

Maryland Project Green Classrooms Initiative Annual Progress Report and Recommendations – January 2023

The statewide Project Green Classrooms (PGC) initiative was established in June 2017 by Governor Larry Hogan's [Executive Order 01.01.2017.12](#) (MSAR 11837). The Executive Order directs the Maryland Department of Natural Resources (DNR) to provide an annual report to discuss Project Green Classrooms' activities and make recommendations to advance the initiative's priorities. The Project Green Classrooms initiative, co-chaired by DNR and the Maryland State Department of Education (MSDE), is an advisory board tasked with making recommendations to state decision makers in three focus areas:

1. Supporting environmental literacy programs in schools;
2. Increasing access to nearby nature; and
3. Promoting the use of the outdoors for learning, discovery, healthy play, and career exploration.

2022 Priority Areas

The leadership and partners of Project Green Classrooms continually evaluate priority areas to maximize the benefit of bringing together the varied agencies and organizations of the coalition to build an informed community proficient in environmental literacy that supports equitable access to nature. In early 2022, the Project Green Classrooms steering committee worked to examine the initiative's mission and goals as defined in the executive order and identified the following priority issues to be elevated for 2022.

1. Address equitable access to parks and green spaces with a focus on expanding access on school grounds.
2. Develop guidance about children's health related to Environmental Literacy programs and services to include health benefits for the entire school community.
3. Leverage funding opportunities to support off-campus learning experiences to reestablish relationships with informal environmental education partners.
4. Leverage Chesapeake Bay restoration efforts, tree planting efforts, and emerging local examples of natural resource curricula developed for career and technology schools. Project Green Classrooms will collaborate on supporting green career pathways through training and opportunities for students and community members, the greening of schoolyards, and the community stewardship of our natural resources.

2022 Actions:

To support the main focus areas as identified in the Executive Order and the priority focus areas, the Coalition worked to advance many projects and issues. The following section provides status updates on those priority actions put forth by Project Green Classrooms.

SUPPORTING ENVIRONMENTAL LITERACY PROGRAMS IN SCHOOLS

- **Environmental Literacy Guidance to Local Education Agencies**

- Progress:

- In 2022, MSDE worked with educators from around Maryland to develop an instructional framework for Maryland’s Environmental Literacy. The framework applies principles from Understanding by Design (Wiggins & McTighe, 2005) to provide developmentally appropriate learning goals for students at each grade level. The framework is anchored by three technical assistance sessions where educators across disciplines and demographic areas will examine the benefits, opportunities, and challenges of environmental literacy. Participants provided feedback on the draft framework.



- Future Direction:

- Following the feedback period, the Environmental Literacy Framework will undergo final review and revision before posting to the MSDE Environmental Literacy website. Additional technical assistance sessions for content leaders and informal education partners will be completed in 2023.
- The Environmental Literacy Framework will meet with educators and community members to identify needs and opportunities for teaching outdoors and increasing professional learning on using public lands.

- **Chesapeake Bay Watershed Agreement Actions:** As a coalition representing state agencies and non-profit partners, PGC functions as the primary means for Maryland to implement its commitments under the Environmental Literacy Goal of the [2014 Chesapeake Bay Watershed Agreement](#).

- Progress:

- In 2022, PGC participated in the biennial review of the Environmental Literacy Goal to the Chesapeake Bay Program Management Board and played a critical role in the updating of the two-year logic and action plans that will guide the work to achieve the Environmental Literacy goals.

- Future Direction:
 - Over the next two years, PGC will work to increase students’ age-appropriate understanding of the watershed through participation in Meaningful Watershed Educational Experiences (MWEES), increase the number of schools using their buildings and school grounds to improve their local watersheds and implement policies to ensure a systematic approach to environmental literacy. Two-year plans for the Student, Sustainable Schools, and Environmental Literacy Planning Outcomes can be found here:

<https://www.chesapeakebay.net/what/goals/environmental-literacy>.

- **Higher Education Environmental Literacy (HEEL):**

- Progress:
 - With support from a Chesapeake Bay Trust grant, the PGC HEEL committee formed a professional learning cohort of faculty fellows at Maryland higher learning institutions. The faculty fellows will engage in professional development focused on outdoor learning and environmental literacy in the spring of 2023. Each fellow will be paired with a mentor from the Project Green Classrooms HEEL committee and will actively collaborate with other faculty fellows on environmental literacy application in higher education.



- Future Direction:
 - In spring 2023, the first HEEL faculty fellow cohort will complete the professional learning series and identify course curricula for the application of environmental literacy into future teacher education courses. Starting in fall 2023, a second cohort of faculty fellows from colleges and universities across Maryland will begin the fellowship experience. The PGC HEEL committee will continue to promote opportunities to engage higher education faculty in professional learning experiences as well as expand opportunities for faculty to enhance environmental literacy application in teacher education courses.

- **Maryland Environmental Literacy Advisory Network:**

- Progress:
 - The Maryland Environmental Literacy Advisory Network (MELAN) was established through the Chesapeake Bay Program Regional Outdoor Learning Network (ROLN) project to strengthen regional connections. MELAN includes representatives from PGC, higher education, local school districts and NGO organizations. The advisory network is collaborating to increase capacity and participation of existing state-wide environmental literacy networks to ensure all students in Maryland are environmentally literate upon graduation. Currently the group is recruiting a network coordinator to develop the project.

- Future Direction:
 - MELAN has identified regional and community informed leads to strengthen environmental literacy networks on the eastern shore, western Maryland, and within the spanish speaking community. They will also continue to develop networks in southern Maryland and central Maryland. By graduating environmentally literate students who are knowledgeable, skilled in making informed decisions, and able to address the complex environmental issues influencing human health, natural resources, and communities, we enable the future success of our society.
- **Strategic funding partnerships:** Chesapeake Bay Trust (CBT), Chesapeake Bay Implementation Grant (CBIG), National Oceanic and Atmospheric Administration (NOAA) and MD Department of Natural Resources (DNR)
 - Progress:
 - The first round of funding supported seven (7) projects around the state; engaging new and future stewards in outdoor science and building environmental literacy through outdoor experiences and activities.
 - Project Green Classrooms will use the results of the Maryland Cost Analysis Survey and the Chesapeake Bay Program Environmental Literacy Indicator Tool to provide funding recommendations that ensure equitable student access to high quality, rigorous environmental literacy programming.
 - The Baltimore County Public Schools Environmental Empowerment Project is a redesign of the county’s science curriculum units to explore environmental inequities within historically excluded or underserved Baltimore County communities.
 - Future Direction:
 - Funding is reserved for current projects through 2024, with the goal of continuing a three-year cycle of CBIG funds for state school system environmental literacy projects. A three year timeframe allows leeway in the case of unforeseen circumstances, like the COVID pandemic, which interrupted programs and outcomes within the school year. Extended funding periods give partners a solid foundation to build a sustainable program.
 - The combined funding effort with the Chesapeake Bay Trust (CBT) will continue with the goal of increasing our percentage of the contribution each year to meet the continuing needs of our formal and non-formal environmental education partners.



INCREASING ACCESS TO NEARBY NATURE

- **Expansion of equity and access-**

Project Green Classroom also works to increase access to parks and the outdoors with a focus on communities that have historically faced barriers to meaningful access to nature.

Progress:

- The Maryland Department of Natural Resources (MD DNR), working with partners including the Chesapeake Conservancy and the National Park Service, continued to expand bi-lingual resources at MD State Parks. *Es Mi Parque* initiatives and events bring Spanish environmental education and recreation opportunities to park visitors. The Maryland Park Service, with the Chesapeake Conservancy, developed and launched the first Spanish Junior Rangers program for young park visitors.
- Sandy Point State Park’s new nature center opened in Spring of 2022 and was designed to be bilingual, with all exhibit text in both English and Spanish.
- The MD DNR also continued to develop and refine [park mapping tools](#) with the University of Maryland to evaluate the [equity of recreational water access](#) across the State.



- Future Direction:

- The MD DNR will continue to expand and enhance bilingual offerings both at Maryland State Parks and through environmental education resources for schools and communities.
- The Project Green Classrooms will coordinate with partner organizations to examine tree canopy cover on school grounds. This data can be used to prioritize and develop strategies for bringing nearby nature to school grounds and surrounding communities and increasing equitable access to natural resources.
- To promote access to nature in preschools, where young children do the majority of their learning and development in an outdoor setting, PGC partners, including MSDE, MD DNR and the Eastern Regional Association of Forest and Nature Schools will develop guidance and highlight necessary changes to the Maryland licensing program to allow for the licensing of nature preschools. **Partners passed a bill in the 2023 legislative session to establish a pilot program for nature preschools (CH 779).** This program will enable more equitable access for children to outdoor education programs, training for teachers and providers, as well as access to often needed resources to enroll in programs.

PROMOTING THE USE OF THE OUTDOORS FOR LEARNING, DISCOVERY, HEALTHY PLAY AND CAREER EXPLORATION

- **Conservation Career Guide**

- Progress:

- The [MD Conservation Careers](#) guide is published online and available for download for easy accessibility. The guide was a collaborative effort by PGC partners, resource professionals, youth, and communications staff and took almost five years to complete. The guide was designed to present conservation career options that are not limited to life science and geosciences but a wide range of disciplines that support action to protect, preserve, restore, and conserve our natural resources.

- Future Direction:

- The guide will be introduced at various natural resource and conservation career events, via short form videos on social media, and at the annual Maryland Association of Environmental and Outdoor Education (MAEOE) conference. PGC partners and career educators can easily share and promote these resources at job fairs, and community events.

- **Outdoor Learning Network Initiative**

- Progress:

- The Outdoor Learning Network Initiative (OLNI) is a capacity-building effort administered by the Chesapeake Bay Trust designed to advance environmental literacy at the school district level by establishing local networks of school districts and organizations who are committed to working collectively to fully incorporate environmental education into the school system long-term. A team of partners, including Chesapeake Bay Foundation, Living Classrooms Foundation, MD DNR, Baltimore City Carrie Murray Nature Center, Great Kids Farms and the Masonville Cove Environmental and Education Center worked alongside Baltimore City Public Schools to develop an outdoor learning experience and Meaningful Watershed Educational Experiences (MWEE). In the fall of 2022, eight teachers and 400 students participated in a MWEE developed from this partnership.



- Future Direction:

- PGC intends to continue involvement as a partner within the Baltimore

City OLNI through the close of the two-year grant period and beyond. Participation may include supporting Baltimore City Public Schools as they embed systemic programs, operationalize ongoing teacher trainings, design environmental literacy plans, develop community-based partnerships, and engage leadership.

Additional Contributions:

- **Mid-Atlantic Climate Change Education Conference & Forum (MACCE)**

- Progress:

- In 2020, the Chesapeake Bay National Estuarine Research Reserve and MD DNR partnered with NOAA Chesapeake Bay Office, the Virginia and Delaware Chesapeake Bay National Estuarine Research Reserves, Virginia Sea Grant, New Jersey Sea Grant, and Goucher College to offer the Mid-Atlantic Climate Change Education Conference (MACCE). This



inaugural virtual conference provided climate change education professional development for over 200 formal and informal educators throughout the Mid-Atlantic. With this success, the partners continued to collaborate and offered the conference again virtually in 2021. In 2022, the planning committee opted for broader, bolder regional education for climate action strategizing in lieu of another multi-day virtual MACCE Forum conference. The team also enhanced regional collaboration by curating specific partners to create a plan to further advance education for climate action regionally and beyond the state of Maryland.

- Future Directions

- Teams were created to move new ideas and solutions forwards and “champions” volunteered to lead these teams as a follow up to the forum. These teams meet regularly, and the champions meet monthly to discuss the work executed and identify needs. The areas for team engagement include:
 - Career Education and Workforce Development
 - Creating Community and Resource Learning Hubs
 - Intergenerational Community-based/Informed Solutions
 - Strengthening Strategic Networks for Climate Action
 - Student-Led Action
 - Systems Level Change Advocacy
 - K-12 Programming

- **Market Analysis/Needs Assessment – Climate Change Training and Education**
 - Progress:
 - MD DNR executed a contract with Responsive Management, a consulting firm with stakeholder outreach expertise, to conduct a Market Analysis and Needs Assessment. The Market Analysis (MA) will clearly and concisely identify firms, groups, programs, agencies and organizations within the state of Maryland and DelMarVa region that are developing and/or delivering coastal and environmental education and training programs focused on climate change and climate change impacts in Maryland. The comprehensive Needs Assessment (NA) will evaluate existing and potential key constituent groups, stakeholders, and partners that may participate or utilize climate-based coastal and environmental education and skill-based training within the state.
 - Future Direction:
 - This survey will provide MD DNR with essential feedback for furthering constituent involvement in climate-forward efforts as part of a statewide and regional strategy to mitigate and adapt to climate change and its coastal impacts.

Wiggins, G. P., & McTighe, J. (2005). *Understanding by design* (2nd ed.). Pearson.

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