District of Columbia
Office of the State Superintendent of Education

ENVIRONMENTAL LITERACY LEADERSHIP CADRE SNAPSHOTS

March 2019

ABOUT THE ENVIRONMENTAL LITERACY LEADERSHIP CADRE

In March 2017, the Office of the State Superintendent of Education (OSSE) selected elementary teachers and educator leaders from 16 schools across the District to participate in the second cohort of the Environmental Literacy Leadership Cadre program. Educators were responsible for the development and implementation of a plan to integrate environmental literacy programs at every grade level within their school. The cadre members were supported by mentors, who provided guidance, feedback, and technical assistance. The snapshots in this booklet describe the efforts of the cadre members, in addition to their future plans and lessons learned.

2017-19 Environmental Literacy Leadership Cadre Members:

- Beers Elementary, Emily Glassman
- Mary McLeod Bethune Day Academy PCS, Melvey Brown*, Shalinee Gusain+, and Clarence McKenzie+
- Bruce-Monroe Elementary @ Park View, Elizabeth Quevedo
- Burroughs Elementary, Kristina Kellogg
- Creative Minds International PCS, Liz Orfaly
- DC Prep – Anacostia Elementary Campus, Katie Kuzma*
- DC Prep – Edgewood Elementary, Katie Kuzma+ and Jillian Deibel*
- Eagle Academy PCS – Congress Heights, Karen Brooks-Bauer
- Hearst Elementary, Kirby Schulz and Ashley Boyle*
- Houston Elementary, Melinda Fuller
- Key Elementary, Amy Johnson
- Lafayette Elementary, Jessica Campbell and Joe Martin
- Mann Elementary, Amy Jagodnik
- Marie Reed Elementary, Michael Englehart and Terry Beasley+
- School Without Walls @ Francis-Stevens, Karin Harrison
- Simon Elementary, Whitney Bartell
- Washington Yu Ying PCS, Sarah Harris

Mentors:

- Arielle Conti, Rock Creek Conservancy
- Rebecca Davis, Environmental Education Consultant
- Margi Fineran, FreshFarm
- Ariel Trahan, Anacostia Watershed Society

* Denotes participant in second year only
\+ Denotes participant in first year only

For questions about the Environmental Literacy Leadership Cadre, please contact Grace Manubay, environmental literacy coordinator at Grace.Manubay@dc.gov.

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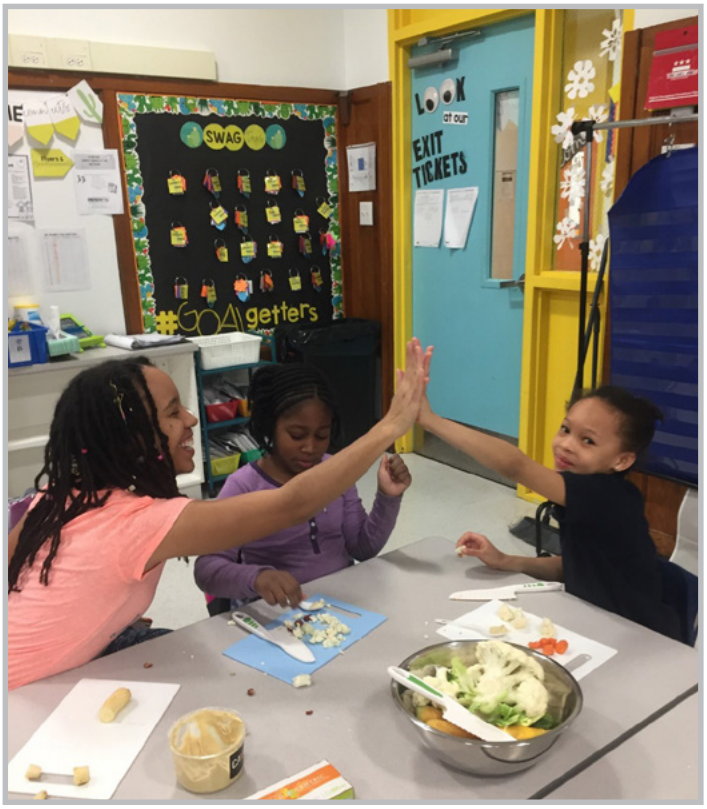
For more information, visit
http://osse.dc.gov/service/environmental-literacy-leadership-cadre

2017-19 HIGHLIGHTS

- In 2018, all students in pre-K 3 through grade 1 participated in the FoodPrints program, which included activities to engage them in learning about nutrition, plants, food preparation, and gardening. Students gain hands-on experience in the school garden and with food preparation.
- Second graders learned about waste management and brought their learning to life by visiting several waste management facilities in the area.
- Students in grade 4 participated in a program with the Anacostia Watershed Society that gave them the opportunity to take a boat ride on the Anacostia and learn first-hand the problems that face their community and local watershed.

ABOUT THE SCHOOL

Anne Beers Elementary School is a school community dedicated to sustaining, enriching and empowering a learning community focused on academic excellence and character building. Anne Beers Elementary is a science, technology, engineering, and math (STEM)-focused school, and through environmental partnerships, teachers aim to foster student learning for life and encourage them to grapple with real-world problems. Located on Alabama Avenue in Ward 7, Anne Beers Elementary has a strong family engagement program, through partnership with the Flamboyan Foundation, and has an active Parent Teacher Organization. At Anne Beers Elementary, teachers and families work together to ensure students experience success and nothing less.



"My students have truly loved their time with FoodPrints, made possible through the environmental literacy program. They have learned so much about different fruits and vegetables, how plants grow, and what they can do to assist the process. But more importantly, they learned how to prepare nutritious meals from the fruits and vegetables we grow in our garden! They are pushed out of their comfort zone by trying new foods, resulting in the development of a new love for nutritious food. FoodPrints days are the most exciting days for my students and they look forward to it all month!"

– Constance Thayer, kindergarten teacher,
Anne Beers Elementary School

ENVIRONMENTAL LITERACY PROGRAM

The environmental literacy program at Anne Beers Elementary provides students an opportunity to apply STEM learning in their community. Starting in pre-K, students take their learning outside to understand how the scientific concepts they are engaging with apply to the real world. In the younger grades, this means exploring the school's garden and growing food to use when students learn to prepare easy, nutritious meals. As students get older, their real-world learning opportunities expand. In second grade, students explore the impacts of different types of waste on their communities, and visit local facilities that are dealing with these issues to bring their learning to life. In fourth grade, students learn about the Anacostia Watershed and the threats to its health and survival. Finally, when students are in fifth grade, they are able to explore how trees affect air quality, apply their learning to the school community, and have the opportunity to take informed action and plant trees, through a partnership with Casey Trees and Clean Air Partners.

NEXT STEPS

In late 2018, Anne Beers Elementary formed a Wellness Committee to improve the efficacy of its environmental learning, especially programs that focus on food and nutrition. The groups' goals include increasing family engagement through family FoodPrints experiences and working to reduce food waste at school. In 2019, fifth grade students will complete their learning experience with Casey Trees and Clean Air Partners and plant trees around the school. The school will continue to use its garden as a resource for environmental science learning experiences for students.

LESSONS LEARNED

- Work with classroom teachers to align experiences with district curriculum resources and standards. By ensuring that these experiences complement the work already being done in classrooms, teachers will feel more excited and less overwhelmed by the new opportunities.
- Find high-impact areas that can be addressed with small changes. By focusing on small changes, you can make big shifts in your school's focus.
- Recruit a team to help you. This year, in forming the Wellness Committee, the school is better able to tackle projects because it established a team of individuals who are interested and committed to strengthening the environmental literacy program at Anne Beers.

Mary McLeod Bethune Day Academy PCS

2017-19 HIGHLIGHTS

- Provided experiential environmental science experiences for students at all grade levels (pre-K to grade 8). Partners included the Anacostia Watershed Society, Blue Plains Wastewater Treatment Plant, NatureBridge, and Audubon Naturalist Society, to increase student knowledge of real-world environmental issues and provide opportunities to cooperatively seek possible solutions to environmental problems.

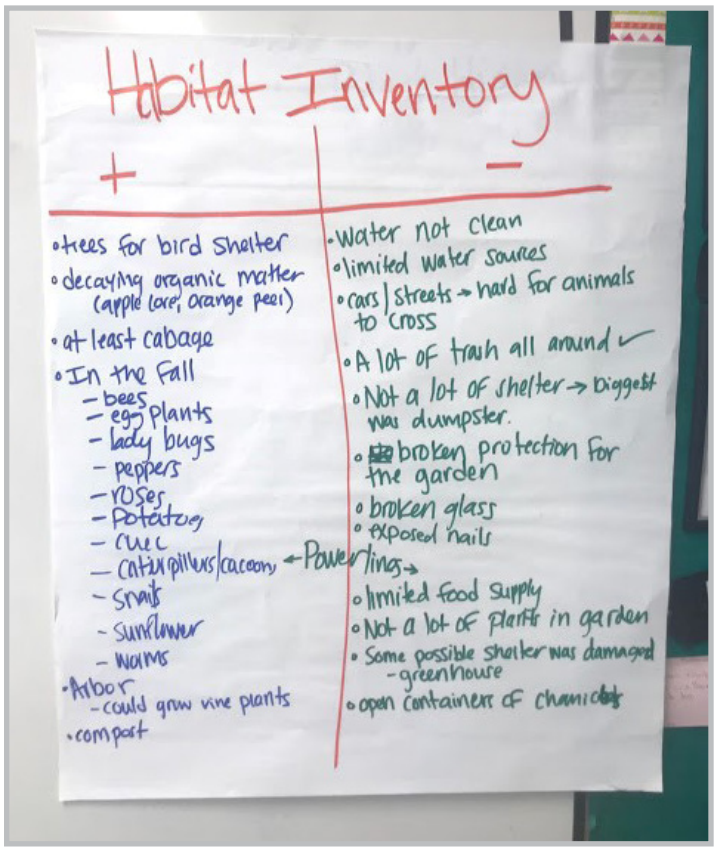
- Planted a pollinator garden, which remains healthy. The initial drivers of the project created a video diary to provide necessary information for the on-going support of the program.

- Built a greenhouse on site to house seedlings for the spring planting season.

ABOUT THE SCHOOL

The mission of the Mary McLeod Bethune Day Academy Public Charter School is to implement a high-performing day school that provides a challenging academic program in a supportive, parentally involved, and diverse learning environment to enable each student to achieve academic success, talent, and positive social development. As an International Baccalaureate (IB) World School, Mary McLeod Bethune Day Academy takes an approach to learning that is global in scope. The school encourages students at all levels to utilize their creativity, research and end-to-end critical thinking skills to solve real-world problems. By working collaboratively within their local communities and the global community at large, students are more likely to develop actionable solutions to environmental problems that impact us all.

> "I can attest from a firsthand basis the effect that the environmental literacy program has had on our school. Students are more knowledgeable about where their food comes from, the importance of keeping the Chesapeake Bay clean, and the deliciousness of homegrown herbs and vegetables! I look forward to the partnership growing and thriving throughout the year for our students and faculty."
>
> – Sanjay Singh, assistant principal, Mary McLeod Bethune Day Academy PCS



ENVIRONMENTAL LITERACY PROGRAM

The environmental literacy program at Mary McLeod Bethune Day Academy is designed to provide high-quality educational experiences that are closely aligned with Next Generation Science Standards. Environmental literacy directly aligns with the school's IB Transdisciplinary Theme, "How the World Works." As an important aspect of the school community, environmental literacy provides additional opportunities for students to gain firsthand knowledge about critical environmental concerns. All students, from pre-K through grade 8, work in tandem with community partners to gain a deeper understanding of environmental concepts and the role that they can play in positively impacting the world around us. Each year, students work on a variety of grade-specific projects. Themes explored include: plant and animal life cycles, sun's energy, wildlife habitats, the recycling, regional watersheds, honeybees and pollination, plant life, wildlife habitats, food/nutrition, and community gardening.

NEXT STEPS

Mary McLeod Bethune Day Academy will continue to implement the Next Generation Science Standards in the curriculum. Students in grades 4 through 8 will be more strategic in leveraging the learnings of previous students by referencing the outcomes of research projects, school audits, and reviewing finding contained in student-generated video diaries. The school will also continue to collaborate with its community partners to reinforce classroom lessons with field experiences.

Mary McLeod Bethune Day Academy will also create additional mechanisms for students to acquire more responsibility for numerous environmental science projects. Suggested projects include: an energy/community audit on a year-over-year basis, to track trends over time; maintain a lunchroom recycling process to minimize food waste; maintain the seedling planting in the greenhouse; create and maintain a worm garden for our garden's soil; and food-to-table harvesting.

LESSON LEARNED

- Continue to infuse technology in classroom instruction.
- Continue to reference previous initiatives/projects, reminding all students of the key aspects of environmental science.

Bruce-Monroe Elementary at Park View

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Several programs started in 2013 and continue today: recycling, camping, DCPS Science Cornerstones, energy audits, and the 1-minute climate change film project.
- Fifth grade students are part of the green team, called Recycle Ninjas. Besides collecting materials from the blue recycling bins twice a week, they are also in charge of sharing with teachers and students the importance of recycling. Fifth graders are also zoo keepers, serving every day as caretakers of the school's pets: tarantulas, gerbils, millipedes, frogs, toads. Besides their love for animals, they show great respect to every living animal.
- Third grade students received an EcoRise Student Innovation grant to improve indoor air quality by creating environmentally friendly cleaning supplies. Students are sharing information with parents, other students, and the community about being responsible using cleaning supplies that do not harm the environment.
- Overall, teachers are more comfortable guiding science projects and lessons in their own classrooms.

ABOUT THE SCHOOL

Bruce-Monroe Elementary School @ Park View is located in Ward 1, with a student population of 59 percent English learners and 100 percent economically disadvantaged. The school follows a dual language program that successfully promotes bilingualism, bi-literacy, and biculturalism. The school teaches science lessons in English and Spanish, and teachers attend the National Science Teachers Association annual conferences and participate in events, such as EcoRise audits and DCPS SciCon.

Bruce-Monroe Elementary partnered with the Department of Energy and Environment to become a RiverSmart School. After a year of construction, the school's outdoor space includes permeable parking, bio-retention ponds, rain barrels, and school signage sharing this news to the whole community. The school also partners with the organization Out Teach to host planning events with school faculty, students and administration to inform the design and construction of our amazing outdoor classroom.

> "Finally, science is all hands-on and students are being educated in real-life environmental issues. Way to go!"
>
> – Elizabeth Quevedo, science specialist, Bruce-Monroe Elementary School

ENVIRONMENTAL LITERACY PROGRAM

The progression of the environmental literacy at Bruce-Monroe Elementary begins with exposure to its local habitat and visiting the Washington Youth Garden, which helps students develop a sense of where they are, where they live, and what the region provides. Second grade students learn about the cycle of trash through Garbology lessons, and third grade includes intense work with ecosystems, habitats and climate change. Fourth graders study soil and visit the Anacostia River. Fifth graders go on a camping trip to Prince William Forest Park with NatureBridge, where students observe a healthy ecosystem and learn about the impact of pollution on the watershed. Students then participate in a project that cleans and sorts trash captured by a trap on an Anacostia River tributary. Students are also part of the shad program, which includes a restoration of this native fish to the Anacostia River. Finally, fifth grade students participate in the project Clean Air, Tree by Tree, where they observe the importance of trees to air quality, conduct a tree health assessment, and make projections of the tree benefits using the program I-Tree. In the end, Bruce-Monroe Elementary students understand the interactions between the Earth's spheres and the human impact in our world.

NEXT STEPS

As a school, Bruce-Monroe Elementary plans to continue current programming and look for more partnership opportunities. Teachers are more connected to science and understand the importance of promoting environmental literacy among students. The school plans to create lesson plans that align to Next Generation Science Standards and Common Core State Standards in a more organic way. The school's main concern is money for transportation, since all trips are currently sponsored by partners.

LESSONS LEARNED

- It takes time to feel comfortable teaching science without a curriculum, but it is delightful to see students discovering the world through science.
- Creating a green team that includes parents, community representatives, at least one teacher per grade level, student government, and administration has been very beneficial for the implementation of science content through environmental literacy.

John Burroughs Elementary School

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Burroughs Elementary School began offering FoodPrints programming for pre-K 3 through grade 2 classes, which integrated gardening, cooking, and nutrition education into the curriculum. This increased student ownership of the school garden, environmental awareness, and healthy habits for students and the school community.
- The school launched composting and recycling efforts, which include organics hauling and onsite compost bins. Through the Department of General Services (DGS), Burroughs Elementary has earned the *DCPS Recycles!* Honor Roll recognition, won the DGS Recycle Right Competition for the Highest Performance Award in 2017 and 2018, and serves as an Ambassador School for the program.
- Burroughs Elementary developed a science, technology, engineering, and math (STEM) Framework, which includes school-wide guidance on planning teaching and learning experiences for all students and provides environmental literacy, engineering and design, hand- on experiments in the STEM lab and outdoor classroom, and field trips.
- For three consecutive years (2017-19), the school received the Office of State Superintendent of Education (OSSE) "Established" STEM School recognition.

ABOUT THE SCHOOL

Burroughs Elementary is the home of the Raging Rams where students come with curiosities and leave with confidence. Nestled in the heart of Ward 5 in the Brookland neighborhood, Burroughs Elementary is a Title 1 school that serves approximately 270 students with a wide range of talent and abilities in pre-K 3 through grade 5. STEM is the foundation at Burroughs Elementary, and it is the only "Established" STEM elementary school in DCPS recognized by OSSE. Learning is facilitated through a school-wide focus on data-driven instruction and hands-on exploratory projects, which enables students to experience rigorous content through collaboration with stakeholders and local partnerships. Staff believe that with an abundant amount of care and support, Burroughs Elementary scholars can achieve at the highest levels.

"Participating in the environmental literacy program has made a huge impact on staff, students and parents. Our students have explored environmental issues, planted, harvested and cooked nutritious foods, investigated the quality of our soil, planted trees and have become student activists by writing to the mayor and DC Council about securing long-term, sustained city funding for FoodPrints. Many of our early childhood parents came to learn more about FoodPrints and are now volunteering each month. The environmental literacy program has been an integral part in helping Burroughs Elementary fuel students' creativity and foster their curiosities."

– Kristina Kellogg, assistant principal, Burroughs Elementary School

ENVIRONMENTAL LITERACY PROGRAM

As a STEM-focused school, Burroughs Elementary has implemented environmental literacy through enhanced instruction and programming from various partnerships. Burroughs Elementary has focused on strategic planning to align environmental teaching and learning experiences with Next Generation Science Standards, Common Core State Standards, 21st Century skills and partnership engagement for each grade level. Students in grades pre-K 3 through grade 2 participate in FoodPrints. Through this program, students learn gardening, cooking, and nutrition education in the STEM lab, outdoor classroom, and garden. Second graders explore natural processes through hands-on classroom activities, such as making recycled paper and visiting a recycling station with the Audubon Naturalist Society. Third graders engage in meaningful integrated lessons in the STEM lab through EcoRise. Fourth graders explore the local watershed on a boat ride on the Anacostia River with Living Classrooms. Fifth graders conduct pH, nitrogen, phosphorus and potassium tests on the soil in the school garden to determine soil quality for produce with the Alice Ferguson Foundation. They also investigated potential sources of air pollution, the species and health of trees on the school grounds with Casey Trees and Clean Air Partners. Fifth graders planted trees, too. Each year, students share their findings from projects and experiences with partnerships at the Burroughs Elementary School STEM Expo.

NEXT STEPS

Teachers will continue to plan STEM-integrated experiences for students to include real-world connections and field trips. Burroughs Elementary's administration will ensure continuous STEM professional development for new and returning teachers and educational aides, who will then serve as additional resources and share STEM best practices with the school community. To extend and enhance the current STEM Framework by seeking out new partnerships and grant opportunities to support funding for current and future STEM programming. Students and staff will also complete a STEM survey, the results of which will guide student engagement, resources, teaching, and learning initiatives. Burroughs Elementary will begin the application process for the 2019-20 school year to earn "Platinum" STEM status recognition from OSSE.

LESSONS LEARNED

- Educate all stakeholders about the impact of environmental literacy in elementary grades at the beginning of the school year to support the overall vision and mission.
- Provide multiple opportunities for students to advocate for environmental issues of their interest to incorporate in the curriculum.
- Create a team of teachers, administrators, parents, community members and students that are all bought into the vision to support planning, grant writing and events.

creative minds
INTERNATIONAL
PUBLIC CHARTER SCHOOL

2017-19 HIGHLIGHTS

- All students in preschool through grade 5 participated in environmental field trips on or off campus. They deepened their understanding of environmental concepts at an age-appropriate level that blends well with their academic content.
- Teachers led classroom lessons outside, taking advantage of the vast green space on campus.
- Staff went through a recycling training that covered information about what can be recycled, how to explain recycling to students, how to access recycling bins, and how to involve families in the process at home.

ABOUT THE SCHOOL

Creative Minds International Public Charter School is located Ward 5 and serves more than 400 students. It is the only public school in the District of Columbia that has received the accreditation by Fieldwork Education to offer the International Primary Curriculum. The program's unique combination of child-centered, arts-based, international, and developmental approaches to education is based on extensive research into various aspects of schooling that have the greatest positive effects on academic achievement. The environmental literacy work infuses seamlessly with the mission and culture of the school. Students and teachers alike value learning about and taking care of the planet.

> "I loved the connection we were able to make between the learning we were already doing in the classroom and the real-world, hands-on application at the arboretum. We were able to see a large-scale functioning garden, compost on a large scale, and taste the fresh vegetables. This was the first time that many of these students were able to make the connection between the food we eat and where it comes from. What a magical experience."
>
> – Alicia Ronquillo, grade 1 teacher, Creative Minds International PCS

ENVIRONMENTAL LITERACY PROGRAM

The main goal at Creative Minds International PCS is to ensure that the recycling process was being executed with fidelity from start to finish. The school gave the custodial staff proper training on how to sort and collect recycling and waste. Additionally, the school provided all classrooms and offices recycling bins. Students in preschool and pre-K participate in Salad Science lessons with the Audubon Naturalist Society. Kindergarten and first grade students go on a field trip to the Washington Youth Garden where they learned about plants. Second grade students learn about garbology, the science of garbage. Third grade students access EcoRise environmental lessons and had access to writing and receiving grants for environmental projects to be executed on campus. Fourth grade students go to the Anacostia River with the Anacostia Watershed Society. Finally, fifth graders work with Casey Trees and Clean Air Partners to do an inquiry study of local trees and air quality. Overall, Creative Minds International PCS has grown tremendously in its environmental practices and awareness through the environmental literacy program.

LESSONS LEARNED

- Even though everyone is supportive of the cause, recognize that change is slow and hard. Small victories can add up to big change.
- Create calendar reminders to follow up with people. Ideas and tasks often get lost among all of the other things that need to be done in a school.
- Try to create a support team to share the work rather than taking it all on.

NEXT STEPS

Moving forward, there is a lot of work to be done. The school needs to ensure that all recently on-boarded staff can be trained in recycling. Creative Minds International PCS also needs to confirm that a recycling bin is in each room and are accessible. Furthermore, the school needs confirmation that all teachers have taught recycling to their students and have created a culture shift around recycling. In the future, it is suggested that the administration work on creating a compost program as well as food conservation for what is not eaten.

DC PREP
Learning has no limits.

Anacostia Elementary

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Aligned authentic, engaging activities with DC Prep's existing curriculum so minimal changes to the curriculum resulted in great outcomes for students in kindergarten to third grade science instruction.
- Created a temporary school garden that was investigated, built, and maintained by DC Prep-Anacostia Elementary kindergarten to second grade scientists, with the support of their teachers and families.
- Focused planning to make field trips more meaningful helped students have a better understanding of their surrounding environment and their impact on it.

DESCRIPTION OF SCHOOL

DC Prep's Anacostia Elementary Campus (AEC) opened in 2015 with preschool and pre-K and has added a grade each year to include third grade by the 2019-20 school year. Currently, DC Prep AEC has a total 314 students in preschool through second grade. DC Prep AEC's population is composed of 93 percent Black, non-Hispanic students, 4 percent Hispanic/Latino students, and 4 percent Multiracial students. Located in Historic Anacostia, the new campus is located less than a mile from the Anacostia River. All students in kindergarten through second grade have a dedicated science block for 30-45 minutes a day. This curriculum was re-written in 2016 to be fully aligned to the Next Generation Science Standards.

> "The environmental lessons and shifts have brought the science curriculum alive for our students. We used to do a lot of observations from books or pictures. Actually exploring and investigating in our community has made a world of a difference for our scientists."
>
> – Derrick Skipper, kindergarten/grade 1 science teacher, DC Prep-Anacostia Elementary

ENVIRONMENTAL LITERACY PROGRAM

The overarching goal for DC Prep AEC's environmental literacy program is to make current programming more authentic through the construction of a school garden. When the school moved to its new campus in August 2017, there was no garden present, but some small spaces to build a garden. During the 2018-19 school year, students from grades K-2 investigating the different spaces around the campus where a garden could thrive. Toward the end of winter/early spring, all students planting seeds to be sprouted in the building. These seeds/sprouts will be planted across the proposed garden spaces on Earth Day 2019, and students will continue to make weekly observations of which space is best for a permanent structure. By the end of the 2018-19 school year, students will select where to build a school garden. With staff and family support, the garden will be built over summer 2019 so kindergarten through grade 3 students can create and maintain a permanent garden at the school.

NEXT STEPS

Now that students, teachers, and families are invested in environmental literacy, DC Prep AEC plans to make its school garden a permanent structure in the school building. In fall 2019, DC Prep AEC will build its permanent structures based on the student investigation from the prior spring. All students in kindergarten through grade 3 will be responsible for maintaining the garden in some capacity in alignment to their current science units. Through creating and maintaining a school garden, the school hopes the benefits will be two-fold. First, DC Prep AEC hopes to bring more authentic science lessons to its daily science programing in kindergarten through grade 3. Then, DC Prep AEC hopes to build deeper understanding in environmental literacy that continues to push students to be advocates for our Earth outside of the school walls.

LESSONS LEARNED

- Know where you are and get specific on how you can launch from there.
- Be patient. The little changes will eventually make a huge difference.
- Bring it alive. There are authentic experiences everywhere you look. These are the best ways to invest your students, teachers and families.

DC PREP
Learning has no limits.

Edgewood Elementary

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Hosted Salad Science for preschool and pre-K students.
- Successfully launched the EcoRise program for students in grades 2 and 3.
- Began the framework for a school garden program for all students.
- Visited the Kenilworth Aquatic Gardens to learn about watershed science.

DESCRIPTION OF SCHOOL

DC Prep-Edgewood Elementary is located in the Edgewood community. The school's mission is "to bridge the educational divide in Washington, DC by increasing the number of students from underserved communities with the academic preparation and personal character to succeed in competitive high schools and colleges." DC Prep-Edgewood Elementary enrolls students in preschool to grade 3 and engages them in rigorous academics alongside character education programs. All students receive 45 minutes of science instruction daily that is aligned to the Next Generation Science Standards. Students also receive daily music, art, physical education, reading, and math instruction. This well-rounded selection sets the foundations for students to be successful in the next chapters of their lives.

"The environmental literacy program has been amazing! The kids really love it and they are learning a lot. They're learning about sustainability, how things grow and it's all hands-on. It's been a great addition to DC Prep."

– Jillian Deibel, elementary science teacher, DC Prep-Edgewood Elementary Campus

ENVIRONMENTAL LITERACY PROGRAM

The environmental literacy program at DC Prep-Edgewood Elementary School was started in 2016. This program progresses through each grade level and is integrated into the students' science courses. In preschool, students participate in Audubon Naturalist Society's Salad Science program, where they learn about where their food comes from and how to grow it. In kindergarten, students begin to learn about how to grow a school garden and how things grow. Students learn how worms compost soil and plant seeds, and students also learn about the parts of plants and why we need to take care of our Earth. Second grade students deeply understand the changes in our Earth, and why it is important to be stewards for our planet. Second graders also take a trip to the school garden to plant seeds. In third grade, "Preppies" understand the life cycles of the plants they planted in the year prior. They also deeply engage in the EcoRise curriculum to continue their learning about stewardship.

NEXT STEPS

To build on the work completed last year, DC Prep-Edgewood Elementary would like to deepen its work with the school's garden. The school wants to have more students outside more often and contribute to the building of the school garden. DC Prep-Edgewood Elementary wants to create more hands-on experiences for students and families through this school garden. In order to do this, the school will be organizing volunteer hours after school to help create materials and remove existing trash and weeds from the garden, as well as hosting material drives. This is done with the hope of building the school community and increasing investment in environmental literacy. After the garden is prepped, all students will participate in the planting process.

LESSONS LEARNED

- Getting support is crucial for success. You cannot do this alone; you must have support of your colleagues and administration. It is so much easier when other people are on board.
- Start small. Beginning an entirely new program from scratch can be challenging. When you start small with more manageable pieces, things can be easier to implement. As you go on year by year, you can slowly add more to the programming.
- Be clear with what you want to do. Create a plan and stick with it. Without clarity, it can be hard to know what your next step should be. Make sure that you detail all of the steps needed to bring your vision to life.

EAGLE ACADEMY
PUBLIC CHARTER SCHOOL
Starting Early, Soaring High...

Congress Heights

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Awarded $38,000 in grants for projects to enhance and expand the school's garden, and to provide professional development for teachers.
- Established partnership with World Wildlife Fund and DC Health Supplemental Nutrition Assistance Program Education (SNAP-Ed) department to conduct food waste audits of lunchroom and pilot nutrition education/food waste reduction lessons for third graders.
- Almost 800 students benefitted from two years' worth of environmental education through environmental literacy partnerships.

ABOUT THE SCHOOL

Eagle Academy PCS-Congress Heights is a science, technology, engineering, and math (STEM)-focused, early childhood school in Ward 8 that provides an innovative academic program to young children, from pre-K 3 through grade 3. The school educates each child through a holistic approach that includes health and social services. The program for all age levels focuses on readiness skills using developmentally appropriate activities with an emphasis on science, technology, engineering and mathematics through the arts. Most Eagle Academy PCS-Congress Heights students come from a community with the highest rate of poverty in Washington, DC. As such, Eagle Academy's leadership works closely with students and their families to identify their academic, health and daily living needs.

"Visiting the Washington Youth Garden was a fantastic experience for my kindergarten students. This experience provided my children with valuable knowledge of how fruits and vegetables are grown. They enjoyed tasting fresh-grown vegetables. Since I am looping with my students to first grade, I look forward to visiting the garden this spring so they can grow their knowledge even more."

– Sequilla Robb, grade 1 teacher, Eagle Academy PCS-Congress Heights

ENVIRONMENTAL LITERACY PROGRAM

For the past two years, Eagle Academy focused on three main goals:

- Students and staff will learn and implement environmentally conscious ways of living and learning.
- Students and staff will gain an appreciation for the natural environment near and far.
- Students and staff will gain an understanding of from where their food comes.

All grade levels participate in environmental learning experiences with environmental literacy partners, as well as additional trips to farms, zoos, and nature centers. Eagle Academy resurrected its school garden program with curriculum resources and garden materials purchased with a Budding Botanist grant from KidsGardening.Org and Klorane Foundation, and received an OSSE School Garden Grant that will support further development of the school's garden and outdoor classroom area. Through partnerships with the World Wildlife Fund and DC Health, as well as Casey Trees, Eagle Academy third grade students are working to beautify the Congress Heights campus through tree plantings and implementing school-wide waste reduction initiatives.

NEXT STEPS

Eagle Academy has worked to build teacher capacity around environmental and outdoor education. At the kindergarten through grade 3 levels teachers now have resources when planning instruction that provide them with opportunities to integrate environmental education with Common Core State Standards, as well Next Generation Science Standards across their teaching schedule. Additionally, teachers have been provided with a database of low-cost and/or free environmental education field trips when planning field experiences.

LESSONS LEARNED

- Timing is important. The program needs to be launched early in the school year when enthusiasm amongst staff and students is at its highest.
- Staff buy-in is key. Identify staff members who are enthusiastic to be part of a "Green Team" that can help spread the message of environmental consciousness to staff from top to bottom (central office, administration, and custodial staff).
- Getting kids on board helps get their teachers and staff on board. When teachers see that their students are excited about initiatives, it motivates teachers to participate.

Hearst Elementary School

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- More than 90 percent of students participated in an in-classroom experience or field trip with a partnering organization that provides exposure to environmental literacy topics.
- In the 2017-18 school year, Hearst Elementary recycled more than 2,000 markers through Crayola's ColorCycle initiative. The school's goal for the 2018-19 school year is to match or beat this number.
- With the development of Hearst Elementary's Energy Captain team, students now play an active role in promoting energy conservation in the school building.
- Pre-K and grade 2 are welcoming back the partnering organization Audubon Naturalist Society for the second year in a row for their Salad Science and Garbology programs.

ABOUT THE SCHOOL

Hearst Elementary is committed to providing all students with a rigorous curriculum integrated with exposure to the arts. The school is also committed to ensuring that Hearst Elementary is responsive to the needs of its diverse learners. The school's goals are to improve student learning, partner with families to support students, and provide the staff with a community that supports their professional learning.

Hearst Elementary truly believes in honoring the whole child and its staff and students work hard to ensure that they are growing minds every day. In 2016, Hearst Elementary defined its core values: Resilient, Inclusive, Service-Oriented, and Empowered. The school continues to redefine its art; music; science, technology, engineering, and math (STEM); Spanish; library; and health/physical education programs to ensure students are participating in rich experiences.

"Last year, the second grade participated in the Audubon Naturalist Society's Garbology Program. Students learned how different types of waste affect our local watershed, the Potomac River. Then, students participated in the Worms at Work lessons in which they observed how worms compost newspaper and lettuce. The worms lived in the classroom for two weeks as students made sure they received enough food and water to survive. Through both activities, students were able to engage with hands on activities and saw how their actions could affect the community and living things."

– Megan Burleigh, grade 2 teacher, Hearst Elementary

ENVIRONMENTAL LITERACY PROGRAM

The goal of Hearst Elementary's environmental literacy program is to provide students with in-classroom and out-of-classroom experiences that provide exposure to a variety of environmental topics. The school partners with several organizations to support its work, including the Washington Youth Garden, Casey Trees, the Anacostia Watershed Society, and Audubon Naturalist Society.

Hearst Elementary is in the early stages of developing school-wide initiatives in which students can take a more active role in promoting environmentally-friendly practices in the school building. For example, the first grade leads the ColorCycle initiative, a program to recycle markers with Crayola. Students learn about recycling and the damaging effects of filling landfills with plastic, provide a decorated collection box for each classroom, and collect used markers every month. Families also regularly send markers in from home to support this school initiative. Hearst Elementary also has the new Energy Captain team that works with students from each grade level.

NEXT STEPS

Hearst Elementary plans to begin implementing Finger Food Fridays in the cafeteria to reduce plastic utensil waste. The school also will continue developing of the Energy Captain program, in which students are responsible for making sure their classroom is incorporating energy-friendly practices.

LESSONS LEARNED

- The environmental literacy leads should support teachers with the scheduling or in-classroom and out of classroom experiences.
- Analyze your building's current environmental practices and see where improvements can be made and how students can get involved in these changes!
- Take notes on the resources near your school, there are many low cost or free experiences that are close by (example: University of the District of Columbia's rooftop garden).

Houston Elementary School

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Students in every grade level had more opportunities for hands-on science learning.
- Pre-K students learned about gardening and had the opportunity to grow sunflower plants, which were sent home just in time for Mother's Day.
- Kindergarten and first grade students had the chance to visit the Washington Youth Garden at the National Arboretum.
- Second grade students learned to make paper.
- Fourth grade students took a trip along the Anacostia River, and fifth grade students learned about the impact of trees on air quality.

ABOUT THE SCHOOL

Houston Elementary is a Title I school located in Northeast Washington, DC. The school serves students in pre-K 3 through grade 5. Houston Elementary began a Spanish Immersion program in fall 2016. As of the 2018-19 school year, students in pre-K 3 through kindergarten participate in the language immersion program. The program will grow by one grade level each year, until it serves students in each grade level.

In addition to Spanish Immersion, students at Houston Elementary participate in a variety of sports including basketball, cheerleading and flag football. Special subjects include music, art, physical education, library/media services, world language, and keyboarding. The school campus is being renovated during the 2018-19 and 2019-20 school years.

"What I love about our school's environmental literacy program is that it teaches students about sustainability by first teaching them to learn and care about their environment."

– Melinda Fuller, pre-K autism teacher, Houston Elementary School

ENVIRONMENTAL LITERACY PROGRAM

The environmental literacy program helps show Houston Elementary students the importance of sustainability by first developing a love and appreciation for the natural environment around them. This begins with the school's youngest students. Students in pre-K have the opportunity to grow flowers while students in fifth grade plant trees. Several grade levels visit the Washington Youth Garden at the National Arboretum, which is only a few miles from Houston Elementary. Being close by makes the Arboretum a great place to explore now and in the future. Fourth grade toured the Anacostia River, and second grade not only recycled paper but learned how to make it. These lessons and experiences as a whole connect students with the surrounding environment and will move students from simply defining environmentalism and sustainability to developing practices to support the environment.

NEXT STEPS

Houston Elementary is in the process of developing a more sustainable and - (environmentally friendly) campus. With its new campus under construction, Houston Elementary is looking forward to having more green space for students and staff to enjoy. This includes space for outdoor learning such as gardening.

Houston Elementary also is planning to expand its paper recycling program to include bottles and cans. DCPS' new single-stream recycling program will make this change easier as it minimizes the amount of sorting for teachers, students and custodians.

LESSONS LEARNED

- All staff needs to be on board – this includes teachers, administrators, and custodial staff.
- Communication is key – tell your staff early about the program, so they can be prepared for the opportunities that are coming. Also, communicate with them regularly via email, announcements, or in-person – whatever method works best for you and your team.
- Think long term – what do you want to accomplish after the two-year Environment Literacy Leadership Cadre period is finished?

Key Elementary School

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- Almost all classes at Key Elementary School have participated in a field experiences that were immensely positive for students and teachers. These experiences are becoming part of the school's curriculum and not just an extra activity. Students are eager to get to the next grade so they can go to the recycling plant, or raise shad to release, or spend two nights with NatureBridge at Prince William Forest Park.
- While recycling has been part of Key Elementary School for many years, recycling and lunchroom composting are becoming routine and habit-forming.
- Students from the green team wanted a greenhouse for winter gardening. They collaborated with the Key Elementary School's student council and wrote a grant to the Palisades Community Foundation. The grant was awarded and with support of parents, a greenhouse is now on site.
- Competitions hosted by the Department of General Services provided extra excitement and enthusiasm for students to collect data, assess the school's recycling efforts and recommend changes. Being recognized on the DCPS Recycles! Honor Roll with Distinction and "Most Improved" award in the DCPS Reduce First! Challenge –Plastics Edition were nice perks, too.

ABOUT THE SCHOOL

Key Elementary School is a nationally recognized Blue Ribbon School that serves students pre-K through grade 5. Key Elementary School strives to provide students with the skills to think critically and to explore and discover their unique abilities. Connecting students to their local environment through inquiry-based learning and empowering them to make a difference has long been a part of the science program at Key Elementary. With the expansion of the school's garden program in the last few years, students are given more opportunities to learn about the local environment. Key has a very active and supportive parent community.

"Developing an environmental literacy program has really helped our school solidify the work we were already doing around environmental education. We have a clear path forward on implementing our plan. By far, one of the best features of the program is the amazing community partners and mentors who brought stellar opportunities for our students and staff! It doesn't get much better than watching our students become 'citizen scientists' around important environmental issues facing our community!"

– Amy Johnson, grades 3-5 science teacher, Key Elementary School

ENVIRONMENTAL LITERACY PROGRAM

The environmental literacy program continues to grow at Key Elementary School. Key Elementary was one of the first public schools in the District to pilot a school-wide recycling program and provide students an opportunity to lead the efforts. The environmental literacy program has been housed through the science program, but classroom teachers are getting more involved. Previously, field experiences were largely in the upper grades; now, every grade has a meaningful activity that connects to the local environment. The yearly progression of experiences strengthens the school's culture of caring about the environment from the youngest to the oldest student. Another positive benefit is that these activities directly connect to the Next Generation Science Standards at each grade level, expanding the learning opportunities beyond the field experience.

Key Elementary has a large and active student green team that helps build the school culture by leading school-wide initiatives. These activities include recycling and energy competitions, walk/bike to school days, and special Earth Week activities. In addition, the green team provides weekly monitoring of the cafeteria waste, recycling patrol of classrooms, and many gardening activities. The Key School Parent Teacher Organization also has a green committee to support student activities and encourage environmental best practices at school events.

NEXT STEPS

Key Elementary plans to continue participating with community partners through the field experiences so each year every student is educated about the environment. Next steps include a closer examination of cleaning products used, energy waste, and moving beyond recycling to reducing the amount of consumables. This will require participation from all of the stakeholders at the school, plus educating those groups who use the school and grounds during out-of-school time. A major goal will be to apply for the US Department of Education's Green Ribbon School recognition in the next two years.

LESSONS LEARNED

- The field experiences and the support of the community partners are an essential part of this program. It not only builds high student engagement but helps students and teachers recognize the impact of their local decisions on the overall health of the environment and how they can make a difference.
- It takes a team to build consistency and tackle all of the areas necessary to building a school culture of sustainability and stewardship. This team needs to include school staff (not just teachers), parents, and students working together.
- A student green team is an integral component to work on special projects, maintain enthusiasm, and create student directed projects and programs.
- It is essential to receive support from District agencies, such as the Department of General Services, since many of the infrastructure decisions are not made by the local school but are implemented and directed from a central office.

Lafayette Elementary

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- All pre-K through grade 5 students participated and will continue to participate in a variety of hands-on, engaging, and developmentally appropriate environmental education lessons, field trips, and projects throughout the year.
- In spring 2018, Lafayette Elementary School third graders successfully applied for $2,300 in grant funds from EcoRise to support composting and recycling projects, campaigns, and materials for the 2018-2019 school year.
- In September 2018, Lafayette Elementary School launched its first environmental after-school club which meets with 50 fourth graders each Monday to discuss environmental topics and issues and to work on projects to improve Lafayette Elementary's environmental footprint.
- With help from a partnership with FoodPrints, Lafayette Elementary School's garden received a much needed revitalization. Students in pre-K and grade 2 are now able to plant and harvest vegetables in raised beds and learn about the benefits of preparing and eating nutritious snacks and meals, but all are community members are welcome to enjoy this revitalized space.

ABOUT THE SCHOOL

Lafayette Elementary is a District of Columbia Public School in the Chevy Chase neighborhood of Washington, DC. The school serves close to 800 students in pre-K through grade 5 and two inclusive classrooms. All students are challenged to become curious observers, independent thinkers, collaborative partners, and mindful community members. Lafayette Elementary's core curriculum focuses on English language arts (ELA), math, writing, social studies, and science, and is enhanced by both special subjects and the school's project-based traditions. Students access differentiated instruction every day during WIN (What I Need) time and participate in other focus areas, such as the student newspaper, reading buddies, choir, and other clubs, during Flex Time. Lafayette Elementary is fortunate to have a very involved parent and guardian community that is always eager and ready to assist with whatever the school needs.

"The environmental club at Lafayette has not only given my kids a forum to learn but also a platform to really engage and to be leaders in school-wide efforts to educate fellow students, staff, and teachers, and to design impactful environment programs to become a green school. Their excitement and active engagement in their projects is a parent's dream. They are taking the lessons and initiatives to be environmentally-conscious at home, and they are having discussions on environmental impacts of things we see in our surroundings. I am sure that this program will be a lasting positive influence on ways in which my kids see their actions in relation to the natural world we live in."

– Dee Harlow, grade 4 Lafayette Elementary School parent

ENVIRONMENTAL LITERACY PROGRAM

As Lafayette Elementary School students move throughout the grades, they build on the crucial lessons they have learned about growing plants, composting, and recycling, and their important and vital relationship and connection with the environment. Lafayette Elementary's environmental literacy program strives to implement the Next Generation Science Standards (NGSS) within classrooms across the school. Pre-K through grade 2 aims to build a better understanding of the importance of recycling and how that relates to a healthy environment. Students participate in the FoodPrints program and gain a stronger appreciation and understanding of gardening, composting, and cooking healthy meals. Third through fifth grade teachers utilize Full Option Science System (FOSS) kits, which are also NGSS-aligned, and include hands-on learning opportunities to engage directly with life science content. With the help of Lafayette's environmental club, students across the school participate in various plastic and paper recycling competitions that inform the student body about recycling through student-created and led skits, while also encouraging students to take action through mindful competition. All lessons are complemented with an opportunity to explore and engage with the school community garden, to take field trips to nature centers and science museums, and receive visits from the Audubon Naturalist Society, Casey Trees, and the Anacostia Watershed Society.

NEXT STEPS

Throughout the next year, teachers will work with administration to find ways to implement more of the Next Generation Science Standards into the curriculum across grade levels. The school also hopes to open dialogue and discussion among grade-level teams to discuss barriers of implementing more science curriculum within their classrooms and brainstorm solutions for embedding more environmental literacy within their teaching, whether that be through labs, cross grade-level collaboration, clubs, or math and ELA integration. Lafayette Elementary's goal is to make all environmental literacy lessons align with science standards so it remains meaningful and sustainable. Teachers also hope participate in discussions to determine how to make FoodPrints a long-term staple for not only grades pre-K through grade 2, but also for third through fifth graders.

LESSONS LEARNED

- Start small and make it so the students and their learning is always the core focus. Plus, be patient. Small steps will eventually lead to a giant step.
- Teacher and administrator buy-in can be hard, but start slowly with small goals and expand from there.
- A student voice is a strong voice. Students can be the necessary movers and shakers in a school to encourage other students, staff, and teachers to jump on board.
- Communication with and opportunities for parents to experience the work in action is essential to keeping the environmental literacy programs alive. If you can get them on board, buy-in across the school is easier.

Mann Elementary School

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- To build upon more than 25 years of science, gardening, and nutrition education efforts, Mann Elementary School collaborated with faculty to formalize all environmental education work into a plan/guide with both high-level and class-specific goals and accomplishments, with an emphasis on connections between new and existing programs.
- Mann Elementary institutionalized a firm commitment to nutrition education and daily waste management practices by providing weekly programming via interns and in-house resources. Initiatives included expanding the pre-K hatchling program to a school-wide chicken education program with a resident Coop on the Roof, and growing of our Tower Garden Farm program by increasing student participation in harvesting and engagement in tastings each week.
- The school continued to strengthen connections with families and the community through environmental activities. The Farm to Table internship program brought in volunteers and students from the community; the farm market program facilitated outreach to families and extended nutrition learning around locally sourced, whole foods into homes; and a new native plant program engaged students in native plant learning, increased native plant gardens on campus, and provided outreach to neighboring communities.

ABOUT THE SCHOOL

Horace Mann Elementary School, located in the northwest corner of Washington, DC and its public school system (DCPS), has provided quality education to the children of the District of Columbia for more than 80 years. Mann Elementary is a lively place of learning where curiosity and connection are celebrated. With its diverse, multi-national population, Mann Elementary is both a global and close community of learners. The school embraces academic choice and responsive teaching. Its recently renovated and expanded campus, which features a rooftop farm, arts classrooms and an expansive outdoor playscape, invites the school community to learn within and beyond the school walls. The Mann Elementary School campus is the physical realization of the school community's most essential educational values of collaboration and connection, sustainability and stewardship, and choice and invention. Learning at Mann Elementary is purposeful, strategy-based and joyful.

"We have engaged in numerous sustainable practices across our years on the Mann campus. With the help of the environmental literacy program, we are more effectively crafting the narrative of why these learning opportunities have meaning for us and for our students. Telling why we do what we do is an essential piece to sustaining our efforts and we're making good progress here, thanks to the environmental literacy program!"

– Elizabeth Whisnant, principal, Mann Elementary School

ENVIRONMENTAL LITERACY PROGRAM

Building upon more than 25 years of science learning, the team at Mann Elementary School has developed a plan that makes environmental learning more inter-disciplinary and comprehensive, and that guides the school community to live their day-to-day lives at school more sustainably. To shape its plan, the school has chosen five high-level goals and developed grade-level specific goals for classroom teachers, specialists, catalysts, and support teams. High-level goals include *Living and Learning Sustainably and Leading by Example* where students and staff learn the ways to live sustainably in their day-to-day lives at school, in their classrooms, in their lunchroom, and on their campus. *Appreciating the Natural Environment Around Us* continues the study of the natural elements of life on Earth and in local watersheds, and teaches members of the school community to be better stewards. *Understanding Where Our Food Comes From and Why That's Important* helps them learn about homegrown and local sourcing and teaches students about healthy eating and wellness. *Our Building is also a Teacher* uses Mann Elementary's LEED Gold-certified building and green campus as a catalyst to environmental learning efforts. *Sharing Best Practices with Our Community* emboldens students and staff as community leaders who share their environmental learning beyond the school campus with parents and families, neighbors and educational peers. Mann Elementary asks its entire community to help them track their progress in living more sustainably, and this is easily measured by the fruits of their actions.

NEXT STEPS

Continue to work toward environmental education goals at all grade levels but will also be nimble and practical with those goals. The key to progress will be building internal partnerships and on-campus resources to make the work as practical and economical as possible.

Collect the tools necessary to assess our progress routinely, and give all level of participants – from students to faculty – the means to assess progress at living sustainably at school.

Continue to seek funding for environmental education program, support the role of School Garden/Sustainability Coordinator, and implement needed improvements in external learning areas.

Expand nutrition education goals/activities into the school kitchen and classroom routines.

Continue to find opportunities to engage the school's parent community and neighbors as partners in the learning and best practices.

LESSONS LEARNED

- Find your champions early and continue to seek out cheerleaders who can help keep your program in focus.
- Work closely with your administration to set goals, find overlaps with other school goals, and build partnerships internally and externally.
- Look outside the traditional avenues for support and accept all types of donation from grants to in-kind services. The job will not be done with your first garden implementation. You will need to continue to fund the support and growth of your programs to assure continued success.
- There is no greater good than teaching our children about the beauty and goodness of the earth and how to protect it, and many in your community will admire you for making the time to teach such lessons and secure our future on the planet.

Marie Reed Elementary School

2017-19 HIGHLIGHTS

- Developed and maintained a school-wide composting and recycling program in the cafeteria and classrooms.
- Recognized by the Department of General Services with the DCPS Recycles! 2018 Honor Roll with Distinction Award.
- Participated in the FoodPrints program, preparing healthy foods and exploring in the school garden.
- Established a dedicated "Green Team" composed of teachers, students, and parents to help with recycling and other environmental projects.
- Provided meaningful environmental education experiences to students across all grade levels.

ABOUT THE SCHOOL

Marie Reed Elementary School is a welcoming community of learners that serves 455 students in pre-K 3 through grade 5. Located in the Adams Morgan neighborhood of Washington, DC, the Marie Reed Elementary community values diversity, equity, social-emotional learning and strong family engagement. The school regularly celebrates the cultures and languages from the many different countries represented in the student body. Marie Reed Elementary is an arts-focused school that understands the value of having a strong learning community. Faculty and staff are committed to having high expectations for all students and focus on providing quality, age-appropriate instruction to make learning fun and engaging.

"Our involvement to create an environmental literacy program has coincided with the renewal and modernization of our 40-year-old school building, which has provided numerous hands-on learning opportunities. Thanks to experiences afforded through the program, our students are practicing recycling and composting throughout the school, exploring the impact of trees and landscaping with Casey Trees, and are generally more aware of the impact they have on their environment."

– Katie Lundgren, principal, Marie Reed Elementary School

ENVIRONMENTAL LITERACY PROGRAM

Fully modernized in 2017, Marie Reed Elementary now has a green, state-of-the-art building with sustainable features that can be used as teaching tools. The school prides itself on its bountiful school garden with an operational rain barrel, various outdoor classroom spaces, and a fully functional teaching kitchen. The FoodPrints program has a meaningful impact in the school. All students learn about nutrition and gardening. Marie Reed Elementary's robust school-wide recycling and cafeteria composting program has been an ongoing success. Students and staff are dedicated to reducing landfill waste. An enthusiastic team of custodians, teachers, and students ensures that recyclables are being sorted and managed properly. Students in pre-K through first grade use their senses to learn about plant life cycles. In second grade, students observe a class worm bin over a two-week period to understand how food is broken down in the soil. Fourth grade students experience a boat trip on the Anacostia River and investigate the American shad restoration program. Grade 5 students work with Clean Air Partners and Casey Trees to test air quality in the community.

NEXT STEPS

Marie Reed Elementary's goal is to educate all stakeholders about the importance of leading a sustainable life. The school strives to maintain a culture of wellness and responsibility. Staff will refine and adjust the school's recycling/composting program, use its outdoor spaces as teaching tools, and build on student interest for learning about the environment. Marie Reed Elementary will create a vision for expanding our garden and utilizing all available outdoor space. The school will continue to collect data and submit an application to become a Green Ribbon School, a recognition from the US Department of Education, which is given to schools that have sustainable environmental practices.

LESSONS LEARNED

- Create a team of teachers, staff, students, and families who are interested in environmental issues to help the school become more sustainable and connected to the environment.
- Collaborate with local organizations in the community or parent groups to help support this important work.
- Recruit and train student-helpers to be stewards and caretakers of recycling at your school.
- Generate enthusiasm for environmental education in the school community by communicating important issues effectively.

2017-19 HIGHLIGHTS

- Implemented a school-wide (pre-K through grade 5) FoodPrints program, in which students prepared nutritious recipes with ingredients from the school garden and learned about the Anacostia watershed.
- Through a curriculum-based initiative, fifth grade students planted 20 trees on school grounds in partnership with Clean Air Partners and Casey Trees. Students developed an understanding of human impact on the Earth, assessed air quality in their community, and explored ways to protect Earth's resources.
- Second grade students participated in the Garbology program with the Audubon Naturalist Society. Students constructed a trash timeline and playground litter survey in order to identify ways to reduce waste.
- Teachers actively sought environmental literacy professional development and solidified partnerships for future student-driven community action projects.

ABOUT THE SCHOOL

Simon Elementary School serves more than 270 students in Ward 8. The school's mission is to prepare all students to be responsible citizens and afford them the opportunity to acquire the skills, knowledge, and abilities necessary to make decisions that lead to meaningful and productive lives. Simon Elementary strives to educate the whole child by meeting students' curricular needs and fostering social-emotional growth. Core academic subjects are supported and enhanced through the arts and technology. Simon Elementary serves students in the general education setting and students who need support services, such as speech and language, occupational and physical therapy, and social work. Teachers work hard to ensure that all students grow academically, pursue a healthy life, and are prepared for the next academic school year.

"With the help of our environmental literacy partners, we have had the unique opportunity to offer our students a special connection to their environment and the world around them. What a pleasure it is to see our students begin own their responsibilities as stewards of their local community! The link to our students' social-emotional development has been especially important. Through the environmental literacy program, our students have cultivated patience, persistence, and kindness."

– Whitney Bartell, grade 5 math and science teacher, Simon Elementary

ENVIRONMENTAL LITERACY PROGRAM

Students at Simon Elementary engage in meaningful, environment-based science activities throughout their elementary education through vertical planning and curricular alignment. Pre-K and kindergarten students are introduced to environmental education through visits to Cox Farm, Anacostia Park, and the Simon School Garden. In first grade, environmental studies continue with the FoodPrints program, where students tend the school garden, prepare healthy meals, and become familiar with watershed studies. With the Audubon Naturalist Society, second grade students learn about conservation through the science of garbage and composting. Third graders study animal habitats and plant and animal life cycles. Fourth grade students explore the Anacostia River with the Anacostia Watershed Society. Fifth grade marks the culmination of environmental studies at Simon Elementary. Fifth graders start their school year with a three-day Meaningful Watershed Educational Experience overnight camping trip in Prince William Forest Park, which includes water quality testing led by NatureBridge staff. Throughout the year, fifth graders act as the stewards of the school garden, create nutritious meals with FoodPrints, and work with Casey Trees to plant 10 trees on school grounds. This approach gives students at Simon Elementary a robust understanding of their impact on their local watershed and a legacy of student-led community action when they move on to middle school.

NEXT STEPS

During 2019, fifth grade students plan to rollout a school-wide composting initiative. In partnership with FoodPrints, fifth graders will film, produce, and edit a cooking show that educates their community about watershed initiatives, conservation, and healthy recipes.

LESSONS LEARNED

- Follow a “recipe for success.” As our students learn in FoodPrints class, following a recipe is important in getting your meal right. When rolling out an environmental literacy program at your school, it is a great idea to follow the “recipe” of schools that have successfully done it before. Listen to the advice of mentors and alumni, and have an organized implementation plan before you start.
- Consider environmental literacy professional development for your entire staff. The Anacostia Watershed Society offers staff professional development that includes a boat tour of the Anacostia River. This can promote teacher buy-in and get teachers excited about incorporating environmental literacy partnerships in their classrooms. Also, use a staff meeting to talk to teachers about the vision of vertical planning and goals for each grade.
- Have fun and bond! The environmental literacy partnerships are masterful at aligning programs with curricular goals. The partners also enable incredible opportunities for you to bond with your students. I have gone camping with my students for seven years, and leave each trip feeling close to my kids and excited for the school year.

School Without Walls at Francis-Stevens

ENVIRONMENTAL LITERACY SNAPSHOT

2017-19 HIGHLIGHTS

- FoodPrints in-school field trips, which focus on seasonal eating and environmental stewardship, expanded from pre-K 3 through grade 5 to include the middle school students after many requests from students, staff, and parents.
- The school garden is tripling in size with a new section in Francis Park, designed by Love and Carrots, and built with student and community labor. Growing has also expanded to inside the school building with a donation of two Grow Towers from chef Jose Andres.
- During Growing Healthy Schools Month, the Student Sustainability Corps (SSC) group-written essay won a Golden Shovel Award for Best School Garden 2018-19. The students also won Best Vegetable blue ribbon at the DC State Fair with an entry of Dent Corn grown in the school's garden.
- For three consecutive years, the SSC won first place in Earth Force's Caring for Our Watershed competition. The latest project stemmed from the Department of General Services' (DGS) Reduce First Challenge, where students conducted a cafeteria waste audit and decided to try to reduce their use of single-use plastic tableware with a Finger Food Friday program. With an extended letter-writing campaign, students got DCPS and Sodexho on board. The students' idea also won DGS's Most Replicable Solution Award.
- Classroom instruction has been augmented with iTree and EcoRise lessons, hatching chicks and shad, and a Garbology unit presented by the Audubon Naturalist Society. An energy curriculum will be added to middle school science in spring 2019.

ABOUT THE SCHOOL

School Without Walls @ Francis-Stevens is a pre-K 3 through grade 8 school of more than 450 students, located in the West End neighborhood of Ward 2. Through the school lottery system, the school enrolls students from almost every ward in the District, but the student body includes 35 percent neighborhood residents, including several embassy families. The student body is comprised of 13 percent English learners and 18 percent receive special education services. While 37 percent are economically disadvantaged, statistically these students perform better than at other schools in the district. Students are strongly encouraged to remember the 4R's of respect: for self, others, property, and the rights of others to learn. School Without Walls @ Francis-Stevens enjoys many partnerships in the community, which provide global and local resources that are incorporated into an active, interdisciplinary approach to learning, ensuring all have the social and life skills needed to be responsible global citizens.

> "Recently, a parent stopped to ask if families could start bringing in compost from home. Their kids had become so excited learning about composting at school, they wanted to apply what they learned at school to home life."
>
> – Ibti Vincent, FoodPrints teacher and master gardener

ENVIRONMENTAL LITERACY PROGRAM

Teachers at various grade levels have incorporated environmental literacy resources and field trips offered through EcoRise, the Audubon Naturalist Society, the National Energy Education Development Project (NEED), and the Anacostia Watershed Society into student learning. Some environmental efforts are school-wide: many teachers have started making do-it-yourself green classroom cleaners with students, and the school has established yearly, whole school Growing Healthy Schools Month participation and a full-day Earth Day celebration.

Additionally, through experiences in the school's FoodPrints demonstration kitchen and garden, students receive their most consistent environmental literacy learning. Lessons throughout the academic year are active and developmentally geared to include topics such as plant parts, pollinators, photosynthesis, nutrition and health, decomposition/composting, recycling, soil composition, paths from farm to table, and individual responsibility in terms of personal choices. Students often observe, plant, or harvest in the school's garden, and every lesson includes cooking and eating in community. Families have reported that recipes students cook in FoodPrints classes are often prepared at home, and many of these healthy, seasonal recipes appear on our school cafeteria lunch line on FoodPrints Tuesdays.

School Without Walls @ Francis-Stevens has had both successes and challenges with school-wide composting and recycling. For the past two years, staff pre-service meetings have included joint presentations with DGS and the Audubon Naturalist Society on sorting waste in classrooms and the cafeteria.

NEXT STEPS

As DGS transitions to single stream recycling system, School Without Walls @ Francis-Stevens will have to re-think its classroom and common area systems and reeducate students, building service staff, and personnel conducting after-school programs. Upcoming Student Sustainability Corps projects include construction of several small green walls to reduce noise and improve indoor air quality, and a campaign to rotate outdoor recess areas to decrease top soil erosion. School Without Walls @ Francis-Stevens plans to identify a dedicated person to coordinate the school's application for recognition as a Green Ribbon School. Although there exists a wonderful amount of collaboration among school staff, a formal system of vertical articulation needs to be established to ensure a coherent vision of environmental learning throughout the school. Funding for the continuation of environmental literacy programs need to be identified, especially for transportation for the field trips that cement classroom learning.

LESSONS LEARNED

- Personal commitment is crucial and healthy, nutritious snacks help get people to meetings.
- Although in-person meetings are wonderful, video and phone participation works, too. Inclusive email communication works between meetings.
- Establishing our ADA accessible school garden in front of the school has encouraged partnerships with the neighborhood. People see us working and ask how they can be involved.
- Active learning with concrete materials has been a boon to English learner students, those on the autism spectrum, and those with different learning styles.
- Environmental literacy encompasses all areas and is not hard to incorporate into math, science, assorted writing styles, social studies, and history. Often times, multiple and diverse standards are incorporated into many lessons. Pointing this out can reduce resistance to change.
- Document every lesson and work day. You will appreciate having a photo record to share with others. You will also appreciate looking back to see the progress you have made.

2017-19 HIGHLIGHTS

- Through several International Baccalaureate Primary Years Program (IB PYP) units of inquiry, all students learned about the environment and our connections to the natural world each year.
- Garden Arts program incorporated visual arts and environmental education.
- Partnerships with community organizations enhanced our curriculum and provide hands-on experiences.

ABOUT THE SCHOOL

Washington Yu Ying Public Charter School combines the International Baccalaureate (IB) curriculum framework with a Mandarin immersion program. The school was founded on the belief that bilingualism develops a greater ability to understand and communicate with other cultures, in addition to positioning students to succeed in an increasingly globalized world. As an IB World School, Yu Ying aims to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

In 2013, Yu Ying received the US Department of Education's Green Ribbon School recognition, which acknowledges the school's commitment to providing an educational environment that incorporates health, wellness and sustainability practices into day-to-day school operations. The school continues to encourage students to make healthy and informed decisions for themselves and the world around them.

"Environmental literacy is embedded into the mission and values of Yu Ying. However, our programming has been greatly enhanced over the past few years by our involvement in so many projects and opportunities for our students to engage in with our community partners. These projects have given us a great foundation for continuing to develop as a school."

– Sarah Harris, grade 5 teacher and founder, Washington Yu Ying PCS

ENVIRONMENTAL LITERACY PROGRAM

At Yu Ying, learning about our environment is woven into IB Primary Years Program (IB PYP) units of inquiry from pre-K 3 through grade 5. Students engage in units under the themes "Sharing the Planet" and "How the World Works," in addition to "How We Express Ourselves." Yu Ying's Garden Arts program encourages students to see the many connections between visual arts and artists and the natural world. Students also learn about the school's environmental impact in the English and Chinese classrooms. In pre-K, students learn about growing healthy food right in the school's gardens, and the insects that inhabit our world. Kindergarteners study worm bins and vermiculture, planting and growing, and observe hens in the fall and chicks in the spring on the Yu Ying campus. First and second graders learn about adaptation of living things and the ecosystem of the school's pond. In third grade, students assess all of the ways the school tries to be environmentally responsible and suggest new ways to improve the school's systems. Fourth graders focus on renewable energy sources, and fifth graders cap off their experiences with a two-night field trip to a local national park to learn about the local watershed and how to protect it.

NEXT STEPS

Environmental literacy is built into the curriculum framework of the school. Yu Ying is committed to providing hands-on, real world experiences for students to help them build their understanding of their place in the world and our responsibilities toward the environment. Yu Ying plans to review and revise the school's science curriculum using the Next Generation Science Standards to ensure that objectives build logically across the grade levels. Yu Ying will also keep developing its outdoor spaces to provide a variety of learning experiences for students. The fifth graders will finish establishing a new native forest garden in the school's Founders Forest, and plant additional trees with Casey Trees. Yu Ying will also improve its composting program by including all classrooms in addition to the lunchroom.

LESSONS LEARNED

- Ensure that your school's mission reflects a commitment to environmental education.
- Identify teachers, administrators, parents, and other community members who are interested in being part of environmental efforts.
- Establish authentic ways for students at the heart of environmental projects.

NOTES:

District of Columbia
Office of the State Superintendent of Education

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