed. The compact campus creates very little run-off, as there is not much concrete, and the playground is dirt, covered with mulch. In addition, the play yard connects with the mulched planter beds outside of the gate. Raised garden boxes (over concrete) are used to catch rainwater and runoff. Students dewater barrels after a rain and redistribute water to gardens to ensure the barrels are ready to catch the next rainfall.
- 90% of the MVWS campus is devoted to ecologically beneficial uses. MVWS has received a National Wildlife Federation Wildlife Habitat Certification (#195743) due to gardens including butterfly and beneficial insect-attracting plants, native plants, seeds, berries, birdbath, bird feeder, mature trees, native plants and sustainable landscape management with no pesticides or chemicals used. An exclusive gated outdoor garden classroom was recently added. 3,838 square feet of grounds are available as outdoor classroom space and are used for movement, math, science, literacy and history lessons, plants are used as dye/food.

#### Element IC: Waste

- MVWS has a 95.65% recycling rate on campus. Only 0.0078 cubic yards/person of waste is generated monthly. Healthy lunches are brought from home, and students help cook daily (e.g., organic grains and soups). Non-acidic fruit and vegetable scraps are fed to the worm compost, which has three layers. Garden trimmings and green waste are added to the compost. Rich dark water (compost tea) that it produces is used to fertilize the garden beds. Then the worms are separated from worm castings in order to use that in the gardens.
- MVWS has no hazardous materials on campus. All school employees are trained on how to identify and use green products. 75% of Outside Cleaning Crew’s products (3x/wk), and 100% of teacher’s daily cleaning products are certified as green. Only natural/green cleaning products are used in all classrooms, shared spaces and bathrooms. (Method) Cradle to Cradle Certified™ GOLD, (Simple Green) NSF International - The Public Health and Safety Company™, Dr. Bronner’s (B Corp). In addition, only natural products are used such as water, white vinegar, baking soda, and essential oils and have switched to “dry cleaning” with Microfiber cloths from the California Department of Public Health.

## Element ID: Alternative Transportation

- Using SurveyMonkey to reach out to families, MVWS found that: 18% of students walk to school; 12% ride their bike or skateboard; 38% carpool with other students; and 1% take other public transportation. MVWS is a private school, and families come from all over the city, as well as five neighboring cities, so it is not possible for many of them to walk/bike. However, nearly 70% of transportation to/from school is alternative, and this does not include many families who drive hybrid/electric cars. Drop off times are staggered to reduce idling.
- After MVWS filed complaints to the City and met with representatives, they not only painted crosswalks at the school's intersection last year; this year the street became a "bike boulevard" with roundabouts at each intersection. This has proven to be so much safer, as traffic has slowed tremendously. In addition, MVWS partnered with the Long Beach Police Department to establish a Safe Routes to School program. Since there is another bike boulevard designed four blocks away, MVWS designated the safest streets to cross with signals, since the cross street does not have one. The Safe Routes map is posted on the school wall and sent in the parent newsletter. Families communicate to organize walking to school. Some parents help others by accompanying their children. The school promotes Trek-To-School Tuesdays where more people participate. MVWS is unable to install EV charging stations, since the building is rented. Bike racks are installed in front and secure storage of scooters/skateboards is in the back of the courtyard. The campus has street parking only, so there are no designated carpool stalls. Vehicle curb loading and unloading is monitored by the Dean each morning. Parents park and walk or drop and pull through.
- All MVWS students (PreK - 8<sup>th</sup>) walk to nearby parks during the school day. Preschoolers and Grades students walk one day/week; Kindergarten walks 5 days/week. Using wagons to carry lunches allows them to walk longer distances. Grades classes take LB Transit Buses (hybrid gas/electric) and the LA Metro to field trips instead of having parents drive in separate cars. Similarly, WVWS began using a 13-passenger van last year for grade field trips, and booked a larger private Long Beach bus to transport all Grades students.
- MVWS has taken several other steps towards reducing environmental impact, such as: bulk ordering to reduce carbon usage and multiple trips; and installing a new paper towel dispenser to help with "one only." A new Pilot Program in Grades 1 and 2 is BYOT (Bring Your Own Towel) to the bathroom to lower paper towel usage; each child has their own hook and hand towel. Grades students went to each classroom on a "bathroom etiquette tour" to ask children to use only one pump of soap, one paper towel, and less toilet paper. Partners to reduce transportation fees/costs include Big Red Bus and Musical Theatre West.
- MVWS partnered with Community Action Team, CleanLB, and One Piece at a Time for Beach Cleanups that were advertised in the Bulletin and Parent Google Group. The Ocean Healer Student Team sold reusable sandwich/snack bags sewed by parents and gave presentation to all parents on solutions for plastic ocean pollution. The school partnered with Bolga Int'l to sell baskets for reusable lunch containers in the school store. All cardboard from shipments is made into weaving boards and placed in worm bins; any remaining is recycled. Viento y Agua Coffeehouse donates to MVWS events, and its close proximity to campus creates incentive to avoid car trips during teachers' breaks.

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

### Element IIA: Environmental Health

- No chemical pesticides are used in MVWS buildings or yard. Faculty identifies any pest issues at weekly meetings and helps formulate natural solutions together to combat any identified pests. Marigolds are planted along garden bed perimeters to discourage pests. MVWS avoids over watering or leaving standing water to discourage infestations. Cinnamon and blackboard chalk are used because many types of insects won't cross them, Simple Green is used to wipe away pests and disrupt movements paths, and peppermint oil discourages insects from entering windows.
- MVWS has a written No Smoking policy in the parent handbook and signs are posted. There is no mercury on site. Old thermostats have been removed/replaced with electronic programmable models. One gas stove is inspected annually and earthquake safeguards are in place. There is one gas fireplace in one classroom, which is inspected annually by the LBFD, and there is a carbon monoxide detector. Only electric hot-plates and tea kettles are used, which are only on when in use. No detected asbestos on site. ELF testing has been conducted, and no ELF has been detected. All wood chips/poles are untreated and safe from contaminants including chromate copper arsenate. MVWS is focused on using only natural products. This includes purchasing and using only zero VOC paint. Unused paint is taken to a Hazardous Waste round-up. Natural beeswax crayons/molding wax, oil based colored pencils, and plant-based paints are used. All cleaning products on-site are either third-party green certified or homemade from natural ingredients.
- 100% of MVWS's classrooms have good acoustics (less than 45 dBA). The school is located in a residential neighborhood without noise impacts. Classrooms have natural light supplemented by T8 lighting retrofits and LED. MVWS is located by the beach and manages the humidity by opening windows to have temperatures within the parameters of the thermostats. When it gets too warm, swamp coolers are used with classroom doors open to hallways. All windows open to promote air flow, and teachers prefer to have fresh air. The proximity to the ocean enables this to happen, rather than spending energy on automatic ventilation and HVAC systems. The south windows view sidewalk trees and planted school trees and garden; east windows view neighbor's lush garden and squirrels visit daily; west windows view banana tree and playground trees; north basement windows view potted plants in window wells.
- Last year, MVWS was accepted into the California Department of Public Health's Cleaning for Asthma-Safer Schools Microfiber Pilot Project. Every classroom and office space now uses these cloths for dry cleaning. MVWS also follow the EPA's IAQ Tools for Schools. To eliminate exposure to mold, moisture is controlled; to eliminate dust mites, classrooms are vacuumed daily and halls are vacuumed 3x/week; to control pests, an IPM Plan is in place including non-toxic materials; to improve indoor air quality, there is a chemical management program that specifies the purchase of only non-toxic products; indoor recess is held if a smog alert is issued or when a smell of natural gas in area is noticed. MVWS uses green cleaning products and does not disinfect/sanitize with any "disinfectants" or "sanitizers" but makes natural ones (e.g., water, tea tree oil, and vinegar). The outside cleaning crew used for deeper cleaning cleans only at night when children and faculty are off campus, and takes all products with them. None are stored on-site.
- The building is inspected regularly for signs of leaks, mold, and moisture. Leaks are addressed at the source. Small leaks are cleaned and dried with fans, mops,

dehumidifiers, and extractors as needed. Large jobs are handled by restoration companies. A mold abatement specialist was hired to do testing. Slight mold was detected and removed and affected material was replaced.

- Loose or flaky paint is analyzed for waste characterization, any affected areas are stabilized. If necessary, structures are removed according to identified proper disposal. All soil is lead-free. Only natural, organic soil is used in the gardens. Only natural fertilizer such as worm compost or chicken compost is used.
- Potable water is 38% ground water, 42% imported, and 6% treated reclaimed; all 3 sources are treated using a multi-stage process including controlled doses of chlorine and chloramine. The City of Long Beach Water Department operates a large groundwater treatment facility and manages a number of field water testing stations that monitor the city's water supply. MVWS's wells are monitored and tested annually and have not found any traces of contamination. The school also has two Brita Filters installed, two Brita filter containers and one Berkey filter on site. Lead-containing fixtures have been removed. Backflow-check valves have been installed and the City of Long Beach Water Department does monthly water quality testing. Children use water from filters to refill their reusable water bottles. All early childhood classes use filtered water for classroom meals. Teachers use filtered water for cooking as well as tea. This policy is in place to avoid the use of single-use plastic water bottles.
- Keeping in mind the Waldorf principles of living in harmony with the earth, MVWS endeavors to have a totally chemical-free environment through the following: use of Green Cleaning Products, no products with any chemicals are left on site by the night cleaning crew, and classes are held for teachers and parents once a year to create and use natural cleaning products. The entire faculty/staff was educated on the use of micro-fiber cloths for cleaning without chemicals or disinfectants, and was also informed that acetic acid, which is found in vinegar, can be an asthma trigger, so the use of vinegar has been minimized in cleaning. Asthma-Safer Cleaning Pledges were signed by each teacher and are posted on the walls.
- Since MVWS has street parking only, the Dean stands outside at arrival time to ensure no cars are double parking or idling when dropping off students. If caught doing so, they are approached and asked to move on immediately. Although unable to establish a formal valet on the residential street, all cars are asked to pull over and directly out. In addition to being addressed at the start of year parent orientation, this is reiterated weekly in an electronic school bulletin.

#### Element IIB: Nutrition and Fitness

- MVWS participates in a Farm to School program to use local, fresh food. Field trips to local Farm Lot 59 highlight biodynamic and other innovative farming techniques; Lazy Acres donates local organic produce. MVWS maintains a "picking garden" for children to eat produce and herbs at will. 100% of purchased food at MVWS is in bulk and organic: brown rice, millet, oats, whole wheat flour, nut butters, raw honey, rice cakes, beans, butter, nut milk, seaweed, seeds, maple syrup, and fresh fruits and vegetables. MTZ Productions donated 1,200 nature bars and boxes of raisins for the school's snack cart.
- Nutrition education efforts include parent classes and emails on healthy whole food choices for lunch/snack/festival/birthday food (e.g., fresh fruit birthday cake). MVWS hosts fermentation workshops and ongoing cooking classes; parents created and published a school cookbook of healthy family recipes. All students are exposed to preparing healthy foods, making butter, bread, applesauce, and soup; and squeezing

fruit for juices. Pre/K grind wheat into flour and bake bread weekly; 3<sup>rd</sup> grade includes farming and cooking curriculum.

- MVWS hired a Gardening Teacher and built an exclusive fenced garden with chalkboard for an outdoor classroom and added an apple tree. Two raised vertical beds were built in the preschool courtyard. Each grade has its own space to grow in the main garden. Plantings are done according to the lunar calendar using heirloom or other rare seeds. Planting interweaves with the school curriculum, using math to determine seed spacing, germination rates, succession planting, yield, and practical business practices from gardening operations. Students study the whole of a farm: structure of a plant, function of a seed, planting varieties, and how long it takes to produce food, using charts. The entire school uses garden spaces to observe ideas studied in botany blocks (e.g., leaf and root structure). Some plants are harvested for natural dye and used to color garments or wool to spin. Others are enjoyed in weekly meals (e.g., herbs in weekly soup, salad parties) or end of season celebrations. Gardens are adjacent to the play yard and accessible to all students. All students are responsible for respectful treatment of the gardens. Partnerships include: City of LB Environmental Services, Office of Sustainability, Farm Lot 59, and Tree People.
- Grades students at MVWS spend 570 minutes per week in physical education. In addition to 45 minutes of outdoor recess, they have physical education class twice a week (90 min), and folk dancing/movement class twice a week (90 min). On Thursdays, Grades students walk 2 miles round-trip to the park and engage in running, tag, climbing, obstacle courses, etc. (165 min). Grade 6–7 students run weekly. All grades have jump rope lessons by professionals. There is a morning lesson on indoor movement exercise. Kindy walks to the park daily, rain or shine. 95% of annual physical education takes place outdoors. The students are assessed for coordination, rhythm, range of motion, balance, stamina/endurance, cross lateral integration, and flexibility. MVWS has also added an after-school sports program. Partners include: LB Parks & Rec, Colorado Lagoon, One World Rope (jump roping), Little Owl Preschool (jump rope demo to students), Cypress Unified SD (donations of tumbling mats), CSULB (donations of sports equipment), Red Rose Co (sports camp), and Girl Scout Camp (Event Grounds).
- MVWS has a Wellness committee that consists of faculty/staff who meet weekly. The Hospitality Committee brings healthy food to all meetings and events. There is a standing wellness policy in the parent handbook that includes nutrition, dressing for the weather/movement, reduction of media, sleep, illness, health, and safety. MVWS holds family bicycling meet-ups, Trek to School Tuesdays, Faculty Friday Yoga, Meditation, and “Green Piece” notices/bulletin board regarding wellness events. Before and after school programs are taught by school teachers to ensure continuity in expectations for healthy living and eco responsibility. 100% of students participate in EPA's Sunwise program and are educated in sun safety (i.e., wearing hats, sunscreen, etc.). Shade sails were added to the yard, and all early childhood students wear sun hats 100% of the time at recess and on walks. Each child has his/her name embroidered on a hat to ensure no hats are shared. Partners include: KITE (after school drama), One World Rope (during and after school jump roping), and Red Rose Co. (after school arts/sports).
- MVWS prides itself on ensuring that faculty and staff are supported emotionally, mentally, physically, and nutritionally. Daily: teachers recite a verse together each morning supporting each other in the day to come; the Dean has office hours for counseling; refrigerator in faculty room for healthy lunches/snacks; organic fruits, vegetables and grains are on-site for faculty/staff including vegan and gluten-free options; all faculty wear sun hats. Weekly: Friday after-school Faculty Yoga led by one of

the teachers; faculty meetings always begin with 10 minutes of yoga exercises, recite inspiring quotes at open/close, sing together, standing agenda item to troubleshoot and support each teacher with student behavioral issues. Parents provide healthy lunches (proteins, fruits, vegetables). Monthly: Study Group, crafting meetings. Yearly: Two Faculty Development days providing yoga, meditation, movement, eurythmy, spatial dynamics, therapeutic drawing, painting, crafting, and compassionate communication. Each teacher receives several outside mentor visits for support.

- Other efforts made to improve health and wellness at MVWS are: Farm Lot 59 (planting/growing/farming education, hands-on learning), LB Farmers Market (Wednesday family meetings), Dr. Melrose (meditation, self-regulation, counseling), Whispering Waters (hiking/climbing access), Lazy Acres (donation of organic fruit), Ciana Lee (Faculty Yoga), Joseph Rubano (Spatial Dynamics, Compassionate Communication), Gail McManus (painting therapy), Mary VanGeffen (Simplicity Parenting Classes) Vicki Abeles (Race to Nowhere, Beyond Measure documentary screenings), Sleepy Hollow Soup (organic soup/salad), LGBTQ Center (faculty education and community lecture). The Dean of School holds ongoing community parent education workshops (e.g., nutrition, rhythm, media free alternatives), has counseling office hours for parents/student/faculty, Media Policy outlined in Parent Handbook (reduced screen time to promote mental/physical activity). Teachers and parents form a volunteer band and hold free annual school concerts (songs of compassion and connection). Sadly, a student passed away in January and a teacher in October. Memorials were held, as well as blessing circles, and a counselor specializing in trauma was on-call for students and parents and the Dean helped parents to communicate with their children.
- Whole process curriculum (e.g., grinding wheat berries to make flour to bake bread) allows students to gain understanding of food origins and an appreciation for whole foods. Faculty and administration educate parents on packing nutritious foods at orientation, workshops, and in a handbook, and parents receive support in incorporating movement and reducing screen time in their homes. The homework-free policy before 4<sup>th</sup> grade stresses the importance of time for child-led outdoor play after school, and demonstrations by movement classes for parents and community help both celebrate and educate. In addition to the Dean providing counseling during office hours, she provides a referral list of local mental health professionals. MVWS partners with the Long Beach Unified School District to provide services to students with special needs. Social inclusion curriculum promotes a safe school environment. A Parent Village meeting is held quarterly, with faculty members and the Dean in attendance to coordinate MVWS health and safety goals.
- MVWS partners with several groups to support health and safety, such as: Algalita Marine Institute (supplies plastic-free lunch container options and education), Farm Lot 59 (supplies organic fruits/vegetables), Dr. Melrose (daily 60 second mindfulness meditation for mental clarity and well-being; class behavioral observation), One World Rope (professional jump rope instructor for fitness/dexterity), Red Rose Co. (afterschool sports camps with transportation), LB LGBTQ Center (information sessions and verbiage for the school's bullying policy for transgender and sexual identity students); Lisa Johnson, OT & Real Connections (evaluations and support of behaviorally-challenged students), Dr. McBride/Allison Keller (LBUSD evaluations for students with special needs and support for staff), MTZ Productions (donated healthy snacks for cart), Suzanne Toro (sound therapy and meditation), Girl Scouts (access to camp facilities), LB Parks & Rec (access to local parks and facilities), LBFD (Fire Drills, emergency preparedness plans, extinguishers, inspections, resource for health/safety), Emmanuel Presbyterian (site

inspections/maintenance), LBPD (safe routes, community safety), CSULB (sports equipment), Waldorf School of OC & Sanderling (Pentathlon Sports training/hosting).

- MVWS has a nurse on-site daily during school hours, as well as a full-time teacher who is a certified Emergency Medical Technician. There are also three full-time office staff who immediately see to minor injuries, splinters, and maladies. A first aid kit is kept in every classroom, as well as in the front office; ice packs are frozen and accessible at all times. A "sick bed" is available where children can wait for parents to pick them up when necessary and all sheets/blankets are washed routinely. The Dean of Education is on-site and has a degree in Sociology and Psychology. She is available daily from 8:30 - 3:00, for any children needing extra emotional support and counsels them in the privacy of her office. Additionally, the Dean of Education meets with parents needing emotional guidance and/or support. She meets with parents by appointment, but is available for drop-in if not otherwise occupied.
- MVWS has a unique approach to school social climate. Social inclusion is used, believing "there is no such thing as an antisocial or disobedient child—only a disoriented one." Early intervention is used including whole-class friendship circles with dialogue, helping them to know the difference between "truth telling" and "tattle tale-ing," creating a safe place for them through awareness of boundaries and giving them tools to work through tensions, and holding children accountable without making them the focus. Students do therapeutic art (color theory), engage in kindness projects and gratitude chains, and write thank you notes as a class for all volunteers. Teachers use pedagogical storytelling to help heal emotional wounds and build courage. Students who injure others are the ones to get the ice pack or Band-Aid to build compassion. Fifth and second graders are Reading Buddies. Class teambuilding activities including knitting, dancing, and making music together weekly. Seventh and eighth grade students practice 60-second "mindful minute" meditation.

### Pillar III: Provide Effective Environmental and Sustainability Education

#### Element IIIA: Interdisciplinary Learning

- MVWS's definition of environmental literacy, expected outcomes, and sustainability requirements are defined and embedded into each grade level's prescribed curriculum. Teachers employ a place-based curriculum, integrated in all subjects rather than taught in isolation, infusing students' lives and learning in science, geography, history, math, and language arts. This addresses the whole child, attends to the students' cognitive, emotional, and aesthetic needs, consistently connects them with the natural world, and allows them to experience hands-on environmental projects.
- MVWS Mission Statement: "Maple Village Waldorf School aims to create a compassionate and welcoming environment, rooted in the traditions and philosophies of Waldorf education. We endeavor to engage and nurture the whole child, resulting in a balance of heart, mind, body and spirit. We strive to provide a full, living education, integrating academia, the arts and communal awareness in order to inspire, energize and develop creativity and a love of learning in each student. We also place a high importance on contributing to and providing a positive focal point for the local community." Faculty and Parent Handbooks include policies on reusable containers, recycling, vermiposting, nutrition, sleep, clothing, caring for school grounds, and respect for each other.

- MVWS opened in 2007 with access to only a courtyard, and established a vision for expanding a green school yard, which was completed in three phases. A certified landscape architect drew plans, which included removing a wall, removing turf and replacing it with a dirt and mulched play yard, sand areas and a climbing area with reclaimed stumps. This year, teachers received professional development in California's Environmental Principles and Concepts (EP&Cs) from TreePeople. The EP&Cs are already deeply embedded in the curriculum, as students have always learned that they are a part of the natural environment and that their actions can and do impact the natural world.
- Sustainability concepts at MVWS weave into all subjects in a few key ways: 1<sup>st</sup>, observing the natural world (nature walks, geography, geometry, meteorology); 2<sup>nd</sup>, examining man's relationship with the environment (gardening, grinding wheat, baking, shelters & farming unit, natural dye & textiles) and impact on it (climate study); and 3<sup>rd</sup>, promotion of healthy habits (care for school, gardens, bodies, others). In early childhood, the main sustainability concept is the child's overall trust and love of the world.
- Through weekly neighborhood walks and park days, teachers engage students in observation of nature, modeling environment conscious practices, sharing their view of the world as an interconnected place. The children imitate this and come to understand their interconnectedness and the need for sustainable practices (reusing, recycling, & classroom chores) that follows from that understanding. In the grades, this aperture of experience is widened, as students study local surroundings, then their state and its history, and then our nation's geography and weather patterns, and later, world history and climate patterns. As this understanding widens, so does their sense of responsibility to care for the environment, and they take on more cleaning and care responsibilities in school shared spaces and the neighborhood (vermiposting, composting, leading recycling), then eventually beyond school grounds (beach cleanups, food bank).
- Teachers write extensive reports about each student, measuring proficiency in sciences, reverence for the natural world and respect shown to it and the other students through participation in gardening/recycling/composting/mulching/experiences in nature (farm trips, overnight camping). This year, all teachers will receive Professional Development in environment literacy, the EP&Cs, and environmental skills and practice. Dean attends environmental workshops (e.g., Algalita Marine Research Summit, Grades of Green), shares learned practices, and circulates environmental texts/articles in faculty library/emails.
- While the entire student body participates in sustainability, The Ocean Healers is a team of 7<sup>th</sup> and 8<sup>th</sup> graders who are committed to education in environmental topics. They were accepted to the 2016 Int'l POPS Summit and wrote and recorded a song to educate our school and greater public on plastics refusal & ocean pollution. They presented to the 130 summit participants and are teaching it to our student body and performing the song in partnership with Seidelworks and Compound Recording Studio to the MVWS community, Intellectual Virtues Academy, & Little Owl. They will also make a presentation to grades students on the 4 R's and give a presentation to all parents on solutions for plastic ocean pollution. In addition, they performed the song to the 2017 POPS Summit.
- 5<sup>th</sup> and 6<sup>th</sup> grade students have entered the Grades of Green 2018 Global Water Challenge (with 75 schools across the country) and will be educating all students on water conservation. Grades students have taken field trips to learn about biodynamic and sustainable farming practices (FoodScape, Farm Lot 59, Fermentation Farm), animal conservation/husbandry (Aquarium of the Pacific, LA Natural History Museum, El

Dorado Park, Centennial Farms, LA County Fair, Rancho Los Alamitos), and take weekly trips on foot to 3 local parks in partnership with LB Parks and Rec, which allows them to observe weather patterns/seasonal changes over time. Grade 4–8 students take yearly camping trips to national parks, beaches and deserts.

- MVWS students' service learning is made up first by their daily tasks in classrooms (watering plants, sweeping, dusting, recycling, emptying compost) and their daily/weekly gardening tasks. Learning about weather patterns and the need to be water-wise weaves in with carrying/spreading mulch, planting and maintaining garden and worm compost. Other service projects include collecting and repurposing yarn donated from the community to knit items for local homeless, donating to our MVWS community clothing swap and rummage sale, donating to community toy drive and food bank ("Can a Day Challenge"), and recording these donations on classroom charts over time, using these figures for learning averaging and rounding, and helping at these events.

### Element IIIB: STEM Content, Knowledge, and Skills

- The MVWS S.T.E.M. by Nature initiative trains and supports teachers in the use of the natural world, school grounds, and field trip experiences to teach STEM elements. Teachers use environmental phenomena to engage the students in inquiry-based lessons.
- **Science:** Students engage in a nature-based approach to science and student phenomena, asking questions and working together to find answers to their questions that stem from these observations. Through activities such as composting, rainwater capture, and gardening, students use the school grounds and surrounding community to deepen their understanding of the natural world. Some examples of this approach include root system identification through flower observation, the study of different cultures throughout time and the environmental resource availability that made these settlements possible. Students learn about environmental stewardship through their tasks/chores, and engage in curriculum projects that relate to daily life, such as studying farming practices from early US settlers while mimicking them in their own garden beds. When children engage in learning through visual, auditory, and gross motor techniques, the information goes deeply into them and creates a reverence for the natural world that cannot be taught. For example, the 4<sup>th</sup> grade class observes the life cycle of a plant in their garden, while learning botany in class, drawing and composing poetry on the topic, and then hearing stories that hearken back to these concepts. Through this, they cannot help but deeply understand and revere the natural world's processes. They recognize their part in these as they care for plants, pull them up as they age and die, compost the plant to enrich the soil, and save the seeds to allow the process of life/learning to continue. In 5<sup>th</sup> grade, students study California trees (Firs, Pines, Oaks, Sycamores, Maples), then go to the park to record texture, characteristics and sizes in meters, followed with a camping trip to Sequoias to study them there.
- **Technology:** While middle school students at MVWS use technology to do online research, they also develop shot lists, and will assist in editing and the production of environmental videos. Students in the "Ocean Healers" team have had the opportunity to record music using a local recording studio and learned about professional music production and mixing. The technology of video production and music recording is presented by experts in the field who mentor and supervise the students. Students also participated in ocean trawling with Algalita Marine Research Foundation and learned the technology of underwater cameras and the mechanism of the trawling net, pulley, and observation tray. Grade 5–8 students participate in Cyber Civics ([cybercivics.org](http://cybercivics.org)), a

technology-based digital citizenship, information literacy, and media literacy program designed to teach students how to be thoughtful and responsible online citizens.

- **Engineering:** Students are encouraged to explore problems and develop, build, and implement solutions. For example, students notice that the recycling bins are being underutilized in the classrooms, and design a solution to reduce the size of the trash containers, draw attention to the recycling containers through new signage, and launch an awareness campaign about recycling on campus. Students noticing that rain was pooling in an area of the playground worked together to connect multiple rain gutters and other objects to create a downspout extension, redirecting the water to another part of the schoolyard. A creative, solutions-based approach to problems is welcome and encouraged.
- **Math:** From creating graphs of different kinds of leaves found in the garden or on a nature walk, to exploring fractions with baking, math is deeply integrated in most interactions and activities. The economics of farming program helps students design a farm that will be profitable and include lessons in purchasing and invoicing.
- Through Maple Village's STEM by Nature initiative, students are in regular contact with experts in green technology and careers. These guest speakers invite students into their worlds and share their work and projects with them. Some examples include working with local farmers to study the business economics of farming and farming biodynamics, working with a school district Energy Manager to evaluate energy usage and efficiency on campus, exploring marine navigation and ecology with Captain Charles Moore, Algalita, and the Long Beach Tall Ships, working with environmental educators at TreePeople, and working with waste education specialists for the Generation Earth program. With each contact and interaction with field experts, the students have the opportunity to ask questions and imagine themselves in the careers of the experts. Students are made aware of green technologies as they learn from a young age how/why to recycle/reuse items at school. They separate recycling and take eligible food items to be vermicomposted. Participating in whole-process learning (Ex: processing a dirty fleece into usable yarn by hand) reminds them that they do not consume in isolation, every product has an environmental cost. There is a strong culture of environmentally-preferred purchasing among families, and discussions about why (glass water bottles, lunch baskets/tins, objects with cradle-to-cradle design).
- Students study conservationists (e.g., John Muir, David Douglas), meet with naturalists on class camping trips, and are exposed to professionals in the field, whether it's a school parent helping with a green renovation (Webber Construction), those who landscape or bring mulch (LB office of Sustainability), or a class speaker presenting about sustainable Native American practices (Anne Coyner, Anthropologist).
- When MVWS partners throughout the year with biodynamic farmers (Farm Lot 59) and people working in the City's Office of Sustainability, students come to realize that these are possible career pathways for them. MVWS also partners with LBCC and CSULB by providing college students observation hours, connecting college students with MVWS students. Because they see themselves as participants in the process of caring for the environment (composting, gardening, recycling, reusing), it follows that this self-image will continue into adulthood, priming them for careers in sustainability and the green sector. This is supported by the high percentage (42%) of Waldorf graduates that go into math or sciences.

### Element IIIC: Civic Knowledge and Skills

- Children of all grades (Pre/K-8): donate to our local food bank through our "Can A Day Challenge," choose gently used items and give them to an annual toy drive (in partnership with Emmanuel Presbyterian Church), collect change for "Pennies for Purpose" which was used this year to provide blankets, gloves and toilet paper to homeless children; donate food and sack-lunch items for Feeding Long Beach, and participate in MVWS sponsored community clothing swaps and rummage sales to reduce consumption of new goods. Grade 5–8 students unload the food bank truck monthly and stock shelves. The 7<sup>th</sup>/8<sup>th</sup> grade class supports a student in South Africa, funding her schooling and making/sending her handmade goods. Grades 1–8 go caroling in the neighborhood each winter, and the oldest grades also sing and play music at local hospitals (Alamitos Belmont Rehabilitation Hospital, Broadway by the Sea Rehabilitation Hospital). First and second grade students finger knit and sell jump ropes in the school store, which is open to the community. Pre/K-8 are invited to participate in four different beach cleanups each month sponsored by local non-profits (One Piece at a Time, Community Action Team, LB Cleanup, Alamitos Beach Cleanup). Grades 1–8 clean local parks weekly during their park visits (Rec. Park, Colorado Lagoon, Friendship Park, Green Belt). Early childhood does sidewalk and green belt cleanups on their walks weekly; classes also create May Cones with fresh herbs/flowers to give to neighbors. Grade 7–8 students participate in Algalita Marine Research and Education events, including Ocean Pollution Solution Summit, and presented to school parents. Ocean Healers attended the 3-day International Summit, brought back information to students/staff, and presents to school and community partners. They also recorded an original song, "Refuse and Go" and are in the process of creating a music video (about refusing single use plastics) to place on YouTube for all schools to view. The team sold handmade reusable sandwich bags to raise money for the recording studio. For the Long Beach Community Action Team's Annual Giving Campaign - MVWS displayed a sign reminding families and greater community to participate in giving toward a fund awarded to local entities deemed to have a positive overall impact on the city.
- MVWS seeks to educate students that can sense harmony or discord in their relationship with the Earth. This begins in Early Childhood (pre-K & K) as children hear fairy tales that have ecoliteracy themes, take weekly nature walks, hike in local parks, build shelters with fallen tree branches and bark boats to sail in creeks and spend time in the "digging hole." They engage daily in environmentally conscious activities: composting, baking bread from flour they ground, growing carrots, broccoli and lettuce to eat, cleaning and sweeping outside. In the grades, they enjoy outdoor games classes and observe more natural phenomena on longer field trips, such as apple picking (Whispering Waters Orchards) and biking in El Dorado Park. Third grade brings study of ancient cultures' shelters (each student building a model) and farming, and includes maintaining their own school "farm," growing grain, and constructing a shelter outdoors, as well as trips or visits to observe artisans and farmers (Centennial Farms, Farm Lot 59, Fermentation Farm). In 4<sup>th</sup>/5<sup>th</sup> grade, studies of map-making, botany, geometry, and local geography bring more times outdoors exploring their own city and creating a local map while observing local plant life and the geometry inherent in the outdoors. Overnight trips to state parks and campsites (El Capitan, Leo Carrillo, Death Valley, Sequoias) in 4<sup>th</sup> grade and beyond strengthen connection to nature. While gaining this appreciation for the world outside the school, they also have more meaningful experiences outdoors on campus, taking on larger responsibilities in caring for the school through independent chores, gardening, composting, and vermiposting. Both these trips and responsibilities

become well-loved rites of passage for children. All grades have lessons at Marina Vista Park each Thursday, not only providing a larger expanse of space to move and play in, but also a familiar touchstone to observe the seasons and change over time in nature.

- Last May, TreePeople supplied and handed out California native Western Redbud tree saplings to all MVWS families at dismissal. The annual school May Day celebration welcomes and celebrates the seasons, nature, and its beauty. Younger children make flower cones and fill them with flowers and fresh herbs to hang on neighbor's doors as a surprise. The state proclamation regarding Living Schoolyard Month is displayed on the "Green Piece" bulletin board as May approaches; MVWS incorporates extra time and care in the school gardens (planting, mulching) and green spaces, inviting families to join in. In celebration, MVWS plans to expand the National Wildlife Federation Habitat Certification by having the children make more bird feeders, and planting more butterfly/pollinator attractive plants. This coincides with a Botany block in the older grades which will focus on flowering plants, and includes extra time in nature. Staff will identify the most appropriate activities for the campus in the Green Schoolyards America Activity Guide and take part in an activity designed with MVWS grounds and gardens in mind.
- Games classes (Waldorf PE) are all held outdoors, on campus and in local parks, and games often have natural themes (crows vs. cranes with examples of what each bird excels at, etc.). Students weigh and measure natural outdoor objects to learn metric system units. Students observe local trees and plants to confirm concepts they are studying in botany and geography, and observe change over time. History is learned and reinforced through trips to see different types of farms, shelters, and artisans (Centennial Farms, Farm Lot 59). Study of the animal kingdom is reinforced by Aquarium of the Pacific and Natural History Museum trips. Grade 5–6 Poetry has included observation of plants and trees to draw from natural themes. Nature illustrations were added, and these were given to residents of a local rehab hospital. Chorus practices inside as well as outdoors to facilitate discussion on acoustics; students perform songs for local businesses and the hospital; all grades have the opportunity to carol for the neighborhood. Math skills shine as older children take charge of the lemonade stand, bake sales, and harvest faire activities, which also reinforce studies of medieval life. Students learn knitting and other handwork skills, which they practice outdoors, and items are donated to local homeless, in addition to toys and canned goods students collect outside of school and tally on a chart. Grade 5–6 used the jump rope skill they developed in their outdoor lessons and had a demonstration at Little Owl Preschool (a partner in local education). A team of older grades students walked their neighborhoods and surveyed residents for single-use plastic use, collected data, used math skills to find the average use of items per day, multiplied by the number of households in Long Beach and estimated that 1,308,248 pieces of single-use plastic are used per day in the city. They have written and recorded a song to encourage change, and will share with the community through performance and music video in partnership with The Compound Studio.
- MVWS leverages extensive partnerships as described throughout, including: Long Beach Environmental Services (Donated Vermiposting Bins, Workshops), LB Office of Sustainability (city mulch, education), Rain Barrels Int'l (donated rain barrels), LaBounty Farm (transported compost daily to feed farm animals), CSULB MBA program (chosen as case study to developing business plan based on sustainability) One World Rope (jump rope curriculum), Red Rose (outdoor sports camps & faculty training), LB LGBTQ Center (trainings and policy support), Lazy Acres (donates produce), EJ Malloy's (donates healthy prepared meals), LB Farmers Market (family meeting place), Long

Beach Parks & Rec. (hosting park days), CSULB (donated sports equip.), WSOC (hosted pentathlon & training), Dr. Melrose (meditation/counseling/lectures on self-regulation), Ciana Lee (faculty yoga), El Dorado Park (bike meetups), Oakiware (wholesale rain clothes), Truus (therapeutic movement), Soup Works, Restauration (fresh soup/salads for staff), Centennial Farms, Farm Lot 59, Fermentation Farm, Rancho Los Alamitos (field trips/education), Alamitos Belmont Rehab Hospital, Broadway by the Sea Rehab Hospital (hosted singing), Colorado Lagoon (docent tours), LB Wetlands, Little Owl Preschool, IVA (partnered for community ed. events), Tree People (Ed. for sustainable practices and saplings), Honey Pacifica (donate beeswax), Santa Ana College, LBCC, El Camino College (MVWS acts as ed. hub for student observations), Emmanuel Presbyterian (hosts food bank/toy drive), Feeding Long Beach (donate school books and lunch supplies for low-income housing project), Algalita Marine (ocean pollution education), Nat'l Guard Armory & Girl Scout Camp (hosted outdoor Harvest Faire), Trader Joe's, Lazy Acres, Vons, Wholefoods (donate food to events), Shore Business Ctr & MOLAA (print flyers for events), Pa's Pumpkin Patch (donate straw bales/pumpkins), Gazette Newspapers (ads for free), Cal Master Builders (donate wooden prizes), National Cleaners LB (donate tablecloths/cleaning for events), Razor Graphics (donated banners for Fair), Musical Theater West (donated costumes for Fair).

- MVWS ensures that nature and the environment are the students' "outdoor classrooms" providing all ages with meaningful experiences connected to nature. Students compost, garden, recycle, rake mulch, drain rain barrels, bring reusable containers and more. Stories with ecoliteracy themes (man/animal living in harmony) anchor curriculum including farming and shelter building technologies, trips to meet organic farmers, visits to wild spaces and orchards, botany up close, and other fields of science that naturally interest children (human/animal relationships, environmental harmony or discord, life cycles throughout the year). MVWS was nearly waste-free and used very little energy with 12 students 10 years ago and continue to do so with 161 today.
- MVWS has used California's U.S. Department of Education Green Ribbon Schools application as a road map adding new programs including: a weekly rain-or-shine nature trail parent/toddler class with parent education focusing on immersing children in nature; Cyber Civics class (ethical digital citizenship supporting psycho-social emotional health & creating leaders in behaving respectfully on the digital playground); CDPH Microfiber Project; two years achieving 1<sup>st</sup> place in the CoolCalifornia Energy Challenge; hiring a gardening teacher, and building new vertical garden beds and MVWS's first gated outdoor classroom garden with chalkboard (with Farm Lot59); recording "Refuse & Go" song in studio (Compound Studio); student sales of reusable sandwich bags; new snack cart with donated healthy bars (MTZ Productions); TreePeople partnership for professional learning; expanded reusable ware (bins of silverware in office for students; added plates/glasses for larger events); CSULB Partnership for MBA case study on Sustainability; partnership with four new restaurants for healthy food donation; participated in the Long Beach Holiday Parade and created a float with repurposed materials; students collected donations for several new organizations (Feed Long Beach and "Pennies for Purpose" donation to "Queens of the Underworld" supporting homeless youth on skid row); grades classes adopted families and hand-sewed Christmas stockings and purchased gifts. The curriculum has a strong emphasis on humans' civic relationship with other humans and the Earth.